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Networked Controls

Philips Dynalite

Products and Applications

A complete library of the Dynalite solution

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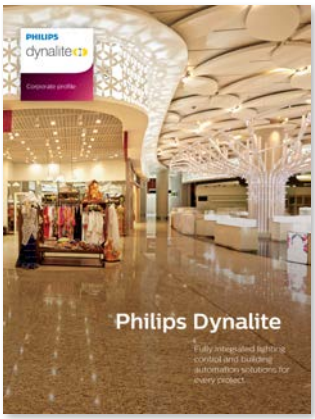
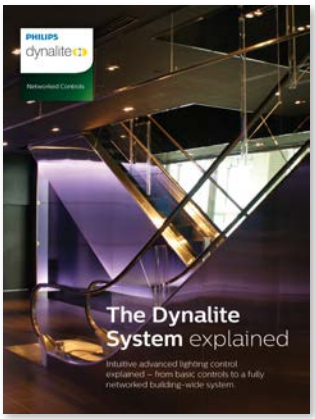
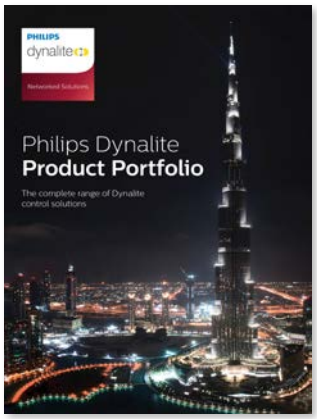
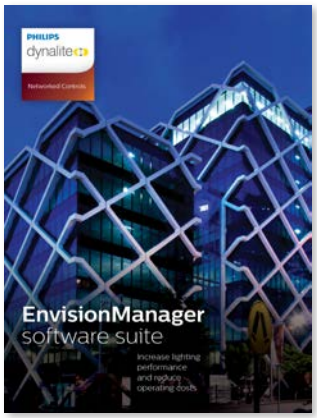
1. Marketing Collateral

Marketing Collateral









Visit **www.philips.com/dynalite** to download your copy of our brochures or contact your local Philips Representative.

To order brochures

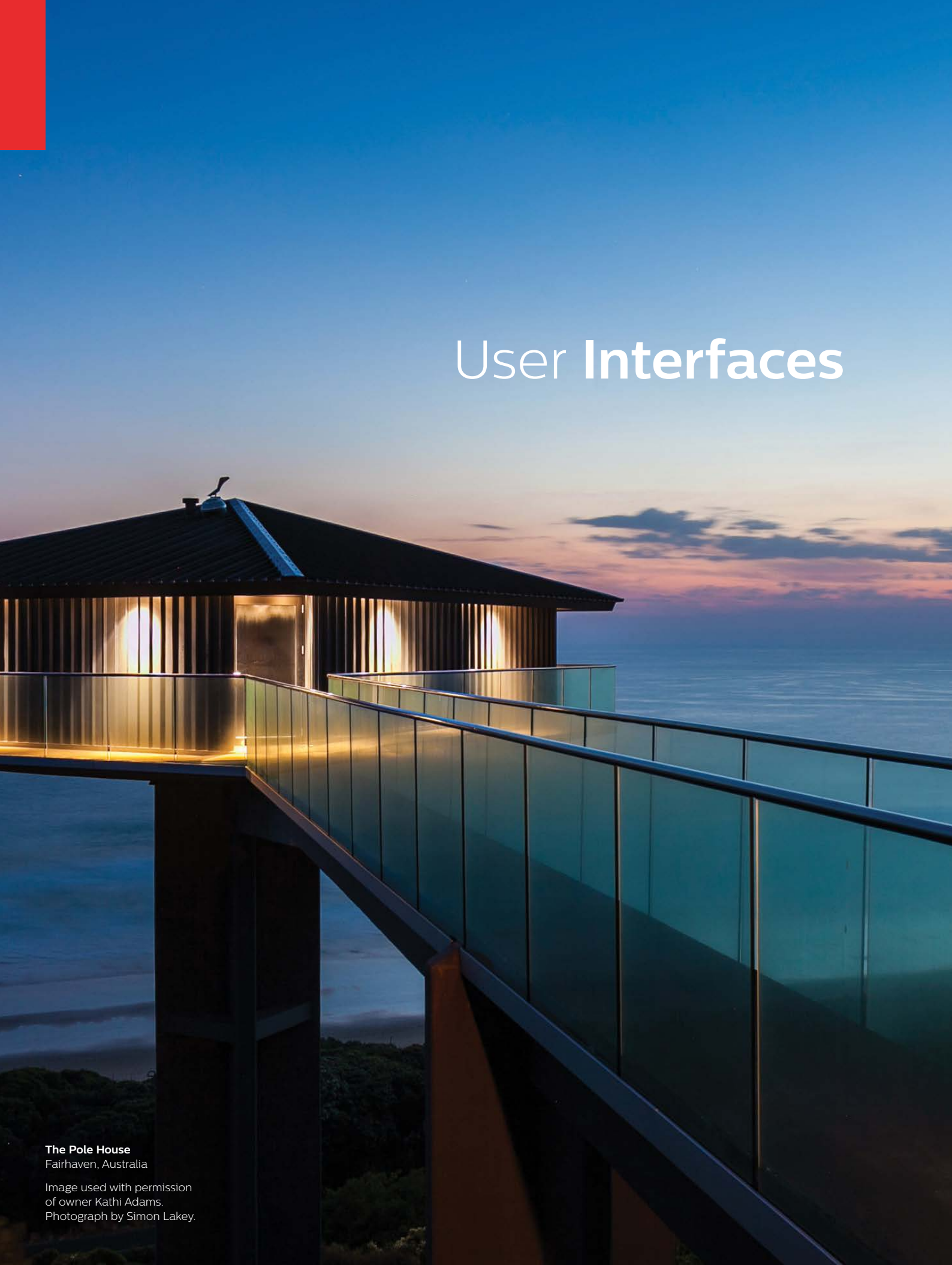
Please contact your local Philips Representative to get a copy of our brochures.

N.B. Brochures and information within may vary in regions due to local customization and product differentiation.

If brochures are updated or replaced, we will endeavour to send you the most up-to-date version available at time of ordering.

Updated 10/15

User **Interfaces**



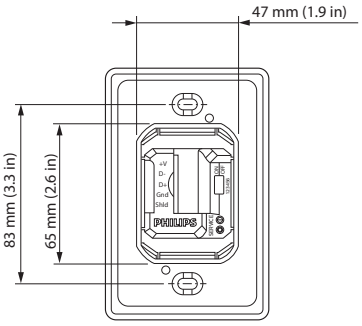
The Pole House
Fairhaven, Australia

Image used with permission
of owner Kathi Adams.
Photograph by Simon Lakey.

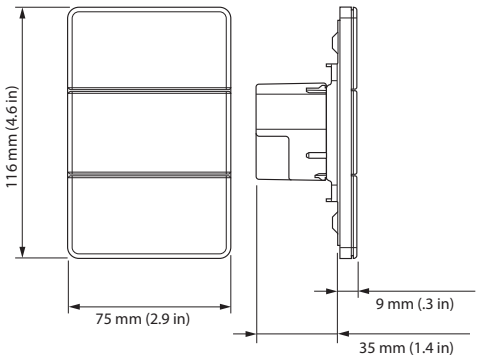
PABPA AntumbraButton User Interfaces

The most flexible user interface solution available

The AntumbraButton user interface consists of large mechanical buttons that can be customized with text or icons and incorporates the latest in field effect technology. The contemporary design features a number of button configurations, with each button capable of local or site-wide control functions. The PABPA range is suitable for, but not limited to, North American, South American, Australian and New Zealand markets.



- Field effect technology — The user interface detects an approaching user and 'wakes up', initiating a wall-wash lighting effect to encourage interaction.
- Supplied as two components — The Application Module contains buttons, rim, base and mounting plate, which can be mixed and matched to suit décor. The Communication Module contains all of the logical and network functions and can be pre-programmed off-site, allowing commissioning to commence prior to finish options being finalized.
- Hidden sensory inputs — An internal light sensor measures ambient light and adjusts light-wash effect accordingly. A built-in temperature sensor automatically adjusts air conditioning when integrated into the system.
- Multiple language and icon labeling — Button labelling language choices include English, Chinese and Arabic. A library of common icons transcends language barriers, which is particularly useful in hospitality applications.
- Selection of rim and fascia options — Allows décor matching to suit any environment.



For detailed product information, please refer to the product information pages at www.philips.com/lightingcontrolsna.

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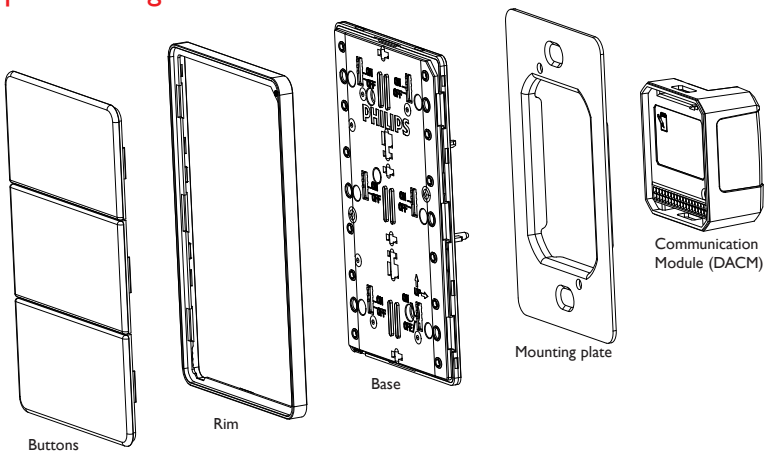
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	DyNet DC Supply	12 - 24 VDC SELV / Class 2 @ 40 mA (max.)
	Control Inputs	One RS-485 DyNet serial port One 5-way removable screw terminal (optional CAT5/CAT6 wire termination available. Requires optional DRJ45ADAPT adapter)
Physical	Dimensions (H x W x D)	4.6" x 2.9" x 0.9" (116 mm x 75 mm x 23 mm)
	Packed Weight	7.05 oz (0.2 kg)
	Button Finishes	White, Silver and Magnesium
	Rim Finishes	White, Magnesium, Chrome and Aluminum
	Number of Button Options	Software configurable from 1 to 6
	LED Indicators	Buttons - white Backlight wash - white
	Field Effect Detection Range	~ 6 inches
	Operating Conditions	Temperature: 32 to 122° F (-0 to 50° C) ambient Humdity: 10 to 90% non-condensing
	Storage & Transport	Temperature: -13 to 140° F (-25 to 60° C) ambient Humidity: 0 to 90% non-condensing
Certification	Compliance	FCC, ICES, RoHS Compliant
	IP Rating	IP22

Exploded Diagram



Ordering Information

Ordering an operational Antumbra UI requires ordering both the Application Module and the Communication Module. An online ordering tool is available on the website below allowing configuration with different button and rim finishes.

The online configuration tool also allows for button labeling details. Once an Antumbra has been configured, a full preview is available and the part number details provided for ordering purposes. Submission of the generated order form is required to process an order for labeled Antumbra user interfaces.

http://www.aprapps.lighting.philips.com/antumbra

Application Module Ordering

PABPA-WW-X

Button Finish	Rim Finish	Button Labeling
W = White M = Magnesium S = Silver A = Aluminum	W = White M = Magnesium C = Chrome A = Aluminum	X = No labeling L = Labeling

Communication Module Ordering

Description	Order Code
DyNet module for Dynalite compatibility. **Note**: One required for each Application Module ordered.	DACM
CAT5/CAT6 Wiring Adapter	DRJ45ADAPT

Communication Module (DACM)

The Communication Module is common across all interfaces in the Antumbra series and is a self-contained unit with all the logical and network functions required for any DyNet project. This device can be pre-programmed off-site without the Application Module, allowing the commissioning process to begin before the final finish options have been chosen. Communication Modules can then be installed and wired months before the final Application Modules are installed, thereby protecting them from damage during construction, while allowing for wiring, commissioning and testing.

Application Module

The Application Module contains the buttons, rim, base and mounting plate. The two visible components of the module (buttons & rim) are available in a range of different finishes. The base component contains all the sensors and indicators, which are enclosed by a rubber envelope to give an IP22 rating. A metal mounting plate supports the whole Antumbra structure so that it operates perfectly every time.

Philips Lighting North America
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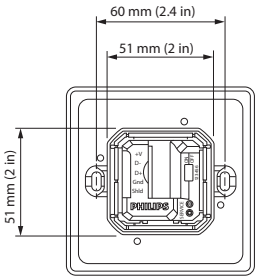
Web: www.philips.com/lightingcontrolsna

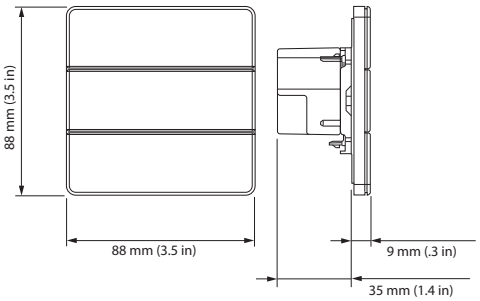
Philips Lighting Canada
281 Hillmount Road
Markham, Ontario L6C 2S3
Canada

PABPE AntumbraButton User Interfaces

The most flexible user interface solution available

The AntumbraButton user interface consists of large mechanical buttons that can be customized with text or icons and incorporates the latest in field effect technology. The contemporary design features a number of button configurations, with each button capable of local or site-wide control functions. The PABPE range is suitable for, but not limited to, European, Middle Eastern, African and Asian markets.





- Field effect technology — The user interface detects an approaching user and 'wakes up', initiating a wall-wash lighting effect to encourage interaction.
- Supplied as two components — The Application Module contains buttons, rim, base and mounting plate, which can be mixed and matched to suit décor. The Communication Module contains all of the logical and network functions and is pre-programmed off-site, allowing commissioning to commence prior to finish options being finalized.
- Hidden sensory inputs — An internal light sensor measures ambient light and adjusts light-wash effect accordingly. A built-in temperature sensor automatically adjusts air conditioning when integrated into the system.
- Multiple language and icon labeling — Button labeling language choices include English, Chinese and Arabic. A library of common icons transcends language barriers, which is particularly useful in hospitality applications.
- Selection of rim and fascia options — Allows décor matching to suit any environment.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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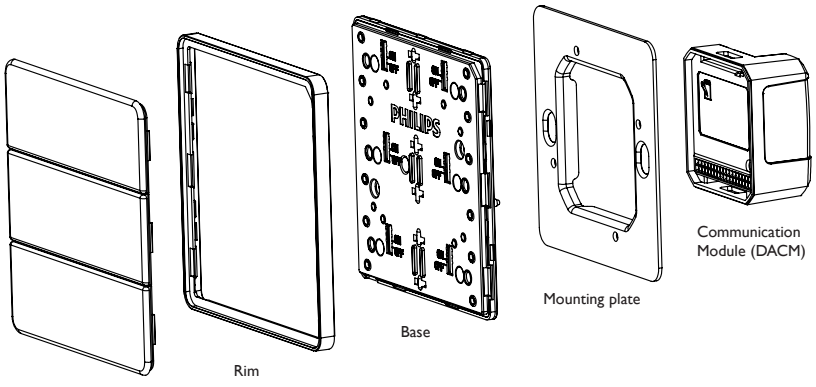
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	DyNet DC Supply	12 - 24 V SELV/Class 2, @ max 40 mA from the DyNet network
	Control Inputs	One RS-485 DyNet serial port
Control	Temperature Sensing	5 to 40° C ± 1.5° C
	Field Effect Detection	Range: ~15 cm (~6")
Physical	Dimensions (H x W x D)	88 mm x 88 mm x 23 mm (3.5" x 3.5" x 0.9")
	Packed Weight	0.2 kg
	Termination	One 5-way removable screw terminal
	Operating Conditions	Temperature: -5 to 50° C ambient Humdity: 0 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Compliance	Certification	CE, RCM, FCC, ICES
	IP Rating	IP22
Options & Ordering		Contact your local Philips representative for ordering information.

Exploded Diagram



Ordering Information

Ordering an operational Antumbra UI requires ordering both the Application Module and the Communication Module. An online ordering tool is available on the website below allowing configuration with different button and rim finishes.

The online configuration tool also allows for button labeling details. Once an Antumbra has been configured, a full preview is available and the part number details provided for ordering purposes. Submission of the generated order form is required to process an order for labeled Antumbra user interfaces.

http://www.aprapps.lighting.philips.com/antumbra

Application Module Ordering

PABPE-WW-X

Button Finish	Rim Finish	Button Labeling
W = White M = Magnesium S = Silver A = Aluminum	W = White M = Magnesium C = Chrome A = Aluminum	X = No labeling L = Labeling

Communication Module Ordering

Description	Order Code
DyNet module for Dynalite compatibility **Note**: One required for each Application Module ordered	DACM

Communication Module (DACM)

The Communication Module is common across all interfaces in the Antumbra series and is a self-contained unit with all the logical and network functions required for any DyNet project. This device can be pre-programmed off-site without the Application Module, allowing the commissioning process to begin before the final finish options have been chosen. Communication Modules can then be installed and wired months before the final Application Modules are installed, thereby protecting them from damage during construction, while allowing for wiring, commissioning and testing.

Application Module

The Application Module contains the buttons, rim, base and mounting plate. The two visible components of the module (buttons & rim) are available in a range of different finishes. The base component contains all the sensors and indicators, which are enclosed by a rubber envelope to give an IP22 rating. A metal mounting plate supports the whole Antumbra structure so that it operates perfectly every time.

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Mascot, NSW 2020
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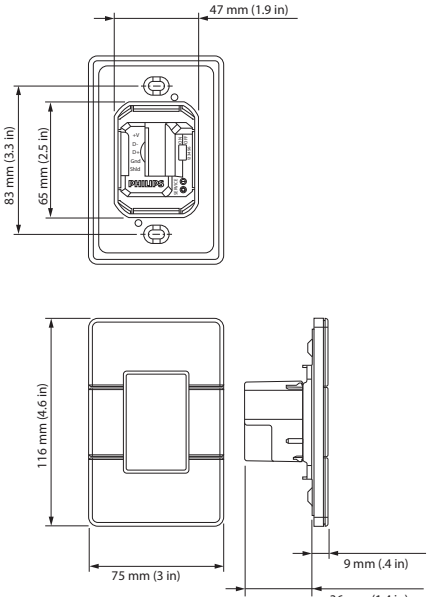
Tel: +61 2 8338 9899
Email: dynalite.info@philips.com
Web: www.philips.com/dynalite

PADPA AntumbraDisplay User Interfaces

The most flexible user interface solution available

The AntumbraDisplay user interface incorporates the latest in field effect technology. The contemporary design features a number of button configurations, with each button capable of local or site-wide control functions and a central LCD display to present multiple pages of functions and systems information. The PADPA range is suitable for, but not limited to, North American, South American, Australian and New Zealand markets.



- Field effect technology — The user interface detects an approaching user and 'wakes up', initiating a wall-wash lighting effect to encourage interaction.
- Supplied as two components — The Application Module contains buttons, rim, base and mounting plate, which can be mixed and matched to suit décor. The Communication Module contains all of the logical and network functions and is pre-programmed off-site, allowing commissioning to commence prior to finish options being finalized.
- Hidden sensory inputs — An internal light sensor measures ambient light and adjusts light-wash effect accordingly. A built-in temperature sensor automatically adjusts air conditioning when integrated into the system.
- Multiple language and icon labeling — Display labeling language choices include English, Chinese and Arabic. A library of common icons transcends language barriers, which is particularly useful in hospitality applications. Button labeling not available.
- Central LCD — Allows for display of system information including temperature, time, channel level and current scene. Button function can change when navigating between up to 16 pages.
- Selection of rim and fascia options — Allows décor matching to suit any environment.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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Item	Specification	Details
Electrical	DyNet DC Supply	12 - 24 VDC SELV/Class 2, max 60mA @ 12VDC, max 35mA @ 24VDC typ. Stand-by power: <0.15W
	Control Inputs	RS-485 DyNet serial port
Control	Temperature Sensing	5 to 40° C ± 1.5° C
	Field Effect Detection	Range: ~15 cm (~6")
Physical	Dimensions (H x W x D)	116 mm x 75 mm x 36 mm (4.6" x 3.0" x 1.4")
	Packed Weight	0.2 kg
	Termination	One 5-way removable screw terminal
	Operating Conditions	Temperature: -5 to 50° C ambient Humdity: 0 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Compliance	Certification	CE, C-Tick, FCC, ICES, EN50491-3
	IP Rating	IP22
Options & Ordering		Contact your local Philips representative for ordering information.

Ordering Information

Ordering an operational Antumbra UI requires ordering both the Application Module and the Communication Module. An online ordering tool is available on the website below allowing configuration with different button and rim finishes.

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http://www.aprapps.lighting.philips.com/antumbra

Application Module Ordering

PADPA-WW

Button Finish

W = White
M = Magnesium
S = Silver
A = Aluminum

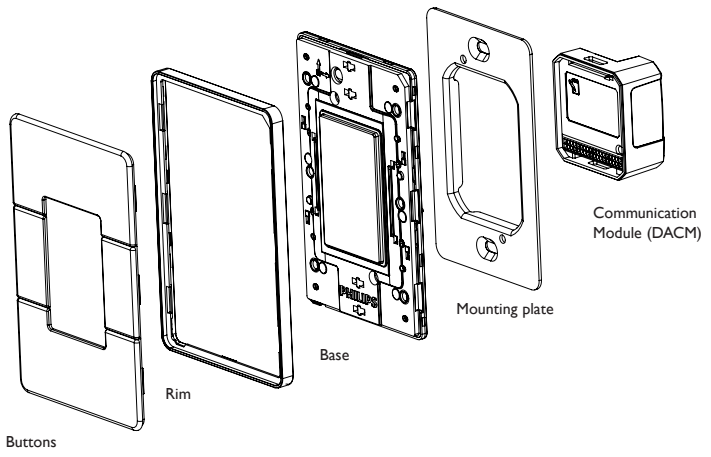
Rim Finish

W = White
M = Magnesium
C = Chrome
A = Aluminum

Communication Module Ordering

Description	Order Code
DyNet module for Dynalite compatibility. **Note**: One required for each Application Module ordered.	DACM

Exploded Diagram



Communication Module (DACM)

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Application Module

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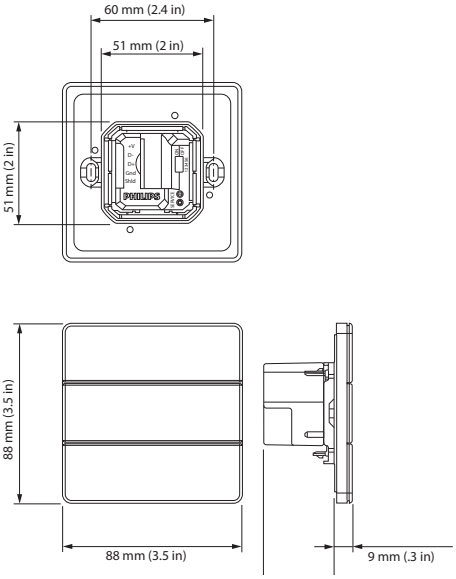
PADPE AntumbraDisplay User Interfaces

The most flexible user interface solution available

The AntumbraDisplay user interface incorporates the latest in field effect technology. The contemporary design features a number of button configurations, with each button capable of local or site-wide control functions and a central LCD display to present multiple pages of functions and systems information. The PADPE range is suitable for, but not limited to, European, Middle Eastern, African and Asian markets.



- Field effect technology — The user interface detects an approaching user and 'wakes up', initiating a wall-wash lighting effect to encourage interaction.
- Supplied as two components — The Application Module contains buttons, rim, base and mounting plate, which can be mixed and matched to suit décor. The Communication Module contains all of the logical and network functions and is pre-programmed off-site, allowing commissioning to commence prior to finish options being finalized.
- Hidden sensory inputs — An internal light sensor measures ambient light and adjusts light-wash effect accordingly. A built-in temperature sensor automatically adjusts air conditioning when integrated into the system.
- Multiple language and icon labeling — Display labeling language choices include English, Chinese and Arabic. A library of common icons transcends language barriers, which is particularly useful in hospitality applications. Button labeling not available.
- Central LCD — Allows for system information to be shown such as temperature, time, channel level and current scene. Button function can change when navigating between the up to 16 pages.
- Selection of rim and fascia options — Allows décor matching to suit any environment.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

PHILIPS dynalite

Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	DyNet DC Supply	12 - 24 VDC SELV/Class 2, max 60mA @ 12VDC, max 35mA @ 24VDC typ. Stand-by power: <0.15W
	Control Inputs	RS-485 DyNet serial port
Control	Temperature Sensing	5 to 40° C ± 1.5° C
	Field Effect Detection	Range: ~15 cm (~6")
Physical	Dimensions (H x W x D)	88 mm x 88 mm x 36 mm (3.5" x 3.5" x 1.4")
	Packed Weight	0.2 kg
	Termination	One 5-way removable screw terminal
	Operating Conditions	Temperature: -5 to 50° C ambient Humdity: 0 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Compliance	Certification	CE, RCM, FCC, ICES, EN50491-3
	IP Rating	IP22
Options & Ordering		Contact your local Philips representative for ordering information.

Ordering Information

Ordering an operational Antumbra UI requires ordering both the Application Module and the Communication Module. An online ordering tool is available on the website below allowing configuration with different button and rim finishes.

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http://www.aprapps.lighting.philips.com/antumbra

Application Module Ordering

PADPE-WW

Button Finish

W = White
M = Magnesium
S = Silver
A = Aluminium

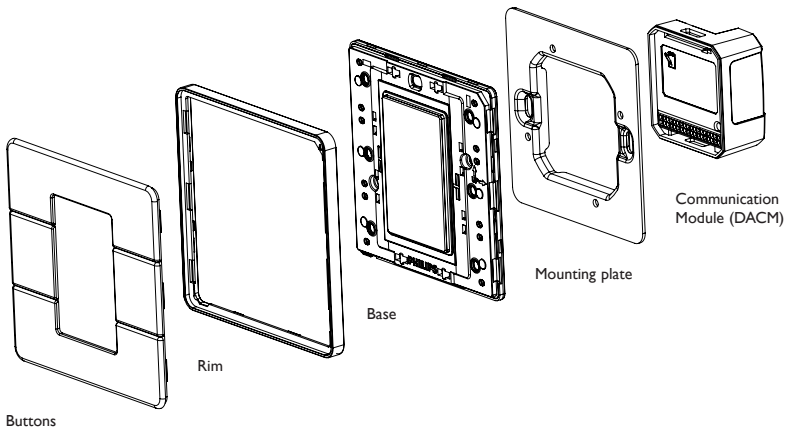
Rim Finish

W = White
M = Magnesium
C = Chrome
A = Aluminium

Communication Module Ordering

Description	Order Code
DyNet module for Dynalite compatibility. **Note**: One required for each Application Module ordered.	DACM

Exploded Diagram



Communication Module (DACM)

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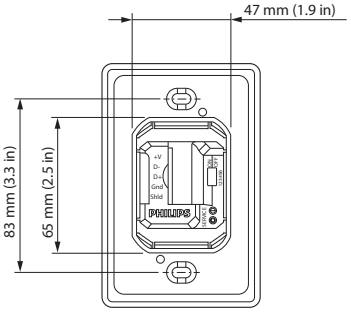
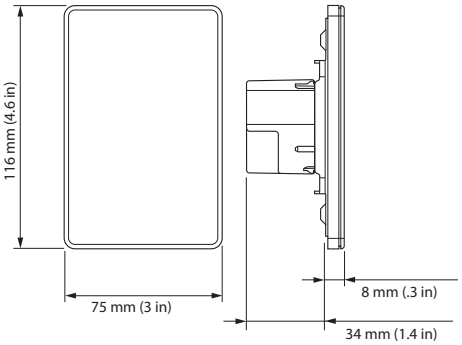
PATPA AntumbraTouch User Interfaces

The most flexible user interface solution available

The AntumbraTouch user interface has a smooth glass finish and uses 'capacitive touch' technology to detect a person's presence. It also incorporates the latest in field effect technology. The contemporary design features a number of button configurations, with each button capable of local or site-wide control functions. The PATPA range is suitable for, but not limited to, North American, South American, Australian and New Zealand markets.





- Field effect technology — The user interface detects an approaching user and 'wakes up', initiating a wall-wash lighting effect to encourage interaction.
- Capacitive touch technology — Smooth glass finish detects the presence of a finger and triggers a button press action.
- Supplied as two components — The Application Module contains buttons, rim, base and mounting plate, which can be mixed and matched to suit décor. The Communication Module contains all of the logical and network functions and can be pre-programmed off-site, allowing commissioning to commence prior to finish options being finalized.
- Hidden sensory inputs — An internal light sensor measures ambient light and adjusts light-wash effect accordingly. A built-in temperature sensor automatically adjusts air conditioning when integrated into the system.
- Multiple language and icon labeling — Button labeling language choices include English, Chinese and Arabic. A library of common icons transcends language barriers, which is particularly useful in hospitality applications.
- Selection of rim and fascia options — Allows décor matching to suit any environment.

For detailed product information, please refer to the product information pages at www.philips.com/lightingcontrolsna.

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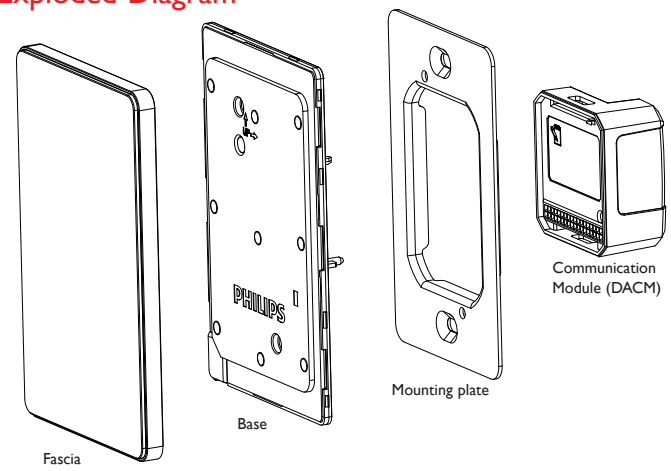
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	DyNet DC Supply	12 - 24 VDC SELV / Class 2 @ 40 mA (max.)
	Control Inputs	One RS-485 DyNet serial port One 5-way removable screw terminal (optional CAT5/CAT6 wire termination available. Requires optional DRJ485ADAPT adapter)
Physical	Dimensions (H x W x D)	4.6" x 3.0" x 0.9" (116 mm x 75 mm x 22 mm)
	Packed Weight	7.05 oz (0.2 kg)
	Button Finishes	White, Silver and Magnesium
	Rim Finishes	White, Magnesium, Chrome and Aluminum
	Number of Button Options	Software configurable from 1 to 6
	LED Indicators	Buttons - white Backlight wash - white
	Field Effect Detection Range	~ 6 inches
	Operating Conditions	Temperature: 32 to 122° F (-0 to 50° C) ambient Humdity: 10 to 95% non-condensing
	Storage & Transport	Temperature: -13 to 140° F (-25 to 60° C) ambient Humidity: 0 to 90% non-condensing
Certification	Compliance	FCC, ICES, RoHS Compliant
	IP Rating	IP22

Exploded Diagram



Ordering Information

Ordering an operational Antumbra UI requires ordering both the Application Module and the Communication Module. An online ordering tool is available on the website below allowing configuration with different button and rim finishes.

The online configuration tool also allows for button labeling details. Once an Antumbra has been configured, a full preview is available and the part number details provided for ordering purposes. Submission of the generated order form is required to process an order for labeled Antumbra user interfaces.

http://www.aprapps.lighting.philips.com/antumbra

Application Module Ordering

PATPA-WW-X

Fascia Finish	Rim Finish	Button Labeling
W = White B = Black	W = White B = Black C = Chrome A = Aluminum	X = No labeling L = Labeling

Communication Module Ordering

Description	Order Code
DyNet module for Dynalite compatibility. **Note**: One required for each Application Module ordered.	DACM
CAT5/CAT6 Wiring Adapter	DRJ45ADAPT

Communication Module (DACM)

The Communication Module is common across all interfaces in the Antumbra series and is a self-contained unit with all the logical and network functions required for any DyNet project. This device can be pre-programmed off-site without the Application Module, allowing the commissioning process to begin before the final finish options have been chosen. Communication Modules can then be installed and wired months before the final Application Modules are installed, thereby protecting them from damage during construction, while allowing for wiring, commissioning and testing.

Application Module

The Application Module contains the buttons, rim, base and mounting plate. The two visible components of the module (buttons & rim) are available in a range of different finishes. The base component contains all the sensors and indicators, which are enclosed by a rubber envelope to give an IP22 rating. A metal mounting plate supports the whole Antumbra structure so that it operates perfectly every time.

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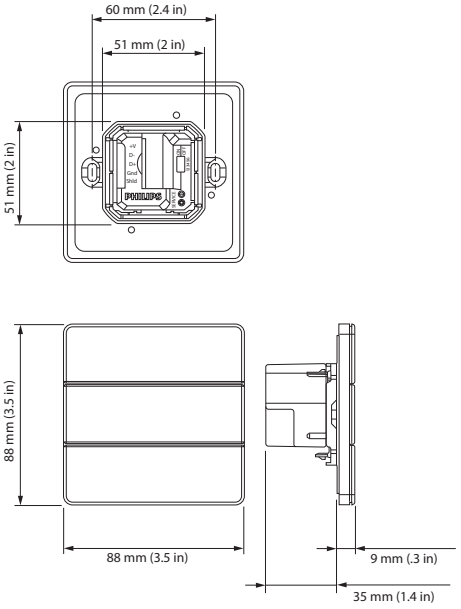
200 Franklin Square Dr
Somerset, NJ, United States
Tel: 1-800-526-2731
Email: controls.support@philips.com
Web: www.philips.com/lightingcontrolsna

Philips Lighting Canada
281 Hillmount Road
Markham, Ontario L6C 2S3
Canada

PATPE AntumbraTouch User Interfaces

The most flexible user interface solution available

The AntumbraTouch user interface has a smooth glass finish and uses 'capacitive touch' technology to detect a persons presence. It also incorporates the latest in field effect technology. The contemporary design features a number of button configurations, with each button capable of local or site-wide control functions. The PATPE range is suitable for, but not limited to, European, Middle Eastern, African and Asian markets.



- Field effect technology — The user interface detects an approaching user and 'wakes up', initiating a wall-wash lighting effect to encourage interaction.
- Capacitive touch technology — Smooth glass finish detects the presence of a finger and triggers a button press action.
- Supplied as two components — The Application Module contains fascia, rim, base and mounting plate, which can be mixed and matched to suit décor. The Communication Module contains all of the logical and network functions and is pre-programmed off-site, allowing commissioning to commence prior to finish options being finalized.
- Hidden sensory inputs — An internal light sensor measures ambient light and adjusts light-wash effect accordingly. A built-in temperature sensor automatically adjusts air conditioning when integrated into the system.
- Multiple language and icon labeling — Fascia labeling language choices include English, Chinese and Arabic. A library of common icons transcends language barriers, which is particularly useful in hospitality applications.
- Selection of rim and fascia options — Allows décor matching to suit any environment.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	DyNet DC Supply	12 - 24 VDC SELV/Class 2, @ max 40 mA from the DyNet network
	Control Inputs	One RS-485 DyNet serial port
Control	Temperature Sensing	5 to 40° C ± 1.5° C
	Field Effect Detection	Range: ~15 cm (~6")
	Glass Impact Resistance	> 0.5 J
Physical	Dimensions (H x W x D)	88 mm x 88 mm x 22 mm (3.5" x 3.5" x 0.9")
	Packed Weight	0.2 kg
	Termination	One 5-way removable screw terminal
	Operating Conditions	Temperature: -5 to 50° C ambient Humdity: 0 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Compliance	Certification	CE, RCM, FCC, ICES
	IP Rating	IP22
Options & Ordering		Contact your local Philips representative for ordering information.

Ordering Information

Ordering an operational Antumbra UI requires ordering both the Application Module and the Communication Module. An online ordering tool is available on the website below allowing configuration with different button and rim finishes.

The online configuration tool also allows for button labeling details. Once an Antumbra has been configured, a full preview is available and the part number details provided for ordering purposes. Submission of the generated order form is required to process an order for labeled Antumbra user interfaces.

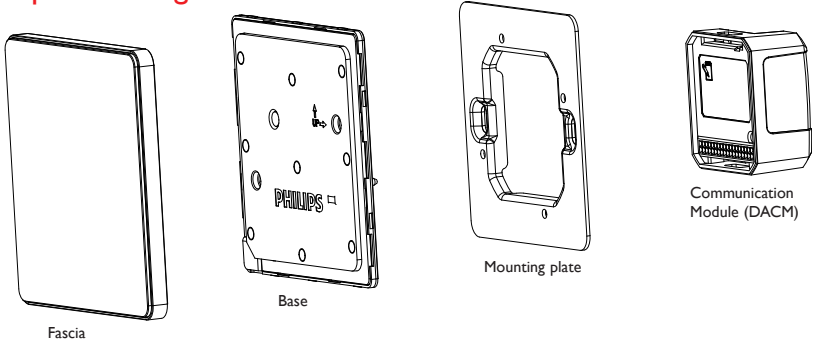
http://www.aprapps.lighting.philips.com/antumbra

Application Module Ordering

PATPE-WW-X

Fascia Finish	Rim Finish	Button Labeling
W = White B = Black	W = White B = Black C = Chrome A = Aluminum	X = No labeling L = Labeling

Exploded Diagram



Fascia

Base

Mounting plate

Communication Module (DACM)

Communication Module Ordering

Description	Order Code
DyNet module for Dynalite compatibility. **Note**: One required for each Application Module ordered.	DACM

Communication Module (DACM)

The Communication Module is common across all interfaces in the Antumbra series and is a self-contained unit with all the logical and network functions required for any DyNet project. This device can be pre-programmed off-site without the Application Module, allowing the commissioning process to begin before the final finish options have been chosen. Communication Modules can then be installed and wired months before the final Application Modules are installed, thereby protecting them from damage during construction, while allowing for wiring, commissioning and testing.

Application Module

The Application Module contains the buttons, rim, base and mounting plate. The two visible components of the module (buttons & rim) are available in a range of different finishes. The base component contains all the sensors and indicators, which are enclosed by a rubber envelope to give an IP22 rating. A metal mounting plate supports the whole Antumbra structure so that it operates perfectly every time.

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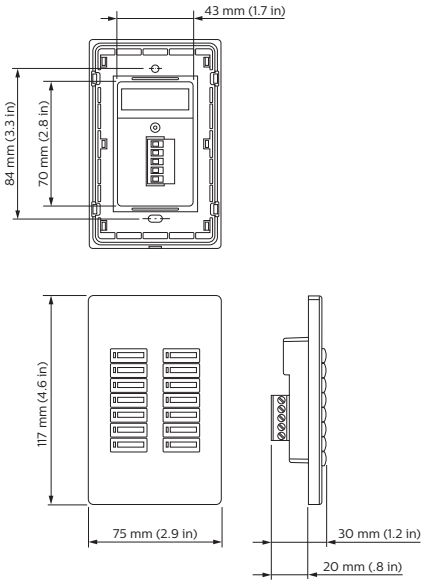
DR2PA Revolution Series User Interfaces

Clip-on cover system provides the ultimate design flexibility

The Philips Dynalite Revolution series of user interfaces provides a direct connection to the DyNet network. The devices can communicate directly with each other, with lighting load controllers and with other integration devices, offering a simple user interface capable of complex automation system functions. The DR2PA range is suitable for, but not limited to, North American, South American, Australian and New Zealand markets.



- Extensive designer range — Innovative clip-on cover fastening system provides the ultimtate flexibility in décor-matching. Standard finishes include brushed stainless steel and white or black glass.
- A choice of button colors — To complement the cover color and finish choice, buttons are available in silver, white or charcoal grey.
- Custom engraving options — Identification of button function is made simple through custom engraving. Buttons can be labeled to identify purpose or area, providing accurate explanation of function. Backlighting assists to locate the UI and provides ease of readability, even in a darkened environment.
- LED status indicators — Easily discern which mode is in operation via the LED indicator on each button.
- Standard control options — Each button can be programmed to perform a range of standard control options that are individually configured to perform functions including toggle lighting on/off and ramp lighting up/down.
- Complex functionality in a single action — A single button press can be used to effect an entire system change, providing a true automation solution.
- Designed to meet any requirement — Available in one to 24 button configurations, the Revolution series user interfaces can be designed to perform as many or as few functions as required.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Ordering

The Philips Dynalite Revolution series provides limitless flexibility and design choice through provision of finish, color, backlight and engraving options. Select one component from each column to specify a complete configuration.

Series Prefix: DR2PA

Column 1	Column 2 (X if not being used)	Column 3 (X if not being used)	Always X	Cover Finish	Option	LEDs & Backlight#	Always X	Engraving ##
M	X	X	C	WE	P	BW	X	C

Column Configurations *See notes below

A	B	C
ON/OFF	ON OFF	ON OFF

D	E	F
1 2 OFF	1 2 OFF	1 2 3 OFF

G	H	I
1 2 3 OFF	1 2 3 4 OFF	1 2 3 4 OFF

J	K	L
1 2 OFF ▲ ▼	1 2 3 4 5 OFF	1 2 3 4 5 6 OFF

M
1 2 3 4 5 OFF ▲ ▼

*** Column Configuration Notes:**
1. Configurations A-F & H are only available in single column layouts. All others are available in single or dual column.

Cover Finish

SS	Brushed Stainless Steel
BG	Black Borosilicate Glass
SG	White Optically Clear Starfire Glass
PB	Polished Brass (gold plated stainless)
AB	Antique Bronze
WE	White (powder coated stainless)
MS	Mirrored Stainless Steel
XX	No cover

Option

P	Pluggable Screw Terminal

LEDs & Backlight#

BW	Blue Indicator LEDs White Backlight
BO	Blue Indicator LEDs Orange Backlight

 # Backlight Note:
BW option only available with charcoal button caps.

Engraving

C	Custom
S	Standard
N	None

Engraving Note:
If Standard engraving selected, buttons will be engraved as shown in Column Configuration illustrations for single column UIs. For dual column UIs, numbering will start at top-most left button and continue to bottom-most right hand button.

Engraving Definition

X	Standard
C	Custom (details must accompany order)

Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	DyNet DC Supply	12 V @ 50 mA from the DyNet network
	Control Inputs	One RS-485 DyNet serial port
Physical	Dimensions (H x W x D)	117 mm x 75 mm x 30 mm (4.6" x 2.9" x 1.2")
	Packed Weight	0.2 kg
	Construction	Bezel, Key Carrier and Gridplate: Polycarbonate Cover: Various - contact your Philips representative for information
	Operating Conditions	Temperature: -0 to 50° C ambient Humdity: 10 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick

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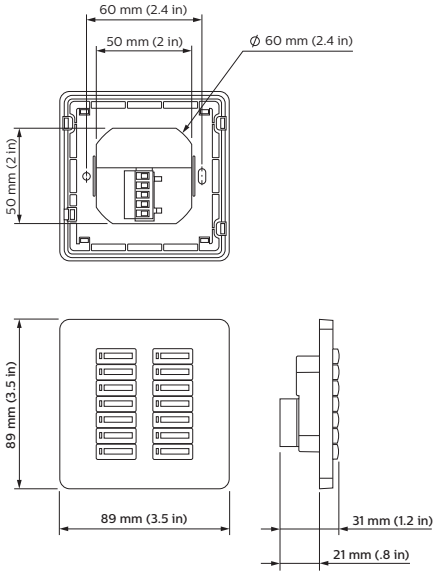
DR2PE Revolution Series User Interfaces

Clip-on cover system provides the ultimate design flexibility

The Philips Dynalite Revolution series of user interfaces provides a direct connection to the DyNet network. The devices can communicate directly with each other, with lighting load controllers and with other integration devices, offering a simple user interface capable of complex automation system functions. The DR2PE range is suitable for, but not limited to, European, Middle Eastern, African and Asian markets.



- Extensive designer range — Innovative clip-on cover fastening system provides the ultimate flexibility in décor-matching. Standard finishes include brushed stainless steel and white or black glass.
- A choice of button colors — To complement the cover color and finish choice, buttons are available in silver, white or charcoal grey.
- Custom engraving options — Identification of button function is made simple through custom engraving. Buttons can be labeled to identify purpose or area, providing accurate explanation of function. Backlighting assists to locate the panel and provides ease of readability, even in a darkened environment.
- LED status indicators — Easily discern which mode is in operation via the LED indicator on each button.
- Standard control options — Each button can be programmed to perform a range of standard control options that are individually configured to perform functions including toggle lighting on/off and ramp lighting up/down.
- Complex functionality in a single action — A single button press can be used to effect an entire system change, providing a true automation solution.
- Designed to meet any requirement — Available in one to 24 button configurations, the Revolution series user interfaces can be designed to perform as many or as few functions as required.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Ordering

The Philips Dynalite Revolution series provides limitless flexibility and design choice through provision of finish, color, backlight and engraving options. Select one component from each column to specify a complete configuration.

Series Prefix | Column 1 | Column 2 (X if not being used) | Column 3 (X if not being used) | Always X | | | | Always X

DR2PE-MXX-X-C-WE-P-BW-X-C

Column Configurations *See notes below

A	B	C
ON/OFF	ON OFF	ON OFF
D	**E**	**F**
1 2 OFF	1 2 OFF	1 2 3 OFF
G	**H**	**I**
1 2 3 OFF	1 2 3 4 OFF	1 2 3 4 OFF
J	**K**	**L**
1 2 OFF ▲ ▼	1 2 3 4 5 OFF	1 2 3 4 5 6 OFF
M		
1 2 3 4 5 OFF ▲ ▼		

*** Column Configuration Notes:**
1. Configurations A-F & H are only available in single column layouts. All others are available in single or dual column.

Button Color

W	White
C	Charcoal
S	Silver

Cover Finish

SS	Brushed Stainless Steel
BG	Black Borosilicate Glass
SG	White Optically Clear Starfire Glass
PB	Polished Brass (gold plated stainless)
AB	Antique Bronze
WE	White (powder coated stainless)
MS	Mirrored Stainless Steel
XX	No cover

Option

P	Pluggable Screw Terminal

LEDs & Backlight#

BW	Blue Indicator LEDs White Backlight
BO	Blue Indicator LEDs Orange Backlight

 # Backlight Note:
BW option only available with charcoal button caps.

Engraving

C	Custom
S	Standard
N	None

Engraving Note:
If Standard engraving selected, buttons will be engraved as shown in Column Configuration illustrations for single column UIs. For dual column UIs, numbering will start at top-most left button and continue to bottom-most right hand button.

Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	DyNet DC Supply	12 V @ 50 mA from the DyNet network
	Control Inputs	One RS-485 DyNet serial port
Physical	Dimensions (H x W x D)	89 mm x 89 mm x 31 mm (3.5" x 3.5" x 1.2")
	Packed Weight	0.2 kg
	Construction	Bezel, Key Carrier and Gridplate: Polycarbonate Cover: Various - contact your Philips representative for information
	Operating Conditions	Temperature: -0 to 50° C ambient Humdity: 10 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick

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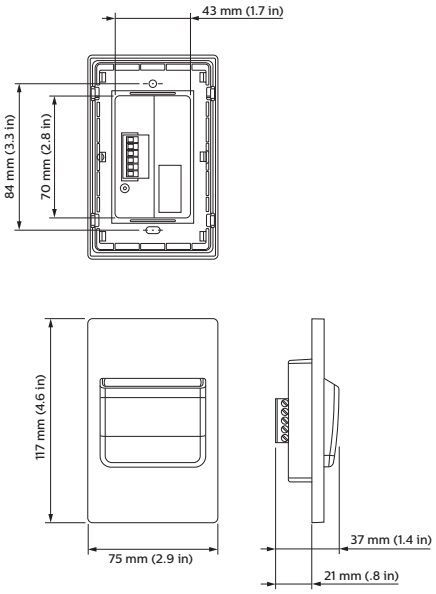
DR2PA-SA Hotel Room System Actuator

Simple hotel room automation

The Philips Dynalite hotel system actuator provides a simple individual room energy management solution. Inserting or removing the room access card into the actuator switches between 'occupied' and 'unoccupied' modes to perform a host of functions including opening or closing blinds, switching lighting on or off, selecting pre-set air conditioning settings and controlling power to designated electrical outlets. The DR2PA-SA is suitable for, but not limited to, North American, South American, Australian and New Zealand markets.

- Network capability — Integration with other devices on the Philips Dynalite network provides advanced control functionality from a single control point.
- Extensive designer range — Innovative clip-on cover fastening system provides the ultimate flexibility in décor-matching. Standard finishes include brushed stainless steel and white or black glass. Custom orders available in wood grain, processed stone, laminate or fabric.
- Card holder finish and color choices — Card holders are available in three finishes to complement any hotel room decor. Backlight available in red, green or blue.



For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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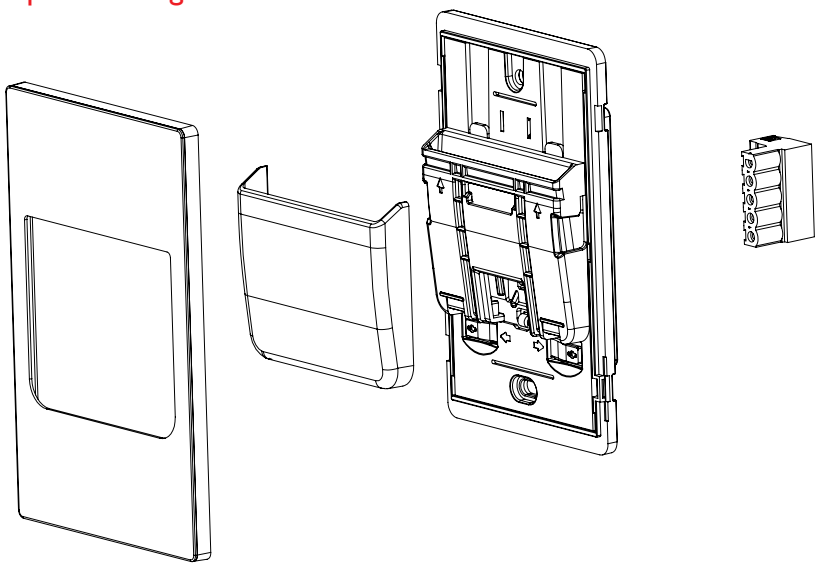
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	DyNet DC Supply	12V @ 50 mA from the DyNet network
	Control Inputs	One RS-485 DyNet serial port
Physical	Dimensions (H x W x D)	117 mm x 75 mm x 37 mm (4.6" x 2.9" x 1.4")
	Compatible card size (H x W x D)	86 mm x 54 mm x 0.5 - 2.2 mm (3.4" x 2.1" x .01 - .08")
	Packed Weight	0.2 kg
	Operating Conditions	Temperature: -0 to 50° C ambient Humdity: 10 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering		Contact your local Philips representative for ordering information.

Exploded Diagram



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DR2PE-SA Hotel Room System Actuator

Simple hotel room automation

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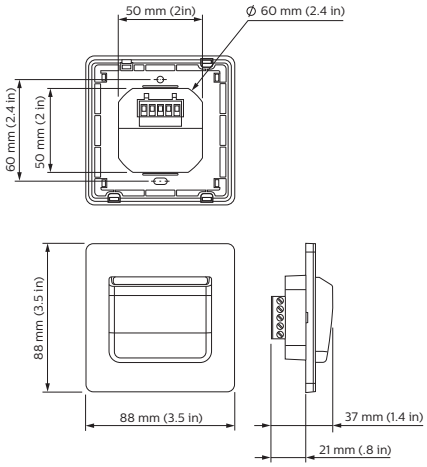

- Network capability — Integration with other devices on the Philips Dynalite network provides advanced control functionality from a single control point.
- Extensive designer range — Innovative clip-on cover fastening system provides the ultimate flexibility in décor-matching. Standard finishes include brushed stainless steel and white or black glass. Custom orders available in wood grain, processed stone, laminate or fabric.
- Card holder finish and color choices — Card holders are available in three finishes to complement any hotel room decor. Backlight available in red, green or blue.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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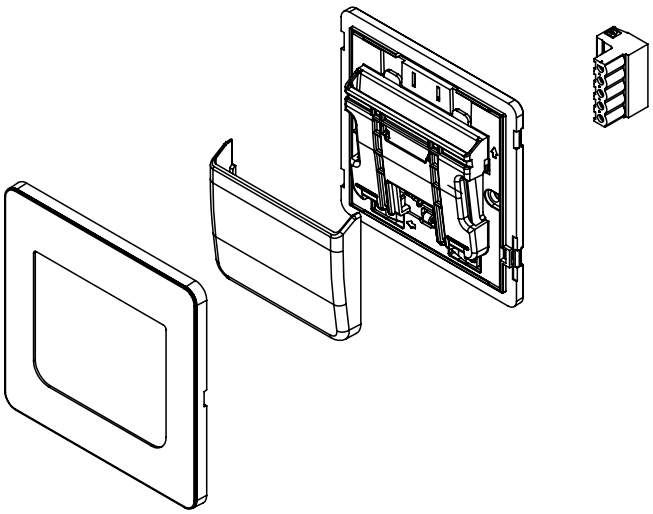
Item	Specification	Details
Electrical	DyNet DC Supply	12 V @ 50 mA from the DyNet network
	Control Inputs	One RS-485 DyNet serial port
Physical	Dimensions (H x W x D)	88 mm x 88 mm x 37 mm (3.5" x 3.5" x 1.4")
	Compatible card size (H x W x D)	86 mm x 54 mm x 0.5 - 2.2 mm (3.4" x 2.1" x .01 - .08")
	Packed Weight	0.2 kg
	Operating Conditions	Temperature: -0 to 50° C ambient Humdity: 10 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering		Contact your local Philips representative for ordering information.

Exploded Diagram



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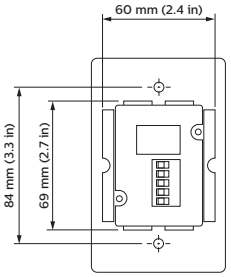
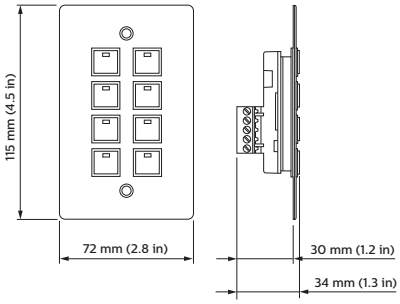
DPNA Classic Series User Interfaces

Contemporary styling to suit any application

The Philips Dynalite DPNA series user interfaces are a popular choice for commercial and residential applications, providing an integrated automation solution. The DPNA range is suitable for, but not limited to, North American, South American, Australian and New Zealand markets.





- Available in a range of standard finishes — Supplied as standard in high quality brushed stainless steel, user interfaces are also available in polished brass, mirrored stainless steel or white powder coat. Custom powder coat colors are available on request.
- LED status indicators on each button — Provides tactile and visual feedback on system operation.
- Removable button caps — Allows engraving for easy identification of button function.
- Button color choices — Supplied in silver as standard, with black bezel and black engraving, button caps are also available in charcoal grey as a standard option.
- Available in 13 standard layouts — Incorporates the most commonly used control scenarios.
- Custom features available — Optional devices including faders, displays, key switches, plug sockets and engraving are available for unique control solutions.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	DyNet DC Supply	12 VDC @ 20 mA from the DyNet network
	Control Inputs	One RS-485 DyNet serial port
Physical	Dimensions (H x W x D)	115 mm x 72 mm x 34 mm (4.5" x 2.8" x 1.3")
	Packed Weight	0.15 kg
	Construction	Plate: Stainless steel or solid brass Button: Metalized ABS plastic
	Operating Conditions	Temperature: -0 to 50° C ambient Humdity: 10 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering		Contact your local Philips representative for ordering information.

Ordering - Non-Stock User Interfaces

Supplied in stainless steel finish, silver button caps, black engraving & bezel.

Panel Configuration	Order Code
2 button 2 room join keypad	DPNA926
0 button keypad with 2 room join keyswitch	DPNA908J
0 button keypad with 3 room join keyswitch	DPNA908J3
4 button preset keypad with single fader	DPNA941F1
4 button preset keypad with keypad enable keyswitch	DPNA941D
4 button preset keypad with DyNet network socket	DPNA941N
4 button preset keypad with 2 room join keyswitch	DPNA941J
4 button preset keypad with 3 room join keyswitch	DPNA941J3
4 button 3 room join keypad	DPNA946
4 button 3 room join keypad with disable keyswitch	DPNA946D
5 button preset 4 fader keypad	DPNA951F4
5 button preset 6 fader keypad	DPNA951F6
5 button preset 8 fader keypad	DPNA951F8
5 button preset 12 fader keypad	DPNA951F12
8 button preset with keypad enable keyswitch	DPNA981D
8 button preset keypad with 2 room join keyswitch	DPNA981J
8 button preset keypad with 3 room join keyswitch	DPNA981J3
8 button preset keypad with DyNet network socket	DPNA981N

Ordering - Alternate User Interface Finishes

User interfaces are supplied in brushed stainless steel as standard, but a range of alternate finishes are available.

Finish	Suffix
Coated solid brass finish	DPNA***-BS
Custom powdercoat finish	DPNA***-PC

Ordering - Standard User Interfaces

Supplied in stainless steel finish, silver button caps, black engraving & bezel.

Panel Configuration	Order Code
0 button with 1 DyNet network socket	DPNA308
1 button ON/OFF toggle	DPNA914
4 button preset 1-3, OFF	DPNA941
6 button preset 1-3, ▲, ▼, OFF	DPNA963
8 button preset 1-7, OFF	DPNA981
8 button programming	DPNA982
8 button programming with keyswitch	DPNA982D
10 button preset, 1-7, ▲, ▼, OFF	DPNA9103

Ordering - Stock Button Caps

Button caps are available in silver or charcoal

Engraving	Silver	Charcoal
None (blank)	DPN-CAP-SI-LED-BLANK	DPN-CAP-CH-LED-BLANK
1	DPN-CAP-SI-LED-1	DPN-CAP-CH-LED-1
2	DPN-CAP-SI-LED-2	DPN-CAP-CH-LED-2
3	DPN-CAP-SI-LED-3	DPN-CAP-CH-LED-3
4	DPN-CAP-SI-LED-4	DPN-CAP-CH-LED-4
5	DPN-CAP-SI-LED-5	DPN-CAP-CH-LED-5
6	DPN-CAP-SI-LED-6	DPN-CAP-CH-LED-6
7	DPN-CAP-SI-LED-7	DPN-CAP-CH-LED-7
8	DPN-CAP-SI-LED-8	DPN-CAP-CH-LED-8
9	DPN-CAP-SI-LED-9	DPN-CAP-CH-LED-9
10	DPN-CAP-SI-LED-10	DPN-CAP-CH-LED-10
11	DPN-CAP-SI-LED-11	DPN-CAP-CH-LED-11
12	DPN-CAP-SI-LED-12	DPN-CAP-CH-LED-12
13	DPN-CAP-SI-LED-13	DPN-CAP-CH-LED-13
14	DPN-CAP-SI-LED-14	DPN-CAP-CH-LED-14
15	DPN-CAP-SI-LED-15	DPN-CAP-CH-LED-15
▲	DPN-CAP-SI-UP	DPN-CAP-CH-UP
▼	DPN-CAP-SI-DOWN	DPN-CAP-CH-DOWN
ON	DPN-CAP-SI-LED-ON	DPN-CAP-CH-LED-ON
OFF	DPN-CAP-SI-LED-OFF	DPN-CAP-CH-LED-OFF
ON/OFF	DPN-CAP-SI-LED-ON/OFF	DPN-CAP-CH-LED-ON/OFF
MANUAL	DPN-CAP-SI-LED-MANUAL	DPN-CAP-CH-LED-MANUAL
DAY	DPN-CAP-SI-LED-DAY	DPN-CAP-CH-LED-DAY
NIGHT	DPN-CAP-SI-LED-NIGHT	DPN-CAP-CH-LED-NIGHT
SECURITY	DPN-CAP-SI-LED-SECURITY	DPN-CAP-CH-LED-SECURITY
CLEAN	DPN-CAP-SI-LED-CLEAN	DPN-CAP-CH-LED-CLEAN
CUSTOM ENGRAVED BUTTON CAPS		
Engraving specified with order		

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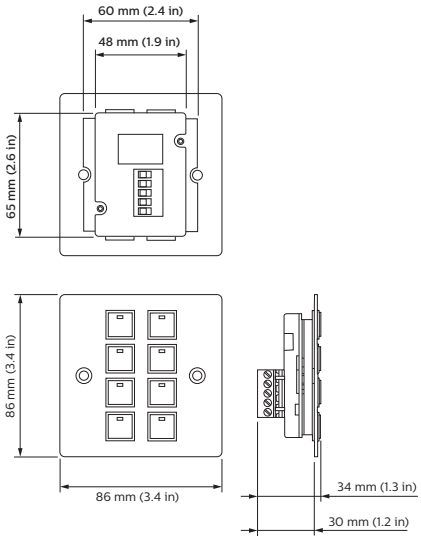
DPNE Classic Series User Interfaces

Contemporary styling to suit any application

The Philips Dynalite DPNE series user interfaces are a popular choice for commercial and residential applications, providing an integrated automation solution. The DPNE range is suitable for, but not limited to, European, Middle Eastern, African and Asian markets.



- Available in a range of standard finishes — Supplied as standard in high quality brushed stainless steel, user interfaces are also available in polished brass, mirrored stainless steel or white powder coat. Custom powder coat colors are available on request.
- LED status indicators on each button — Provides tactile and visual feedback on system operation.
- Removable button caps — Allows engraving for easy identification of button function.
- Button color choices — Supplied in silver as standard, with black bezel and black engraving, button caps are also available in charcoal grey as a standard option.
- Available in 13 standard layouts — Incorporates the most commonly used control scenarios.
- Custom features available — Optional devices including faders, displays, key switches, plug sockets and engraving are available for unique control solutions.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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dynalite

Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	DyNet DC Supply	12 V @ 20 mA from the DyNet network
	Control Inputs	One RS-485 DyNet serial port
Physical	Dimensions (H x W x D)	86 mm x 86 mm x 34 mm (3.4" x 3.4" x 1.3")
	Packed Weight	0.15 kg
	Construction	Plate: Stainless steel or solid brass Button: Metalized ABS plastic
	Operating Conditions	Temperature: -0 to 50° C ambient Humdity: 10 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering		Contact your local Philips representative for ordering information.

Ordering - Non-Stock User Interfaces

Supplied in stainless steel finish, silver button caps, black engraving & bezel.

Panel Configuration	Order Code
2 button 2 room join keypad	DPNE926
0 button keypad with 2 room join keyswitch	DPNE908J
0 button keypad with 3 room join keyswitch	DPNE908J3
4 button keypad panel with single fader	DPNE941F1
4 button preset keypad with keypad enable keyswitch	DPNE941D
4 button preset keypad with DyNet network socket	DPNE941N
4 button preset keypad with 2 room join keyswitch	DPNE941J
4 button preset keypad with 3 room join keyswitch	DPNE941J3
4 button 3 room join keypad	DPNE946
4 button 3 room join keypad with disable keyswitch	DPNE946D
5 button preset 4 fader keypad	DPNE951F4
5 button preset 6 fader keypad	DPNE951F6
5 button preset 8 fader keypad	DPNE951F8
5 button preset 12 fader keypad	DPNE951F12
8 button preset with keypad enable keyswitch	DPNE981D
8 button preset keypad with 2 room join keyswitch	DPNE981J
8 button preset keypad with 3 room join keyswitch	DPNE981J3
8 button preset keypad with DyNet network socket	DPNE981N

Ordering - Alternate User Interface Finishes

User interfaces are supplied in brushed stainless steel as standard, but a range of alternate finishes are available.

Finish	Suffix
Coated solid brass finish	DPNE***-BS
Custom powdercoat finish	DPNE***-PC

Ordering - Standard User Interfaces

Supplied in stainless steel finish, silver button caps, black engraving & bezel.

Panel Configuration	Order Code
0 button with 1 DyNet network socket	DPNE308
1 button ON/OFF toggle	DPNE914
4 button preset 1-3, OFF	DPNE941
6 button preset 1-3, ▲, ▼, OFF	DPNE963
8 button preset 1-7, OFF	DPNE981
8 button programming	DPNE982
8 button programming with keyswitch	DPNE982D
10 button preset, 1-7, ▲, ▼, OFF	DPNE9103

Ordering - Stock Button Caps

Button caps are available in silver or charcoal

Engraving	Silver	Charcoal
None (blank)	DPN-CAP-SI-LED-BLANK	DPN-CAP-CH-LED-BLANK
1	DPN-CAP-SI-LED-1	DPN-CAP-CH-LED-1
2	DPN-CAP-SI-LED-2	DPN-CAP-CH-LED-2
3	DPN-CAP-SI-LED-3	DPN-CAP-CH-LED-3
4	DPN-CAP-SI-LED-4	DPN-CAP-CH-LED-4
5	DPN-CAP-SI-LED-5	DPN-CAP-CH-LED-5
6	DPN-CAP-SI-LED-6	DPN-CAP-CH-LED-6
7	DPN-CAP-SI-LED-7	DPN-CAP-CH-LED-7
8	DPN-CAP-SI-LED-8	DPN-CAP-CH-LED-8
9	DPN-CAP-SI-LED-9	DPN-CAP-CH-LED-9
10	DPN-CAP-SI-LED-10	DPN-CAP-CH-LED-10
11	DPN-CAP-SI-LED-11	DPN-CAP-CH-LED-11
12	DPN-CAP-SI-LED-12	DPN-CAP-CH-LED-12
13	DPN-CAP-SI-LED-13	DPN-CAP-CH-LED-13
14	DPN-CAP-SI-LED-14	DPN-CAP-CH-LED-14
15	DPN-CAP-SI-LED-15	DPN-CAP-CH-LED-15
▲	DPN-CAP-SI-UP	DPN-CAP-CH-UP
▼	DPN-CAP-SI-DOWN	DPN-CAP-CH-DOWN
ON	DPN-CAP-SI-LED-ON	DPN-CAP-CH-LED-ON
OFF	DPN-CAP-SI-LED-OFF	DPN-CAP-CH-LED-OFF
ON/OFF	DPN-CAP-SI-LED-ON/OFF	DPN-CAP-CH-LED-ON/OFF
MANUAL	DPN-CAP-SI-LED-MANUAL	DPN-CAP-CH-LED-MANUAL
DAY	DPN-CAP-SI-LED-DAY	DPN-CAP-CH-LED-DAY
NIGHT	DPN-CAP-SI-LED-NIGHT	DPN-CAP-CH-LED-NIGHT
SECURITY	DPN-CAP-SI-LED-SECURITY	DPN-CAP-CH-LED-SECURITY
CLEAN	DPN-CAP-SI-LED-CLEAN	DPN-CAP-CH-LED-CLEAN
CUSTOM ENGRAVED BUTTON CAPS		
Engraving specified with order		

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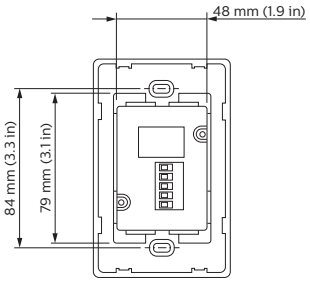
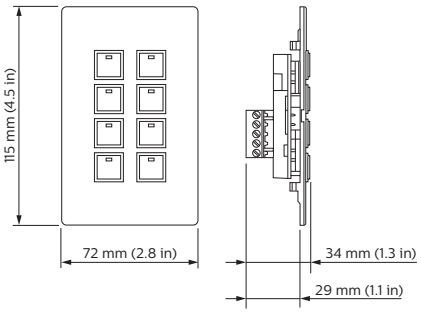
DPNA-SF Classic Series User Interfaces

Contemporary styling to suit any application

The Philips Dynalite DPNA-SF series user interfaces are a popular choice for commercial and residential applications, providing an integrated automation solution. The DPNA-SF range features a screwless fascia and is suitable for, but not limited to, North American, South American, Australian and New Zealand markets.





- Screwless fixing fascia — For use in applications where design aesthetic is a key consideration.
- Available in a range of standard finishes — Supplied as standard in high quality brushed stainless steel, user interfaces are also available in polished brass, mirrored stainless steel or white powder coat. Custom powder coat colors are available on request.
- LED status indicators on each button — Provides tactile and visual feedback on system operation.
- Removable button caps — Allows engraving for easy identification of button function.
- Button color choices — Supplied in silver as standard, with black bezel and black engraving, button caps are also available in charcoal grey as a standard option.
- Available in 13 standard layouts — Incorporates the most commonly used control scenarios.
- Custom features available — Optional devices including faders, displays, key switches, plug sockets and engraving are available for unique control solutions.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

PHILIPS
dynalite

Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	DyNet DC Supply	12 VDC @ 20 mA from the DyNet network
	Control Inputs	One RS-485 DyNet serial port
Physical	Dimensions (H x W x D)	115 mm x 72 mm x 34 mm (4.5" x 2.8" x 1.3")
	Packed Weight	0.15 kg
	Construction	Plate: Stainless steel or solid brass Button: Metalized ABS plastic
	Operating Conditions	Temperature: -0 to 50° C ambient Humdity: 10 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering		Contact your local Philips representative for ordering information.

Ordering - Non-Stock User Interfaces

Supplied in stainless steel finish, silver button caps, black engraving & bezel.

Panel Configuration	Order Code
2 button 2 room join keypad	DPNA926-SF
0 button keypad with 2 room join keyswitch	DPNA908J-SF
0 button keypad with 3 room join keyswitch	DPNA908J3-SF
4 button preset keypad with single fader	DPNA941F1-SF
4 button preset keypad with keypad enable keyswitch	DPNA941D-SF
4 button preset keypad with DyNet network socket	DPNA941N-SF
4 button preset keypad with 2 room join keyswitch	DPNA941J-SF
4 button preset keypad with 3 room join keyswitch	DPNA941J3-SF
4 button 3 room join keypad	DPNA946-SF
4 button 3 room join keypad with disable keyswitch	DPNA946D-SF
5 button preset 4 fader keypad	DPNA951F4-SF
5 button preset 6 fader keypad	DPNA951F6-SF
5 button preset 8 fader keypad	DPNA951F8-SF
5 button preset 12 fader keypad	DPNA951F12-SF
8 button preset with keypad enable keyswitch	DPNA981D-SF
8 button preset keypad with 2 room join keyswitch	DPNA981J-SF
8 button preset keypad with 3 room join keyswitch	DPNA981J3-SF
8 button preset keypad with DyNet network socket	DPNA981N-SF

Ordering - Alternate User Interface Finishes

User interfaces are supplied in brushed stainless steel as standard, but a range of alternate finishes are available.

Finish	Suffix
Coated solid brass finish	DPNA***-BS
Custom powdercoat finish	DPNA***-PC

Ordering - Standard User Interfaces

Supplied in stainless steel finish, silver button caps, black engraving & bezel.

Panel Configuration	Order Code
0 button with 1 DyNet network socket	DPNA308-SF
1 button ON/OFF toggle	DPNA914-SF
4 button preset 1-3, OFF	DPNA941-SF
6 button preset 1-3, ▲, ▼, OFF	DPNA963-SF
8 button preset 1-7, OFF	DPNA981-SF
8 button programming	DPNA982-SF
8 button programming with keyswitch	DPNA982D-SF
10 button preset, 1-7, ▲, ▼, OFF	DPNA9103-SF

Ordering - Stock Button Caps

Button caps are available in silver or charcoal

Engraving	Silver	Charcoal
None (blank)	DPN-CAP-SI-LED-BLANK	DPN-CAP-CH-LED-BLANK
1	DPN-CAP-SI-LED-1	DPN-CAP-CH-LED-1
2	DPN-CAP-SI-LED-2	DPN-CAP-CH-LED-2
3	DPN-CAP-SI-LED-3	DPN-CAP-CH-LED-3
4	DPN-CAP-SI-LED-4	DPN-CAP-CH-LED-4
5	DPN-CAP-SI-LED-5	DPN-CAP-CH-LED-5
6	DPN-CAP-SI-LED-6	DPN-CAP-CH-LED-6
7	DPN-CAP-SI-LED-7	DPN-CAP-CH-LED-7
8	DPN-CAP-SI-LED-8	DPN-CAP-CH-LED-8
9	DPN-CAP-SI-LED-9	DPN-CAP-CH-LED-9
10	DPN-CAP-SI-LED-10	DPN-CAP-CH-LED-10
11	DPN-CAP-SI-LED-11	DPN-CAP-CH-LED-11
12	DPN-CAP-SI-LED-12	DPN-CAP-CH-LED-12
13	DPN-CAP-SI-LED-13	DPN-CAP-CH-LED-13
14	DPN-CAP-SI-LED-14	DPN-CAP-CH-LED-14
15	DPN-CAP-SI-LED-15	DPN-CAP-CH-LED-15
▲	DPN-CAP-SI-UP	DPN-CAP-CH-UP
▼	DPN-CAP-SI-DOWN	DPN-CAP-CH-DOWN
ON	DPN-CAP-SI-LED-ON	DPN-CAP-CH-LED-ON
OFF	DPN-CAP-SI-LED-OFF	DPN-CAP-CH-LED-OFF
ON/OFF	DPN-CAP-SI-LED-ON/OFF	DPN-CAP-CH-LED-ON/OFF
MANUAL	DPN-CAP-SI-LED-MANUAL	DPN-CAP-CH-LED-MANUAL
DAY	DPN-CAP-SI-LED-DAY	DPN-CAP-CH-LED-DAY
NIGHT	DPN-CAP-SI-LED-NIGHT	DPN-CAP-CH-LED-NIGHT
SECURITY	DPN-CAP-SI-LED-SECURITY	DPN-CAP-CH-LED-SECURITY
CLEAN	DPN-CAP-SI-LED-CLEAN	DPN-CAP-CH-LED-CLEAN
CUSTOM ENGRAVED BUTTON CAPS		
Engraving specified with order		

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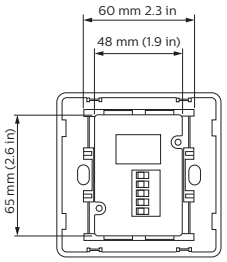
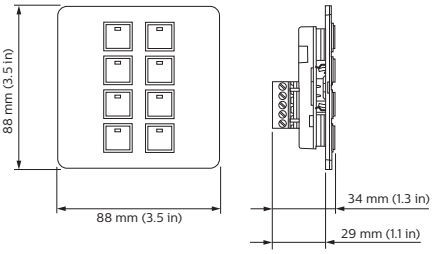
DPNE-SF Classic Series User Interfaces

Contemporary styling to suit any application

The Philips Dynalite DPNE-SF series user interfaces are a popular choice for commercial and residential applications, providing an integrated automation solution. The DPNE-SF range features a screwless fascia and is suitable for, but not limited to, European, Middle Eastern, African and Asian markets.





- Screwless fixing fascia — For use in applications where design aesthetic is a key consideration.
- Available in a range of finishes — Supplied as standard in high quality brushed stainless steel, user interfaces are also available in custom powder coat colors on request.
- LED status indicators on each button — Provides tactile and visual feedback on system operation.
- Removable button caps — Allows engraving for easy identification of button function.
- Button color choices — Supplied in silver as standard, with black bezel and black engraving, button caps are also available in charcoal grey as a standard option.
- Available in 13 standard layouts — Incorporates the most commonly used control scenarios.
- Custom features available — Optional devices including faders, displays, key switches, plug sockets and engraving are available for unique control solutions.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	DyNet DC Supply	12 VDC @ 20 mA from the DyNet network
	Control Inputs	One RS-485 DyNet serial port
Physical	Dimensions (H x W x D)	88 mm x 88 mm x 34 mm (3.5" x 3.5" x 1.3")
	Packed Weight	0.15 kg
	Construction	Plate: Stainless steel or solid brass Button: Metalized ABS plastic
	Operating Conditions	Temperature: -0 to 50° C ambient Humdity: 10 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering		Contact your local Philips representative for ordering information.

Ordering - Non-Stock User Interfaces

Supplied in stainless steel finish, silver button caps, black engraving & bezel.

Panel Configuration	Order Code
2 button 2 room join keypad	DPNE926-SF
0 button keypad with 2 room join keyswitch	DPNE908J-SF
0 button keypad with 3 room join keyswitch	DPNE908J3-SF
4 button preset keypad with single fader	DPNE941F1-SF
4 button preset keypad with keypad enable keyswitch	DPNE941D-SF
4 button preset keypad with DyNet network socket	DPNE941N-SF
4 button preset keypad with 2 room join keyswitch	DPNE941J-SF
4 button preset keypad with 3 room join keyswitch	DPNE941J3-SF
4 button 3 room join keypad	DPNE946-SF
4 button 3 room join keypad with disable keyswitch	DPNE946D-SF
5 button preset 4 fader keypad	DPNE951F4-SF
5 button preset 6 fader keypad	DPNE951F6-SF
5 button preset 8 fader keypad	DPNE951F8-SF
5 button preset 12 fader keypad	DPNE951F12-SF
8 button preset with keypad enable keyswitch	DPNE981D-SF
8 button preset keypad with 2 room join keyswitch	DPNE981J-SF
8 button preset keypad with 3 room join keyswitch	DPNE981J3-SF
8 button preset keypad with DyNet network socket	DPNE981N-SF

Ordering - Alternate User Interface Finishes

User interfaces are supplied in brushed stainless steel as standard, but a range of alternate finishes are available.

Finish	Suffix
Custom powdercoat finish	DPNE***-PC

Ordering - Standard User Interfaces

Supplied in stainless steel finish, silver button caps, black engraving & bezel.

Panel Configuration	Order Code
0 button with 1 DyNet network socket	DPNE308-SF
1 button ON/OFF toggle	DPNE914-SF
4 button preset 1-3, OFF	DPNE941-SF
6 button preset 1-3, ▲, ▼, OFF	DPNE963-SF
8 button preset 1-7, OFF	DPNE981-SF
8 button programming	DPNE982-SF
8 button programming with keyswitch	DPNE982D-SF
10 button preset, 1-7, ▲, ▼, OFF	DPNE9103-SF

Ordering - Stock Button Caps

Button caps are available in silver or charcoal

Engraving	Silver	Charcoal
None (blank)	DPN-CAP-SI-LED-BLANK	DPN-CAP-CH-LED-BLANK
1	DPN-CAP-SI-LED-1	DPN-CAP-CH-LED-1
2	DPN-CAP-SI-LED-2	DPN-CAP-CH-LED-2
3	DPN-CAP-SI-LED-3	DPN-CAP-CH-LED-3
4	DPN-CAP-SI-LED-4	DPN-CAP-CH-LED-4
5	DPN-CAP-SI-LED-5	DPN-CAP-CH-LED-5
6	DPN-CAP-SI-LED-6	DPN-CAP-CH-LED-6
7	DPN-CAP-SI-LED-7	DPN-CAP-CH-LED-7
8	DPN-CAP-SI-LED-8	DPN-CAP-CH-LED-8
9	DPN-CAP-SI-LED-9	DPN-CAP-CH-LED-9
10	DPN-CAP-SI-LED-10	DPN-CAP-CH-LED-10
11	DPN-CAP-SI-LED-11	DPN-CAP-CH-LED-11
12	DPN-CAP-SI-LED-12	DPN-CAP-CH-LED-12
13	DPN-CAP-SI-LED-13	DPN-CAP-CH-LED-13
14	DPN-CAP-SI-LED-14	DPN-CAP-CH-LED-14
15	DPN-CAP-SI-LED-15	DPN-CAP-CH-LED-15
▲	DPN-CAP-SI-UP	DPN-CAP-CH-UP
▼	DPN-CAP-SI-DOWN	DPN-CAP-CH-DOWN
ON	DPN-CAP-SI-LED-ON	DPN-CAP-CH-LED-ON
OFF	DPN-CAP-SI-LED-OFF	DPN-CAP-CH-LED-OFF
ON/OFF	DPN-CAP-SI-LED-ON/OFF	DPN-CAP-CH-LED-ON/OFF
MANUAL	DPN-CAP-SI-LED-MANUAL	DPN-CAP-CH-LED-MANUAL
DAY	DPN-CAP-SI-LED-DAY	DPN-CAP-CH-LED-DAY
NIGHT	DPN-CAP-SI-LED-NIGHT	DPN-CAP-CH-LED-NIGHT
SECURITY	DPN-CAP-SI-LED-SECURITY	DPN-CAP-CH-LED-SECURITY
CLEAN	DPN-CAP-SI-LED-CLEAN	DPN-CAP-CH-LED-CLEAN
CUSTOM ENGRAVED BUTTON CAPS		
Engraving specified with order		

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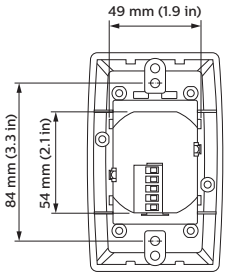
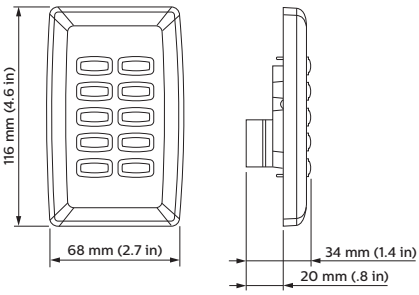
DLPA Standard Series User Interfaces

Blending aesthetics and function

Anything but standard, the DLPA range is beautifully formed and highly functional. Built with the full Philips Dynalite feature set, these simple yet elegant interfaces bring the full power of the automation system to the touch of a button. The DLPA range is suitable for, but not limited to, North American, South American, Australian and New Zealand markets.





- Aesthetically pleasing — Provides an elegant point for integrated automation in commercial buildings and homes.
- Available in two configurations — Single column, for up to five buttons and a dual column design for up to ten buttons, where more complex control is required.
- Incorporates a miniature DyNet control network socket — Discreetly located under the snap-on cover, the network socket enables system adjustments and programming from any user interface on the network.
- Smooth action buttons with blue LED indicators — Provide tactile and visual feedback and are easily removed for engraving.
- Integrated Infrared (IR) receive capability — Elminates the need for separate sensors where IR remotes are required.
- Décor matching capability — Available in a range of fascia, bezel and button cap colors and finishes.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

PHILIPS

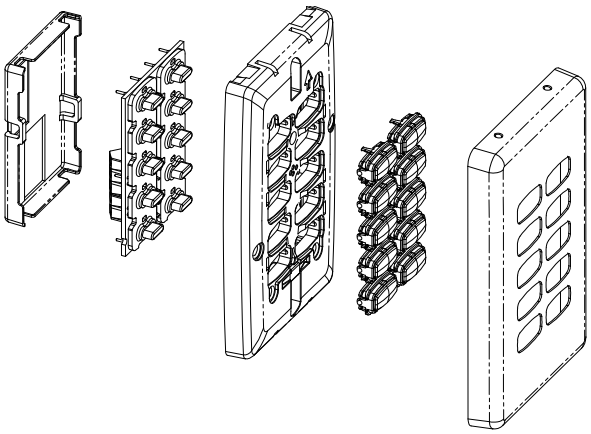
dynalite

Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	DyNet DC Supply	12V @ 20 - 35 mA from the DyNet network
	Control Inputs	One RS-485 DyNet serial port
Physical	Dimensions (H x W x D)	116 mm x 68 mm x 34 mm (4.6" x 2.7" x 1.4")
	Packed Weight	0.15 kg
	Construction	Grid plate & rear cover: ABS Plastic cover: ABS Switch membrane: Silicone
	Operating Conditions	Temperature: -0 to 50° C ambient Humdity: 10 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering		Contact your local Philips representative for ordering information.

Exploded Diagram



Ordering - Standard User Interfaces

Listed below are order codes for standard UI configurations. All are supplied with blue LED indicators, blank white buttons, white covers and button bezels.

Grid Plate	Order Code
1 button	DLPA910
2 button	DLPA920
5 button	DLPA950
6 button	DLPA960
7 button	DLPA970
10 button	DLPA9100

Ordering - Covers & Button Caps

Grid Plate	Order Code
1 button cover	DLPA-FC-01WE
2 button cover	DLPA-FC-02WE
5 button cover	DLPA-FC-05WE
6 button cover	DLPA-FC-06WE
7 button cover	DLPA-FC-07WE
10 button cover	DLPA-FC-10WE
Cap - White	DLP-CAP-WE
Bezel - White	DLP-BZ-WE

Custom Button Caps

The button shape offers a generous area for text or symbols, ensuring that the function of the button is clearly discernible from normal viewing distances. Over 19 standard button caps are available ex-stock. Contact your local Philips representative for details on custom engraving.

Ordering - Standard Button Engraving Options

Engraving Detail	Order Code	Engraving Detail	Order Code	Engraving Detail	Order Code	Engraving Detail	Order Code
1	DLP-CAP-WE-1	6	DLP-CAP-WE-6	▲	DLP-CAP-WE-UP	ON/OFF	DLP-CAP-WE-ON/OFF
2	DLP-CAP-WE-2	7	DLP-CAP-WE-7	▼	DLP-CAP-WE-DOWN	HIGH	DLP-CAP-WE-HIGH
3	DLP-CAP-WE-3	8	DLP-CAP-WE-8	PROGRAM	DLP-CAP-WE-PROGRAM	MED	DLP-CAP-WE-MED
4	DLP-CAP-WE-4	9	DLP-CAP-WE-9	ON	DLP-CAP-WE-ON	LOW	DLP-CAP-WE-LOW
5	DLP-CAP-WE-5	10	DLP-CAP-WE-10	OFF	DLP-CAP-WE-OFF		

Standard Layouts

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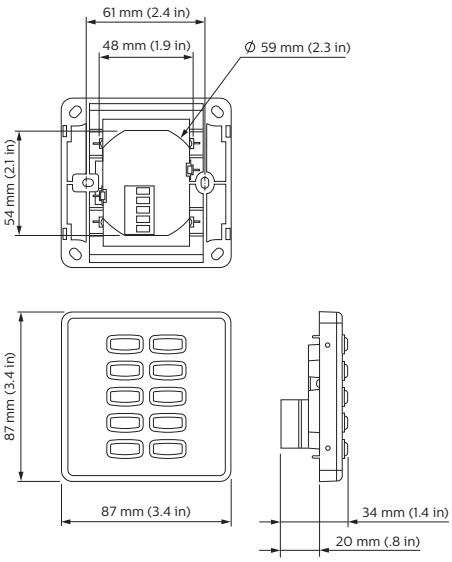
DLPE Standard Series User Interfaces

Blending aesthetics and function

Anything but standard, the DLPE range is beautifully formed and highly functional. Built with the full Philips Dynalite feature set, these simple yet elegant panels bring the full power of the automation system to the touch of a button. The DLPE range is suitable for, but not limited to, European, Middle Eastern, African and Asian markets.



- Aesthetically pleasing — Provides an elegant point for integrated automation in commercial buildings and homes.
- Available in two configurations — Single column, for up to five buttons and a dual column design for up to ten buttons, where more complex control is required.
- Incorporates a miniature DyNet control network socket — Discreetly located under the snap-on cover, the network socket enables system adjustments and programming from any user interface on the network.
- Smooth action buttons with blue LED indicators — Provide tactile and visual feedback and are easily removed for engraving.
- Integrated Infrared (IR) receive capability — Elminates the need for separate sensors where IR remotes are required.
- Décor matching capability — Available in a range of fascia, bezel and button cap colors and finishes.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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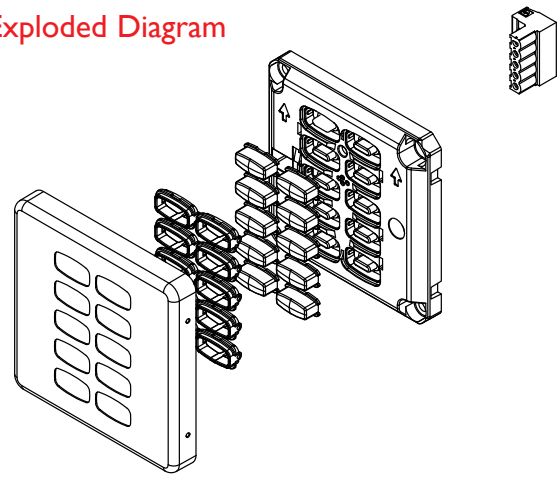
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	DyNet DC Supply	12 VDC @ 20 - 35 mA from the DyNet network
	Control Inputs	One RS-485 DyNet serial port
Physical	Dimensions (H x W x D)	87 mm x 87 mm x 34 mm (3.4" x 3.4" x 1.4")
	Packed Weight	0.15 kg
	Construction	Grid plate & rear cover: ABS Metallic cover: Anodized aluminum or stainless steel Switch membrane: Silicone
	Operating Conditions	Temperature: -0 to 50° C ambient Humdity: 10 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, RCM
Options & Ordering		Contact your local Philips representative for ordering information.

Exploded Diagram



Ordering - Standard User Interfaces

Listed below are order codes for standard UI configurations. All are supplied with blue LED indicators, blank charcoal buttons & bezels, with stainless steel covers.

Grid Plate	Order Code
1 button	DLPE910
2 button	DLPE920
5 button	DLPE950
6 button	DLPE960
7 button	DLPE970
10 button	DLPE9100

Ordering - Covers & Button Caps

Grid Plate	Order Code
1 button cover	DLPE-FC-01-SS
2 button cover	DLPE-FC-02-SS
5 button cover	DLPE-FC-05-SS
6 button cover	DLPE-FC-06-SS
7 button cover	DLPE-FC-07-SS
10 button cover	DLPE-FC-10-SS
Cap - Charcoal	DLP-CAP-CH
Bezel - Charcoal	DLP-BZ-CH

Custom Button Caps

The button shape offers a generous area for text or symbols, ensuring that the function of the button is clearly discernible from normal viewing distances. Over 19 standard button caps are available ex-stock. Contact your local Philips representative for details on custom engraving.

Ordering - Standard Button Engraving Options

Engraving Detail	Order Code	Engraving Detail	Order Code	Engraving Detail	Order Code	Engraving Detail	Order Code
1	DLP-CAP-CH-1	6	DLP-CAP-CH-6	▲	DLP-CAP-CH-UP	ON/OFF	DLP-CAP-CH-ON/OFF
2	DLP-CAP-CH-2	7	DLP-CAP-CH-7	▼	DLP-CAP-CH-DOWN	HIGH	DLP-CAP-CH-HIGH
3	DLP-CAP-CH-3	8	DLP-CAP-CH-8	PROGRAM	DLP-CAP-CH-PROGRAM	MED	DLP-CAP-CH-MED
4	DLP-CAP-CH-4	9	DLP-CAP-CH-9	ON	DLP-CAP-CH-ON	LOW	DLP-CAP-CH-LOW
5	DLP-CAP-CH-5	10	DLP-CAP-CH-10	OFF	DLP-CAP-CH-OFF		

Standard Layouts

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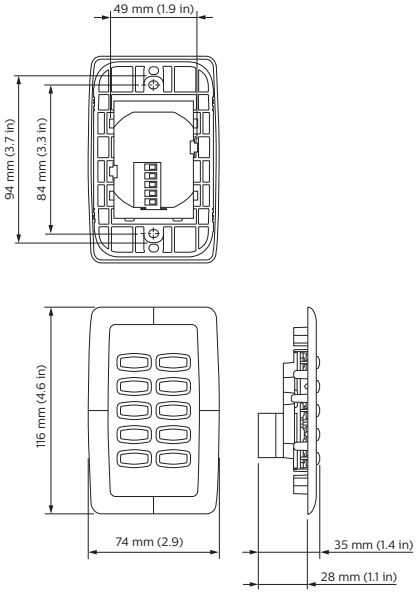
DL2PA Standard Series User Interfaces

Blending aesthetics and function

Anything but standard, the DL2PA range is beautifully formed and highly functional. Built with the full Philips Dynalite feature set, these simple yet elegant interfaces bring the full power of the automation system to the touch of a button. The DL2PA range features a slimline finish and is suitable for, but not limited to, North American, South American, Australian and New Zealand markets.



- Slimline finish — Ultra-thin profile provides a less intrusive alternative, where aesthetics are a key issue.
- Aesthetically pleasing — Provides an elegant point for integrated automation in commercial buildings and homes.
- Available in two configurations — Single column, for up to five buttons and a dual column design for up to ten buttons, where more complex control is required.
- Incorporates a miniature DyNet control network socket — Discreetly located under the snap-on cover, the network socket enables system adjustments and programming from any user interface on the network.
- Smooth action buttons with blue LED indicators — Provide tactile and visual feedback and are easily removed for engraving.
- Integrated Infrared (IR) receive capability — Elminates the need for separate sensors where IR remotes are required.
- Décor matching capability — Available in a range of fascia, bezel and button cap colors and finishes.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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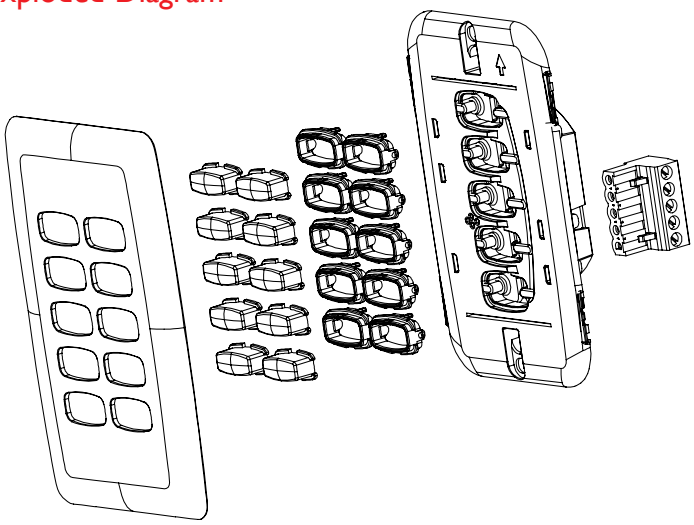
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	DyNet DC Supply	12 V @ 20 - 35 mA from the DyNet network
	Control Inputs	One RS-485 DyNet serial port
Physical	Dimensions (H x W x D)	116 mm x 74 mm x 35 mm (4.6" x 2.9" x 1.4")
	Packed Weight	0.15 kg
	Construction	Grid plate & rear cover: ABS Plastic cover: ABS Switch membrane: Silicone
	Operating Conditions	Temperature: -0 to 50° C ambient Humdity: 10 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering		Contact your local Philips representative for ordering information.

Exploded Diagram



Ordering - Standard User Interfaces

Listed below are order codes for standard UI configurations. All are supplied with blue LED indicators, blank white buttons, white covers and button bezels.

Grid Plate	Order Code
1 button	DL2PA910
2 button	DL2PA920
5 button	DL2PA950
6 button	DL2PA960
7 button	DL2PA970
10 button	DL2PA9100

Ordering - Covers & Button Caps

Grid Plate	Order Code
1 button cover	DL2PA-FC-01-WE
2 button cover	DL2PA-FC-02-WE
5 button cover	DL2PA-FC-05-WE
6 button cover	DL2PA-FC-06-WE
7 button cover	DL2PA-FC-07-WE
10 button cover	DL2PA-FC-10-WE
Cap - White	DLP-CAP-WE
Bezel - White	DLP-BZ-WE

Custom Button Caps

The button shape offers a generous area for text or symbols, ensuring that the function of the button is clearly discernible from normal viewing distances. Over 19 standard button caps are available ex-stock. Contact your local Philips representative for details on custom engraving.

Ordering - Standard Button Engraving Options

Engraving Detail	Order Code	Engraving Detail	Order Code	Engraving Detail	Order Code	Engraving Detail	Order Code
1	DLP-CAP-WE-1	6	DLP-CAP-WE-6	▲	DLP-CAP-WE-UP	ON/OFF	DLP-CAP-WE-ON/OFF
2	DLP-CAP-WE-2	7	DLP-CAP-WE-7	▼	DLP-CAP-WE-DOWN	HIGH	DLP-CAP-WE-HIGH
3	DLP-CAP-WE-3	8	DLP-CAP-WE-8	PROGRAM	DLP-CAP-WE-PROGRAM	MED	DLP-CAP-WE-MED
4	DLP-CAP-WE-4	9	DLP-CAP-WE-9	ON	DLP-CAP-WE-ON	LOW	DLP-CAP-WE-LOW
5	DLP-CAP-WE-5	10	DLP-CAP-WE-10	OFF	DLP-CAP-WE-OFF		

Standard Layouts

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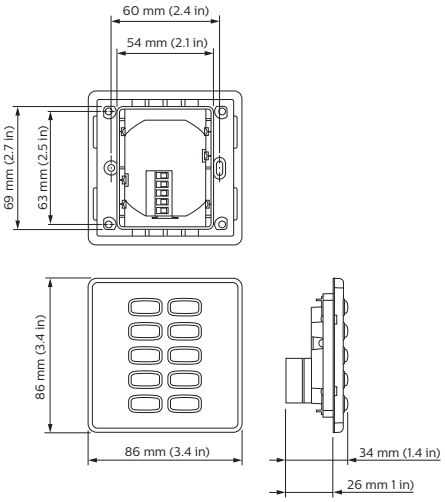
DPWE Standard Series User Interfaces

Blending aesthetics and function

Anything but standard, the DPWE range is beautifully formed and highly functional. Built with the full Philips Dynalite feature set, these simple yet elegant user interfaces bring the full power of the automation system to the touch of a button. The DPWE range features a slimline finish and is suitable for, but not limited to, European, Middle Eastern, African and Asian markets.



- Aesthetically pleasing — Provides an elegant point for integrated automation in commercial buildings and homes.
- Slimline finish — Ultra-thin profile provides a less intrusive alternative, where aesthetics are a key issue.
- Available in two configurations — Single column, for up to five buttons and a dual column design for up to ten buttons, where more complex control is required.
- Incorporates a miniature DyNet control network socket — Discreetly located under the snap-on cover, the network socket enables system adjustments and programming from any user interface on the network.
- Smooth action buttons with blue LED indicators — Provide tactile and visual feedback and are easily removed for engraving.
- Integrated Infrared (IR) receive capability — Elminates the need for separate sensors where IR remotes are required
- Décor matching capability — Available in a range of fascia, bezel and button cap colors and finishes.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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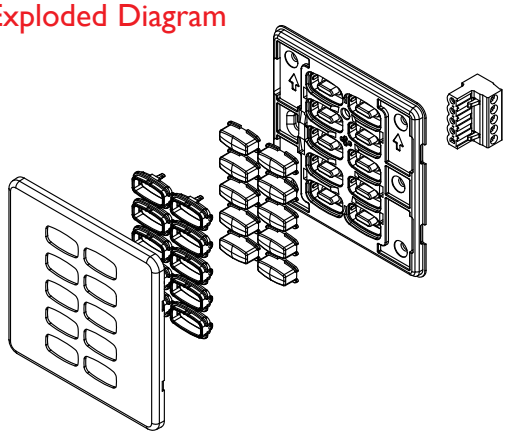
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	DyNet DC Supply	12 VDC @ 20 - 35 mA from the DyNet network
	Control Inputs	One RS-485 DyNet serial port
Physical	Dimensions (H x W x D)	86 mm x 86 mm x 34 mm (3.4" x 3.4" x 1.4")
	Packed Weight	0.15 kg
	Construction	Grid plate & rear cover: ABS Metallic cover: Anodized aluminum or stainless steel Switch membrane: Silicone
	Operating Conditions	Temperature: -0 to 50° C ambient Humdity: 10 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering		Contact your local Philips representative for ordering information.

Exploded Diagram



Ordering - Standard User Interfaces

Listed below are order codes for standard UI configurations. All are supplied with blue LED indicators, blank charcoal buttons & bezels. Covers to be ordered separately.

Grid Plate	Order Code
1 button	DPWE910
2 button	DPWE920
5 button	DPWE950
6 button	DPWE960
7 button	DPWE970
10 button	DPWE9100

Ordering - Covers & Button Caps

Grid Plate	Order Code
1 button cover	DPWE-FC-01-SS
2 button cover	DPWE-FC-02-SS
5 button cover	DPWE-FC-05-SS
6 button cover	DPWE-FC-06-SS
7 button cover	DPWE-FC-07-SS
10 button cover	DPWE-FC-10-SS
Cap - Charcoal	DLP-CAP-CH
Bezel - Charcoal	DLP-BZ-CH

Custom Button Caps

The button shape offers a generous area for text or symbols, ensuring that the function of the button is clearly discernible from normal viewing distances. Over 19 standard button caps are available ex-stock. Contact your local Philips representative for details on custom engraving.

Ordering - Standard Button Engraving Options

Engraving Detail	Order Code	Engraving Detail	Order Code	Engraving Detail	Order Code	Engraving Detail	Order Code
1	DLP-CAP-CH-1	6	DLP-CAP-CH-6	▲	DLP-CAP-CH-UP	ON/OFF	DLP-CAP-CH-ON/OFF
2	DLP-CAP-CH-2	7	DLP-CAP-CH-7	▼	DLP-CAP-CH-DOWN	HIGH	DLP-CAP-CH-HIGH
3	DLP-CAP-CH-3	8	DLP-CAP-CH-8	PROGRAM	DLP-CAP-CH-PROGRAM	MED	DLP-CAP-CH-MED
4	DLP-CAP-CH-4	9	DLP-CAP-CH-9	ON	DLP-CAP-CH-ON	LOW	DLP-CAP-CH-LOW
5	DLP-CAP-CH-5	10	DLP-CAP-CH-10	OFF	DLP-CAP-CH-OFF		

Standard Layouts

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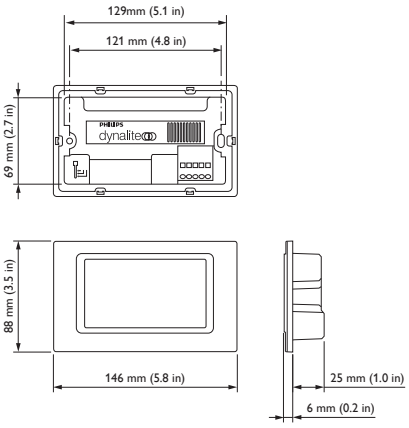
DTP100 Color Touchscreen

A feature-rich color LCD touchscreen

A Philips Dynalite touchscreen adds a new dimension of control to any automation application. The DTP100 supports a range of features that provide end-users with the ultimate in automation system interaction. The screen interface can be customized to control all automation elements from one location. The device features a screen size of H 56mm x W 95mm.



- Vivid graphics and sophisticated onscreen controls — Objects such as logos, buttons, faders, floor plans and diagnostic icons can be placed on pages to perform simple or complex control functions.
- Simple page creation — Easy-to-use pages are created using Philips Dynalite's touchscreen editor and JavaScript is fully supported.
- Windows operating system and full internet connectivity — Runs Windows CE 6.0 and Internet Explorer 6. Full Windows Media Player 9 and MP3 file support.
- Décor matching capability — The innovative clip-on fascia can be matched with Revolution series user interfaces, or customized using practically any flat architectural medium.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Hardware	DyNet DC Supply	12 VDC @ 400 mA from the DyNet network
	Screen	Viewable Area: 10.9cm (4.3") diagonal H 56mm x W 95mm (2.2" x 3.7") Resolution: 480 x 272 (16:9 screen ratio) Color Depth: 16bit (65536) Contrast: 300:1 Luminance: 350 cd/m2 Screen Type: TFT LCD Viewing Angle: H 75° Vtop 75° Vbottom 55° Backlight: LED, dimmable, min 40,000 hr (subject to screen saver settings) Touch Overlay: 4 Wire Resistive
	OS & Software	Windows CE 6.0 Internet Explorer 6 Windows Media Player 9 / MP3 support
	Audio	Onboard speaker Line Out via 3.5mm stereo jack
	Input/Output Ports	One RS-485 DyNet serial port One Mini USB Type B service socket (programming port) One Mini USB Type B service socket (keyboard/mouse) One RJ45 10/100BaseT ethernet port One Reset switch
Features	Internal Controls	PC timeclock with battery backup Programmable Logic Controller
	User Page Objects	Button Fader Text Box Icon Image Import
	Hardware	CPU: Intel XScale PXA310 624 MHz Non Volatile Memory: 512 MB Volatile Memory: 128 MB
Physical	Dimensions (H x W x D)	88 mm x 146 mm x 6 mm (3.5" x 5.8" x 0.2") (exposed)
	Packed Weight	0.9kg
	Construction	Concealed fixings fascia
	Operating Conditions	Temperature: -0 to 45° C ambient Humidity: 10 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Stainless steel fascia (std) Black glass fascia (option) White glass fascia (option) Custom finishes available - ask your Philps Dynalite representative	DTP100 (Philips 12NC - 913703074509) DTP100-BG (Philips 12NC - 913703074609) DTP100-WG (Philips 12NC - 913703074709)
	Recess metal wallbox Surface mount wallbox	DTP100-WALLBOX-RECESS-METAL (12NC - 913703075309) DTP100-WALLBOX-SURFACEMOUNT (" - 913703075909)

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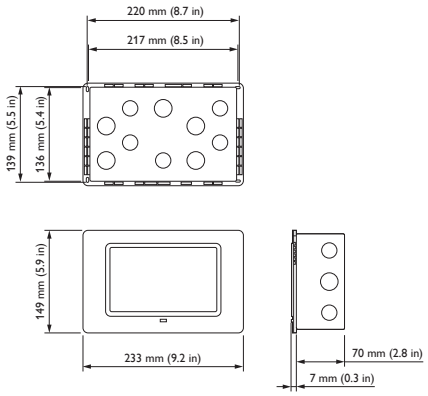
DTP170 Color Touchscreen

A feature-rich color LCD touchscreen

A Philips Dynalite touchscreen adds a new dimension of control to any automation application. The DTP170 supports a range of features that provide end-users with the ultimate in automation system interaction. The screen interface can be customized to control all automation elements from one location. The device features a screen size of H 94mm x W 155mm.



- Vivid graphics and sophisticated onscreen controls — Objects such as logos, buttons, faders, floor plans and diagnostic icons can be placed on pages to perform simple or complex control functions.
- Simple page creation — Easy-to-use pages are created using Philips Dynalite's touchscreen editor and JavaScript is fully supported.
- Windows operating system and full internet connectivity — Runs Windows CE 6.0 and Internet Explorer 6. Full Windows Media Player 9 and MP3 file support.
- Décor matching capability — The innovative clip-on fascia can be matched with Revolution series user interfaces, or customized using practically any flat architectural medium.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Hardware	DyNet DC Supply	12 V @ 0.6 A from the DyNet network
	Screen	Viewable Area: 178mm (7") diagonal (H 95mm x W 155mm) Resolution: 800x480 (WVGA / 16:9 ratio) Color Depth: 65,536 (16bit) Contrast: 300:1 Luminance: 280 cd/m2 Screen Type: TFT LCD View Angle: H 65° Vtop 60° Vbottom 50° Backlight: LED, dimmable, 40,000hr life Touch Overlay: 4 Wire Resistive
	OS & Software	Windows CE 6.0 Internet Explorer 6 Windows Media Player 9 / MP 3 support
	Audio	Onboard speaker Line Out via 3.5mm stereo jack
	Input/Output Ports	One RS-485 DyNet port - screw terminals One RS-485 DyNet port - RJ12 One RJ45 10/100BaseT ethernet port One Mini USB Type B socket One Mini USB Type A socket One Reset switch
Features	Internal Controls	PC timeclock with battery backup Programmable Logic Controller
	User Page Objects	Button Fader Text Box Icon Image Import
	Hardware	CPU: Intel XScale PXA310 624 MHz 128 MB SDRAM 512 MB FLASH
Physical	Dimensions (H x W x D)	149 mm x 233 mm x 7 mm (5.9" x 9.2" x 0.3") (exposed)
	Packed Weight	1.9 kg
	Construction	Concealed fixings fascia, metal body and wallbox (supplied separately)
	Operating Conditions	Temperature: -0 to 45° C ambient Humdity: 10 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Stainless steel fascia (std) - no wallbox	DTP170 (Philips 12NC - 913703075709)
	Stainless steel fascia with wallbox	DTP170-WB (Philips 12NC - 913703076109)
	With black borosilicate glass fascia (option)	DTP170-BG (Philips 12NC - 913703076409)
	With white optically clear starfire glass fascia (option) Custom finishes available - ask your Philps Dynalite representative	DTP170-SG (Philips 12NC - 913703075409)
	Wallbox only	DTP170-WALLBOX (Philips 12NC - 913703076209)

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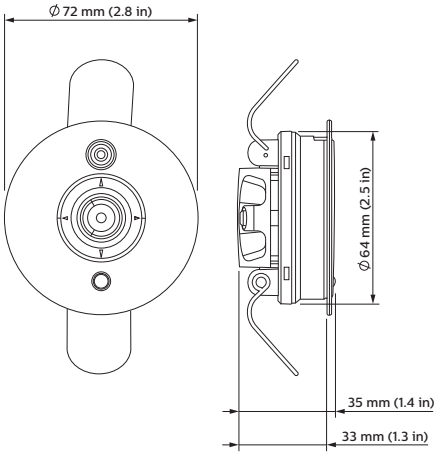
Sensors

Skanska Property
Warsaw, Poland

DUS804C Multifunction Sensor

Low profile recessed 360° flush mount ceiling sensor

The DUS804C is a recess mountable 360 degree multifunction sensor that combines motion detection (PIR), Infrared remote control reception (IR) and ambient light level detection (PE) into one device in applications such as offices, lecture theaters and homes.



- Motion detection feature — Detects the presence or absence of motion and adjusts lights accordingly.
- Segmented click-up bezel — Surrounds the motion sensor element and enables a portion of the sensing field to be masked. This prevents nuisance detection from adjacent doorways or corridors.
- Ambient light level detection and daylight harvesting — In applications where it is critical to maintain precise light, the PE function reads ambient levels and adjusts artificial light accordingly.
- Infrared receive capability — Manually adjust light levels using a hand-held remote control, via the inbuilt IR receive sensor of the DUS804C.
- Daylight Harvesting mode — Delivers automatic energy savings.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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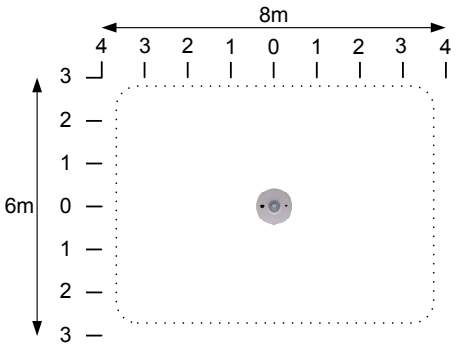
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Hardware	Motion Detector	**DUS804C** Standard sensitivity Maximum detection range: 5 m Detection area: 7.4 m to 5.6 m rectangular (at a height of 2.5 m) Detection speed: 1.0 m/s Detection object: 700 mm x 250 mm Detection zones: 64 LED activation indicator Sensor: Quad element pyroelectric **DUS804C-SM** Slight motion sensitivity Maximum detection range: 2 m Detection area: 5 m circular (at a height of 2 m) Detection speed: 0.5 m/s Detection object: 200 mm x 200 mm Detection zones: 104 LED activation indicator Sensor: Quad element pyroelectric
	PE Cell	Range <5 lux to >5000 lux Automatic 'Daylight Harvesting' mode
	Infrared Remote Control Receiver	Range up to 6 m LED activation indicator Can be used with DTK500 series infrared remotes or other learning IR remote control
	Terminals	Standard: 5 way terminal strip, 1 x 2.5 mm² max conductor size RJ12 Option: Two RJ12 network sockets
	Controls	Walk test/IR received LED indicator Tamper switch
Network	Control Inputs/Outputs	One RS-485 DyNet serial port
	DyNet DC Load	20 mA
	Configurations	All functions remotely programmable
Physical	Dimensions (H x W x D)	72 mm dia. x 35 mm (2.8" dia. x 1.4")
	Packed Weight	0.116 kg
	Construction	ABS plastic enclosure
	Operating Conditions	Temperature: -0 to 45° C ambient Humdity: 10 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DUS804C (Philips 12NC - 913703071009)
	Slight motion sensitivity	DUS804C-SM (Philips 12NC - 913703071109)
	2 x RJ12 network sockets	DUS804C-RJ (Philips 12NC - 913703071209)
	2 x RJ12 sockets/slight motion	DUS804C-RJ-SM (Philips 12NC - 913703071309)

Lens Pattern



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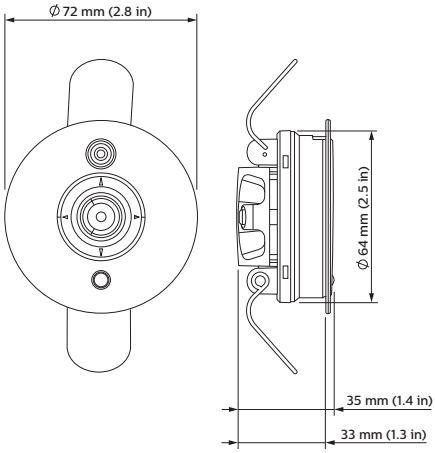
DUS804C-DALI Multifunction Sensor

Low profile sensor powered by the DALI network

The DUS804C-DALI is a recess mountable 360 degree multifunction sensor that combines motion detection (PIR) and ambient light level detection (PE) in one device. The DUS804C-DALI is powered and communicates to the network control system via a DALI bus.



- Powered directly by the DALI network — Eliminates the need for additional network field wiring.
- Works with DALI master controller — Requires a DALI MultiMaster controller, such as the DDBC120-DALI, to operate.
- Motion detection feature — Detection of motion within scanned area triggers a programmed lighting action.
- Segmented click-up bezel — Surrounds the motion sensor element and enables a portion of the sensing field to be masked. This prevents nuisance detection from adjacent doorways or corridors.
- Ambient light level detection and daylight harvesting — In applications where it is critical to maintain precise light, the PE function reads ambient levels and adjusts artificial light accordingly.
- Daylight Harvesting mode — Delivers automatic energy savings.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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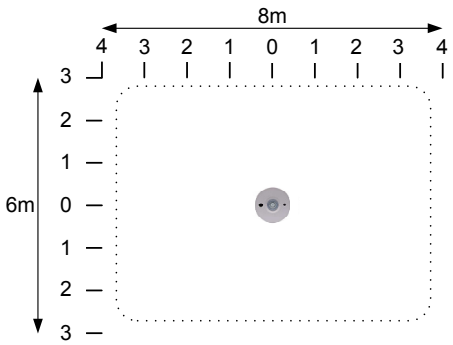
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Hardware	Motion Detector	Standard Sensitivity Maximum detection range: 5 m Detection area: 7.4 m to 5.6 m rectangular (at a height of 2.5 m) Detection speed: 1.0 m/s Detection object: 700 mm x 250 mm Detection zones: 64 LED activation indicator Sensor: Quad element pyroelectric
	PE Cell	Range 5 lux to 5000 lux (incident on sensor) Range 5 lux to 5000 lux (illumination of non-reflective surface in sensor's field of view) Note: value subject to the reflectance properties of the surface Automatic 'Daylight Harvesting' mode
	Control Bus	DALI bus with a Philips Dynalite MultiMaster controller
	DALI Power Consumption	9 mA (total 10 user interfaces on one DALI universe)
	Terminals	5 way terminal strip, loop in, loop out 1 x5 mm² max strain relief unit conductor size
Network	Controls	Walk test/IR received LED indicator Service pushbutton
	Configurations	All functions remotely programmable
Physical	Dimensions (H x W x D)	72 mm dia. x 35 mm (2.8" dia. x 1.4")
	Packed Weight	0.116 kg
	Construction	ABS plastic enclosure
	Operating Conditions	Temperature: -0 to 45° C ambient Humdity: 10 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DUS804C-DALI (Philips 12NC - 913703570409)

Lens Pattern



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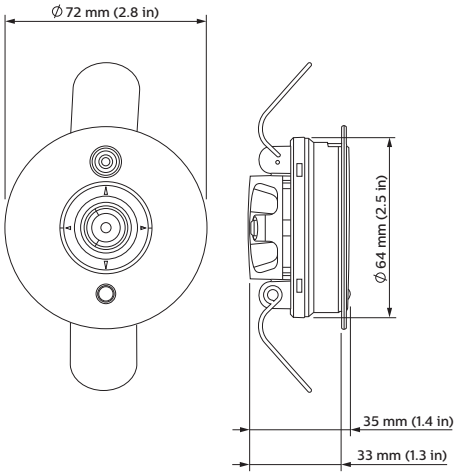
DUS804C-RJ-DA Ecoset Motion Sensor

Ecoset ceiling mount motion sensor

The DUS804C-RJ-DA is a recess mountable 360 degree motion sensor that combines motion detection (PIR), Infrared remote control reception (IR) and ambient light level detection (PE) into the one device. The Ecoset DUS804-RJ-DA is a component of the Ecoset system and is a switch-settable sensor with time-out, designed to allow intelligent control of luminaires in combination with the EcoSet DMRC210-RJ-DA relay controller.



- Low profile design — Flush-mounted 360 degree ceiling-mount motion detection (PIR) sensor.
- No software set-up — All functionality can be achieved with the built-in dipswitches for area addressing, no-motion time-out and other advanced features.
- Rapid configuration — Up to 31 individual addressing areas of control.
- User-selectable options — No-motion time-out selectable to 30 seconds, 5 minutes, 15 minutes or 30 minutes.
- Corridor hold — Links corridor areas with adjacent rooms so they remain lit while occupancy is detected.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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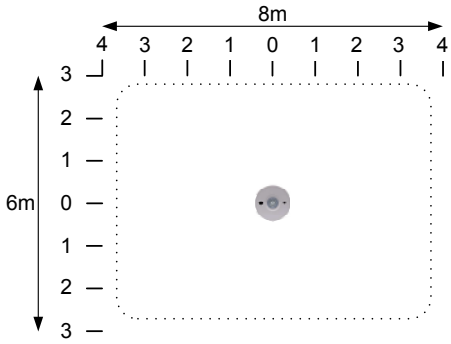
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Hardware	Motion Detector	**DUS804C** Standard Sensitivity Maximum detection range: 5 m Detection area: 7.4 m to 5.6 m rectangular (at a height of 2.5 m) Detection speed: 1.0 m/s Detection object: 700 mm x 250 mm Detection zones: 64 LED activation indicator Sensor: Quad element pyroelectric
	Terminals	2 x RJ12 network sockets
	Controls	Walk test/IR received LED indicator Service switch
Network	Control Inputs/Outputs	One RS-485 DyNet serial port
	DyNet DC Load	20 mA
	Configurations	All functions set by accessible dipswitches
Physical	Dimensions (H x W x D)	72 mm dia. x 35 mm (2.8" x 1.4")
	Packed Weight	0.116 kg
	Construction	ABS plastic enclosure
	Operating Conditions	Temperature: -0 to 45° C ambient Humdity: 10 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard product	DUS804C-RJ-DA (Philips 12NC - 913703071409)

Lens Pattern



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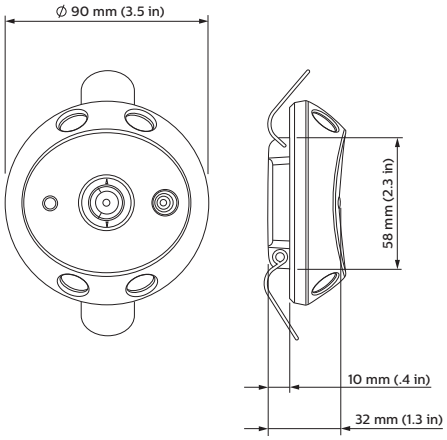
DUS804C-UP Multifunction Sensor

Surface mount ceiling sensor with ultrasonic capability

The DUS804C-UP is a surface mountable 360 degree multifunction sensor that combines ultrasonic (UP), motion detection (PIR), Infrared remote control reception (IR) and ambient light level detection (PE) into one device in applications such as offices, lecture theaters and homes.



- Motion detection feature — Detection of motion within scanned area triggers a programmed lighting action.
- Ambient light level detection and daylight harvesting — In applications where it is critical to maintain precise light, the PE function reads ambient levels and adjusts artificial light accordingly.
- Infrared receive capability — Manually adjust light levels using a hand-held remote control, via the inbuilt IR receive sensor of the DUS804C-UP.
- Daylight Harvesting mode — Delivers automatic energy savings.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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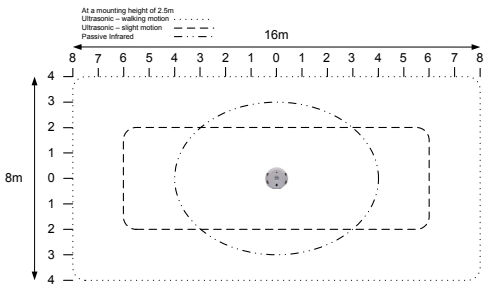
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Hardware	Motion Detector	**PIR** Maximum detection range: 5 m Detection area: 7.4 m to 5.6 m ellipse (at a height of 2.5 m) Detection speed: 1.0 m/s Detection object: 700 mm x 500 mm Detection zones: 64 LED activation indicator Adjustable Pulse Count & Sensitivity Sensor: Quad element pyroelectric RFI Immunity: >15 V/m @ 10-1000 MHz **Ultrasonic** Normal motion detection area: 8 m x 16 m (128² coverage) Slight motion detection area: 4 m x 12 m (48² coverage) Transducer pairs: 2 Operating frequency: 32 KHz
	PE Cell	Range <5 lux to >5000 lux (reflected) Automatic 'Daylight Harvesting' mode
	Infrared Remote Control Receiver	Range up to >6 m LED activation indicator Can be used with DTK500 series infrared remotes or other learning IR remote control
	Terminals	5 way terminal strip, 1 x 2.5 mm² max conductor size
	Controls	Walk test/IR received LED indicator Tamper switch
Network	Control Inputs/Outputs	One RS-485 DyNet serial port IR window used as network sign on
	DyNet DC Load	80 mA
	Configurations	All functions remotely programmable
Physical	Dimensions (H x W x D)	90 mm dia. x 32 mm (3.5" x 1.3")
	Packed Weight	0.25 kg
	Construction	ABS plastic enclosure
	Mounting	Recessed spring clip or adjustable surface mounting ring Shipped with surface mounting ring as standard
	Operating Conditions	Temperature: -0 to 45° C ambient Humdity: 10 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DUS804C-UP (Philips 12NC - 913703070409)

Lens Pattern



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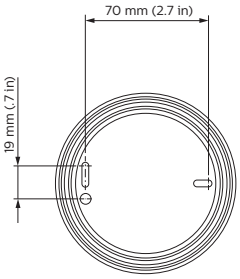
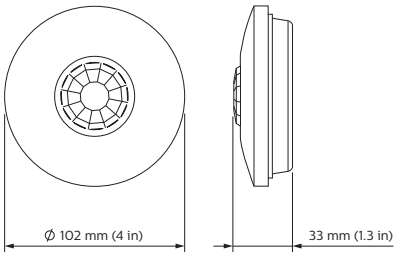
DUS704C Universal Sensor

Combination PIR, IR and PE sensing

The DUS704C is a surface mountable 360 degree sensor that combines motion detection (PIR), Infrared remote control reception (IR) and ambient light level detection (PE) into one device in applications such as offices, lecture theaters and homes.





- Motion detection feature — Detects the presence or absence of motion and adjusts lights accordingly.
- Ambient light level detection and daylight harvesting — In applications where it is critical to maintain precise light, the PE function reads ambient levels and adjusts artificial light accordingly.
- Infrared receive capability — Manually adjust light levels using a hand-held remote control, via the inbuilt IR receive sensor of the DUS704C.
- Multiple mounting options — The device is available in both 360 degree ceiling mount (DUS704C) or wide angle wall mount (DUS704W) versions.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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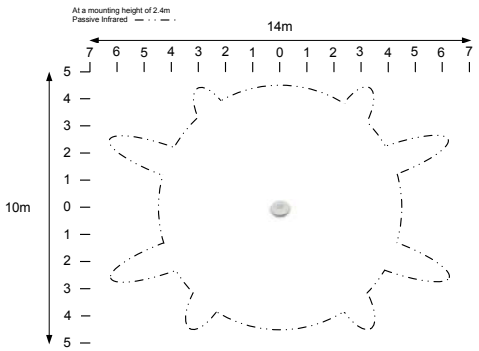
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Hardware	Motion Detector	360° Ceiling Mount PIR Detector Range 9 m x 6 m ellipse (at 2.4 m height) Mounting height: 2.1 m to 4.0 m, 2.4 m optimum LED activation indicator Adjustable Pulse Count & Sensitivity Detection Zones: 34 dual element zones Sensor: Dual element pyroelectric RFI Immunity: >15 V/m @ 10-1000 MHz
	PE Cell	Dynamic range <5 lux to >13000 lux Automatic 'Daylight Harvesting' mode Can be used for light measurement
	Infrared Remote Control Receiver	Range >6m LED activation indicator Can be used with DTK500 series infrared remotes or other learning IR remote control
	Terminals	5 way terminal strip, 1 x 2.5 mm² max conductor size and RJ12 socket
	Controls	Walk test/IR received LED indicator Tamper switch
Network	Control Inputs/Outputs	One RS-485 DyNet serial port
	DyNet DC Load	20 mA
	Configurations	All functions remotely programmable
Physical	Dimensions (H x W x D)	102 mm dia. x 33 mm (4.0" dia x 1.3")
	Packed Weight	0.116 kg
	Construction	ABS plastic enclosure
	Operating Conditions	Temperature: -0 to 45° C ambient Humdity: 10 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Ceiling mount 360°	DUS704C (Philips 12NC - 913703070009)

Lens Pattern



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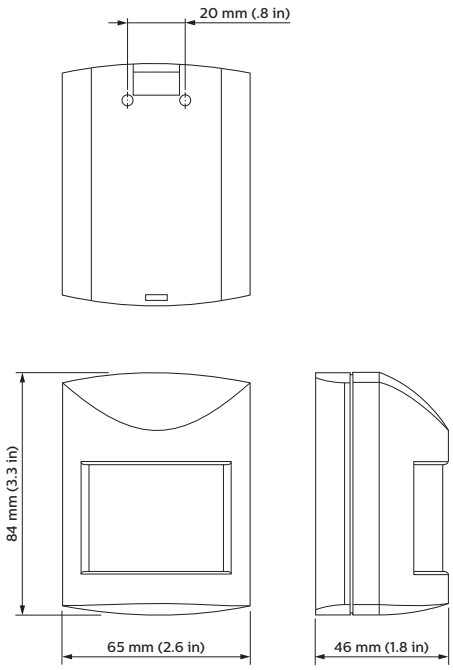
DUS704W Universal Sensor

Combination PIR, IR and PE sensing

The DUS704W is a wall mountable 90 degree universal sensor that combines motion detection (PIR), Infrared remote control reception (IR) and ambient light level detection (PE) into one device in applications such as offices, lecture theaters and homes.



- Motion detection feature — Detects the presence or absence of motion and adjusts lights accordingly.
- Ambient light level detection and daylight harvesting — In applications where it is critical to maintain precise light, the PE function reads ambient levels and adjusts artificial light accordingly.
- Infrared receive capability — Manually adjust light levels using a hand-held remote control, via the inbuilt IR receive sensor of the DUS704W.
- Multiple mounting options — The device is available in both 360 degree ceiling mount (DUS704C) or wide angle wall mount (DUS704W) versions.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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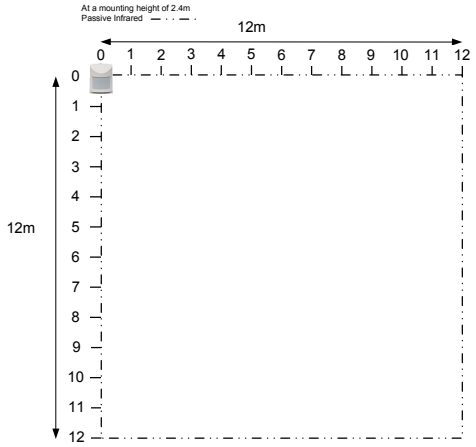
Specifications

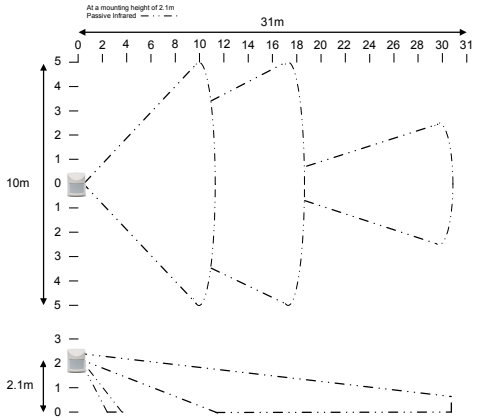
Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Hardware	Motion Detector	Wide Angle Wall Mount PIR Detector Range 12 m x 90° (standard lens) Mounting height: 1.1 m to 3.1 m LED activation indicator Adjustable Pulse Count & Sensitivity Detection zones: 20 dual element zones Sensor: Dual element pyroelectric RFI Immunity: >15 V/m @ 10-1000 MHz Optional Lens: 30 m x 30° Long Range
	PE Cell	Dynamic range <5 lux to >13000 lux Automatic 'Daylight Harvesting' mode Can be used for light measurement
	Infrared Remote Control Receiver	Range >6m LED activation indicator Can be used with DTK500 series infrared remotes or other learning IR remote control
	Terminals	5 way terminal strip, 1 x 2.5 mm² max conductor size and RJ12 socket
	Controls	Walk test/IR received LED indicator Tamper switch
Network	Control Inputs/Outputs	One RS-485 DyNet serial port
	DyNet DC Load	20 mA
	Configurations	All functions remotely programmable
Physical	Dimensions (H x W x D)	84 mm x 65 mm x 46 mm (3.3" x 2.6" x 1.8")
	Packed Weight	0.116 kg
	Construction	ABS plastic enclosure
	Operating Conditions	Temperature: -0 to 45° C ambient Humdity: 10 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Wall mount wide angle	DUS704W (Philips 12NC - 913703070209)
	Wall mount wide angle with mounting bracket	DUS704W-MB (Philips 12NC - 913703001909)
	Long range lens (option)	DUS704W-LR (Philips 12NC - 913703070309)

Lens Pattern - DUS704W



Lens Pattern - DUS704W-LR



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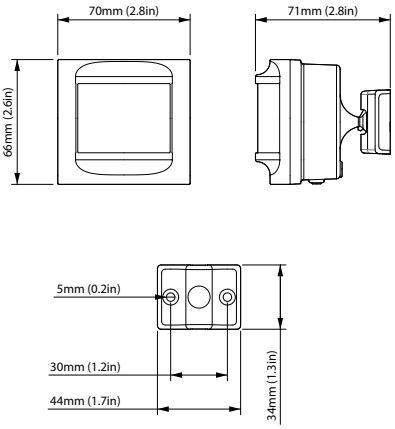
DUS90-AHB-DALI Multifunction Sensor

Aisleway high bay DALI network sensor

The DUS90-AHB-DALI is a multifunction sensor that combines motion detection (PIR) and ambient light level detection (PE) in one device. The sensor uses the DALI protocol for power and communications to a network control system, eliminating the need for additional network field wiring. This sensor is ideal for mounting between warehouse shelving.



- MultiMaster compatible — Fully compatible with a Philips Dynalite DALI MultiMaster controller, such as the DDBC120-DALI.
- Motion detection feature — Detects the presence or absence of motion and triggers a programmed action.
- Ambient light level detection — In applications where it is critical to maintain precise lighting levels, the PE function reads ambient levels and adjusts artificial light accordingly.
- Daylight harvesting — When used in conjunction with networked open loop day lighting sensor.
- Infrared receive capability — Enables sign-in identifcation to the networked system.
- Additional networking advantages — Including reporting and monitoring software tools.
- Targeted positioning — Directional wall-mounting block allows sensors to be easily mounted and directed to the required area.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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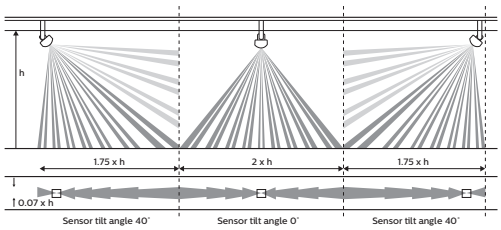
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Sensor	Motion Detector	Standard sensitivity Maximum detection range: 15 m Detection pattern: L = 2 x Height W = 0.7 x Height Detection zones: 90° wide angle lens with 9 beams in 1 detection layer. LED activation indicator Sensor: Dual element pyroelectric
	PE Cell	Range 5 lux to 10,000 lux (incident on sensor) Range 5 lux to 10,000 lux (illumination of non-reflective surface in sensor field of view)
	IR Receiver	Philips RC5 codes Network sign-on functionality only 12 m max range
Interface	Controls	Walk test, IR received, LED indicator, and service pushbutton
Network	Connection	30 cm fly lead
	DALI Power Consumption	9 mA
	DALI Supply Requirements	9.5 - 22.5 VDC
	Control Bus	DALI bus with a Philips Dynalite MultiMaster controller
	Configurations	All functions remotely programmable
Physical	Dimensions (H x W x D)	66 mm x 70 mm x 61 mm (2.6" x 2.75" x 2.4")
	Packed Weight	0.116 kg (0.26 lbs)
	Construction	Polycarbonate White (RAL 9010)
	Operating Conditions	Temperature: -5 to 50°C ambient Humdity: 10 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60°C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, RCM
Options & Ordering	Standard Product	DUS90-AHB - DALI (Philips 12NC - 913703015409)

Lens Pattern



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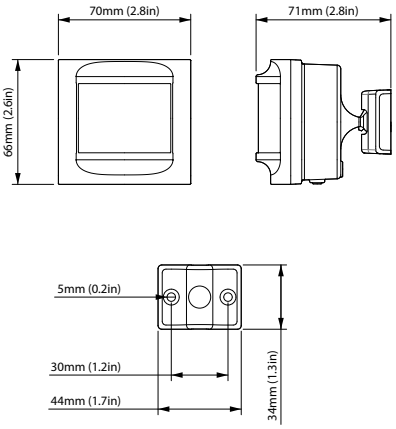
DUS90-WHB-DALI Multifunction Sensor

Wide angle DALI network sensor

The DUS90-WHB-DALI is a multifunction sensor that combines motion detection (PIR) and ambient light level detection (PE) in one device. The sensor uses the DALI protocol for power and communications to a network control system, eliminating the need for additional network field wiring. This is a wide angle, general purpose sensor.



- MultiMaster compatible — Fully compatible with a Philips Dynalite DALI MultiMaster controller, such as the DDBC120-DALI.
- Motion detection feature — Detects the presence or absence of motion and triggers a programmed action.
- Ambient light level detection — In applications where it is critical to maintain precise lighting levels, the PE function reads ambient levels and adjusts artificial light accordingly.
- Daylight harvesting — When used in conjunction with networked open loop day lighting sensor.
- Infrared receive capability — Enables sign-in identification to the networked system.
- Additional networking advantages — Including reporting and monitoring software tools.
- Targeted positioning — Directional wall-mounting block allows sensors to be easily mounted and directed to the required area.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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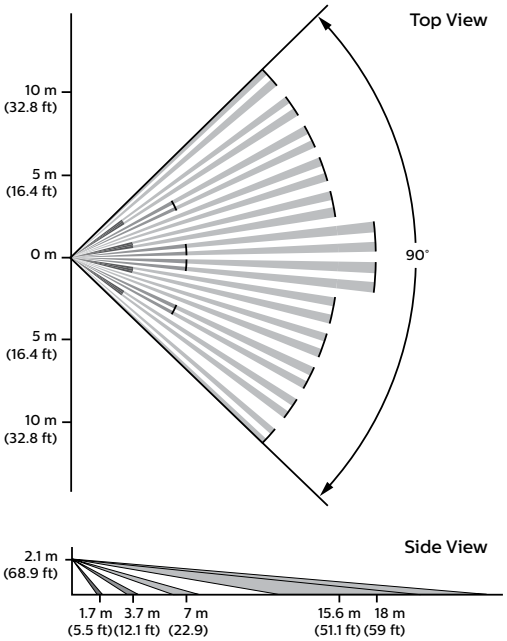
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Sensor	Motion Detector	Standard Sensitivity Maximum detection range: 18m Detection pattern: 15m x 15m Detection zones: 90° wide angle lens with 22 beams in 4 detection layer. LED activation indicator Sensor: Dual element pyroelectric
	PE Cell	Range 5 lux to 10,000 lux (incident on sensor) Range 5 lux to 10,000 lux (illumination of non-reflective surface in sensor field of view)
	IR Receiver	Philips RC5 codes Network sign-on functionality only 12 m max range
Interface	Controls	Walk test, IR received, LED indicator, and service pushbutton
Network	Connection	30 cm fly lead
	DALI Power Consumption	9 mA
	DALI Supply Requirements	9.5 - 22.5 VDC
	Control Bus	DALI bus with a Philips Dynalite MultiMaster controller
	Configurations	All functions remotely programmable
Physical	Dimensions (H x W x D)	66 mm x 70 mm x 61 mm (2.6" x 2.75" x 2.4")
	Packed Weight	0.116 kg (0.26 lbs)
	Construction	Polycarbonate White (RAL 9010)
	Operating Conditions	Temperature: -5 to 50°C ambient Humdity: 10 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60°C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DUS90-WHB - DALI (Philips 12NC - 913703015509)

Lens Pattern



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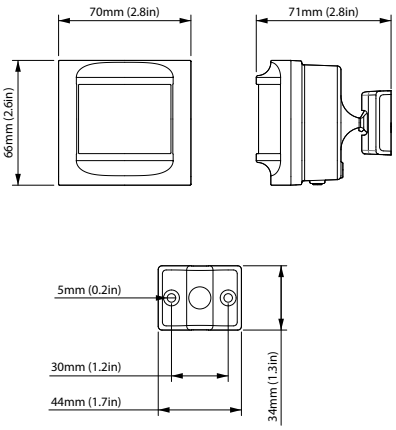
DUS30-LHB-DALI Multifunction Sensor

Long-range high bay DALI network sensor

The DUS30-LHB-DALI is a multifunction sensor that combines motion detection (PIR) and ambient light level detection (PE) in one device. The sensor uses the DALI protocol for power and communications to a network control system, eliminating the need for additional network field wiring. This sensor is useful for long-range and trip detection.



- MultiMaster compatible — Fully compatible with a Philips Dynalite DALI MultiMaster controller, such as the DDBC120-DALI.
- Motion detection feature — Detects the presence or absence of motion and triggers a programmed action.
- Ambient light level detection — In applications where it is critical to maintain precise lighting levels, the PE function reads ambient levels and adjusts artificial light accordingly.
- Daylight harvesting — When used in conjunction with networked open loop day lighting sensor.
- Infrared receive capability — Enables sign-in identification to the networked system.
- Additional networking advantages — Including reporting and monitoring software tools.
- Targeted positioning — Directional wall-mounting block allows sensors to be easily mounted and directed to the required area.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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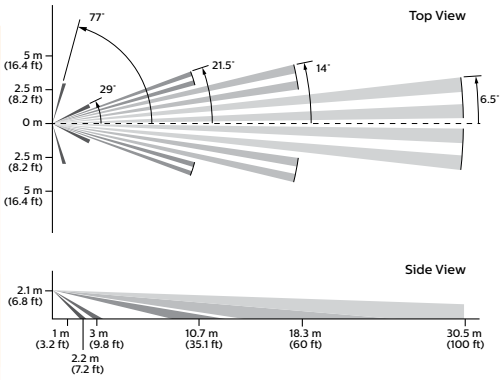
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Sensor	Motion Detector	Standard sensitivity Maximum detection range: 30.5 m Detection pattern: 3 x 25 m Detection zones: 30° wide angle lens with 14 beams in 4 detection layer. LED activation indicator Sensor: Dual element pyroelectric
	PE Cell	Range 5 lux to 10,000 lux (incident on sensor) Range 5 lux to 10,000 lux (illumination of non-reflective surface in sensor field of view)
	IR Receiver	Philips RC5 codes Network sign-on functionality only 12 m max range
Interface	Controls	Walk test, IR received, LED indicator, & Service pushbutton
Network	Connection	30 cm fly lead
	DALI Power Consumption	9 mA
	DALI Supply Requirements	9.5 - 22.5 VDC
	Control Bus	DALI bus with a Philips Dynalite MultiMaster controller
	Configurations	All functions remotely programmable
Physical	Dimensions (H x W x D)	66 mm x 70 mm x 71 mm (2.6" x 2.75" x 2.8")
	Packed Weight	0.116 kg (0.26 lbs)
	Construction	Polycarbonate White (RAL 9010)
	Operating Conditions	Temperature: -5 to 50°C ambient Humdity: 10 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60°C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DUS30-LHB - DALI (Philips 12NC - 913703015609)

Lens Pattern



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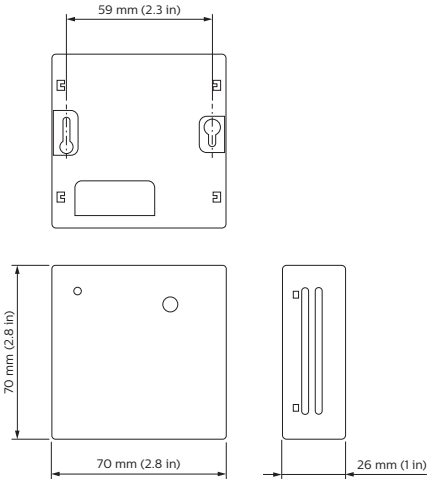
DTS900 Temperature Sensor

Measure & report ambient temperature to network devices

The DTS900 temperature sensor measures and reports ambient temperature data to other Philips Dynalite devices in situations where temperature control is critical, such as heating and cooling plants.



- Incorporates filtering and hysteresis — Provides compensation for rapid temperature fluctuations.
- Customized high and low set points — Create acceptable temperature parameters specific to the application using Envision commissioning software or other Philips Dynalite control devices, including touchscreens.
- Integrate with touchscreens for two way network communication — Use DTP100 or DTP170 touchscreens to interrogate the sensor and display the current temperature in real time.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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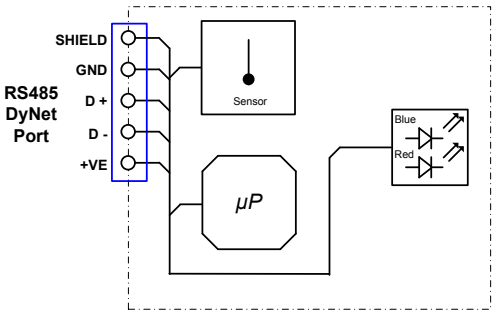
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Hardware	Supply	12 VDC @ 20 mA from the DyNet network
	Control Inputs/Outputs	One RS-485 DyNet serial port
	Measurement Range	0° to 50° C, accuracy ± -1° C
	Internal Controls	Programmable Logic Controller
	User Controls	LED Indicator: Blue = Cool Red = Heat
Physical	Dimensions (H x W x D)	70 mm x 70 mm x 26 mm (2.8" x 2.8" x 1.0")
	Packed Weight	0.116 kg
	Construction	ABS plastic enclosure
	Operating Conditions	Temperature: -0 to 45° C ambient Humdity: 10 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DTS900 (Philips 12NC - 913703072009)

Electrical Diagram



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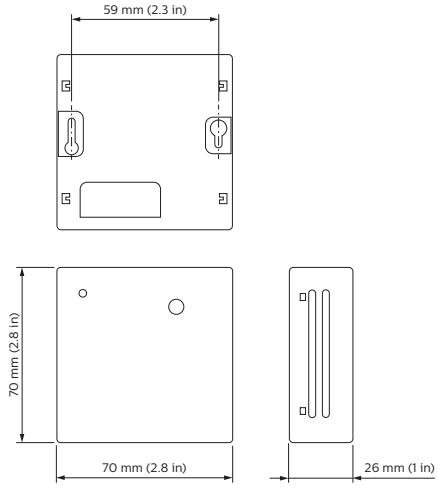
DTS900M Temperature Sensor

Measure & report ambient temperature to network devices

The DTS900M temperature sensor measures and reports ambient temperature data to other Philips Dynalite devices in situations where temperature control is critical, such as heating and cooling plants. The DTS900M features a set point knob, to manually adjust the temperature.



- Incorporates filtering and hysteresis — To provide compensation for rapid temperature fluctuations.
- Customized high and low set points — Create acceptable temperature parameters specific to the application using Envision commissioning software or other Philips Dynalite control devices, including touchscreens.
- Integrate with touchscreens for two way network communication — Use DTP100 or DTP170 touchscreens to interrogate the sensor and display the current temperature in real time.
- User-adjustable — Manual temperature set point knob provided.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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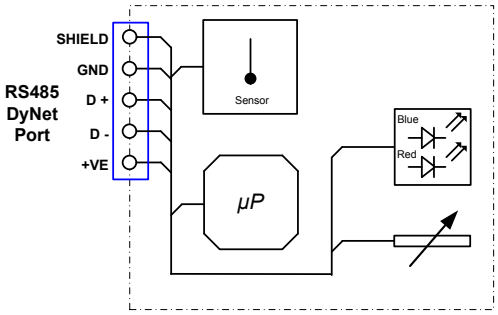
Item	Specification	Details
Hardware	Supply	12 VDC @ 20 mA from the DyNet network
	Control Inputs/Outputs	One RS-485 DyNet serial port
	Measurement Range	0° to 50° C, accuracy ± -1° C
	Internal Controls	Programmable Logic Controller
	User Controls	LED Indicator: Blue = Cool Red = Heat Temperature set point knob
Physical	Dimensions (H x W x D)	70 mm x 70 mm x 26 mm (2.8" x 2.8" x 1.0")
	Packed Weight	0.116 kg
	Construction	ABS plastic enclosure
	Operating Conditions	Temperature: -0 to 45° C ambient Humdity: 10 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	User Adjustable Set Point	DTS900M (Philips 12NC - 913703072109)

Electrical Diagram



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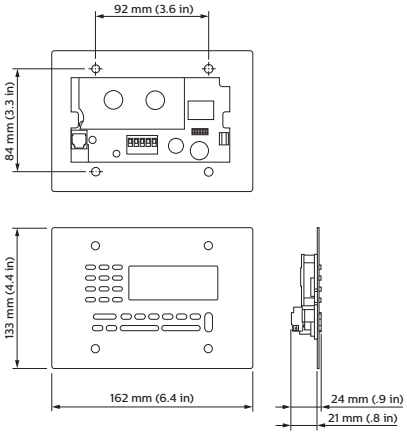
Timeclocks

North Narrabeen Residence
Sydney, Australia

DTC602 Timeclock

Astronomical 365 day timeclock

The DTC602 timeclock is used to automate programmed tasks and events on a DyNet network. The DTC602 is suitable for, but not limited to, North American, South American, Australian and New Zealand markets.



- Advanced clock controls — Features sunrise/ sunset tracking and automatic adjustment for daylight saving.
- Performs as an energy management controller — Uses powerful macro and conditional logic functions to perform full automation of large commercial projects, where automatic lighting events are required at predetermined times.
- Sets the operating mode of other devices on the network — Can be used to set the operating mode of multifunction sensors, giving priority to IR, PIR or PE facilities, depending on the time of day or day of the week.
- Local or remote operation — Programming and operation is possible either locally, utilizing the front panel LCD display and keypad, or remotely via a PC.
- PIN protected — Prevent unauthorized system changes through use of PIN password protection.
- Used as a system programmer — The timeclock can be used to program system changes, guiding the user step-by-step through the programing task. Channel, area and preset scene names are automatically uploaded from the network.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Hardware	DyNet DC Supply	12V @ 20 mA from the DyNet network
	Control Inputs/Outputs	One RS-485 DyNet serial port
	User Controls	One 122 x 32 pixel rear lit LCD display One 12 button LCD transport keys One 12 button numeric keypad
	Clock	365 day clock Battery backup Sunrise/sunset tracking Automatic daylight saving adjustment 250 timed events 64 tasks
	Memory	All data stored in 100 year life EEPROM
Physical	Dimensions (H x W x D)	133 mm x 162 mm x 24 mm (4.4" x 6.4" x 0.9")
	Packed Weight	0.2 kg
	Construction	1.6 mm stainless steel faceplate/body
	Operating Conditions	Temperature: -0 to 45° C ambient Humdity: 10 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DTC602 (Philips 12NC - 913703074109)

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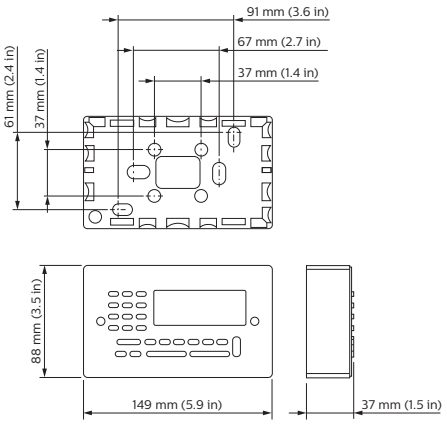
DTCE602 Timeclock

Astronomical 365 day timeclock

The DTCE602 timeclock is used to automate programmed tasks and events on a DyNet network. The DTCE602 is suitable for, but not limited to, European, Middle Eastern, African and Asian markets.



- Advanced clock controls — Features sunrise/ sunset tracking and automatic adjustment for daylight saving.
- Performs as an energy management controller — Uses powerful macro and conditional logic functions to perform full automation of large commercial projects, where automatic lighting events are required at predetermined times.
- Sets the operating mode of other devices on the network — Can be used to set the operating mode of multifunction sensors, giving priority to IR, PIR or PE facilities, depending on the time of day or day of the week.
- Local or remote operation — Programming and operation is possible either locally, utilizing the front panel LCD display and keypad, or remotely via a PC.
- PIN protected — Prevent unauthorized system changes through use of PIN password protection.
- Used as a system programmer — The timeclock can be used to program system changes, guiding the user step-by-step through the programing task. Channel, area and preset scene names are automatically uploaded from the network.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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Item	Specification	Details
Hardware	DyNet DC Supply	12V @ 20 mA from the DyNet network
	Control Inputs/Outputs	One RS-485 DyNet serial port
	User Controls	One 122 x 32 pixel rear lit LCD display One 12 button LCD transport keys One 12 button numeric keypad
	Clock	365 day clock Battery backup Sunrise/sunset tracking Automatic daylight saving adjustment 250 timed events 64 tasks
	Memory	All data stored in 100 year life EEPROM
Physical	Dimensions (H x W x D)	88 mm x 149 mm x 37 mm (3.5" x 5.9" x 1.5")
	Packed Weight	0.2 kg
	Construction	1.6 mm stainless steel faceplate/body
	Operating Conditions	Temperature: -0 to 45° C ambient Humdity: 10 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DTCE602 (Philips 12NC - 913703074209)

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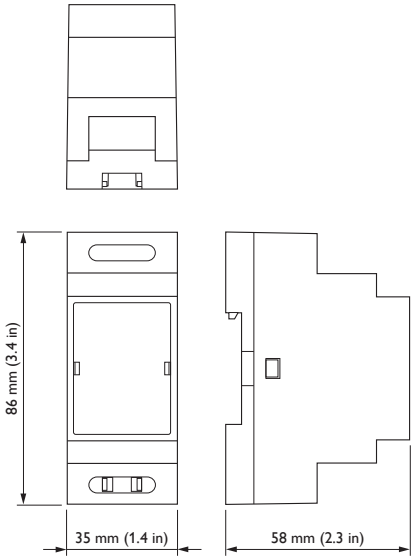
DDTC001 Timeclock

Tamper resistant time control

The DDTC001 timeclock provides a tamper resistant solution for time-based event control on a DyNet network.

- Remote programming — The device is programed via a PC and there are no external controls available, providing a tamper resistant solution.
- Advanced clock controls — Features sunrise/ sunset tracking and automatic adjustment for daylight saving.
- Performs as an energy management controller — Uses powerful macro and conditional logic functions to perform full automation of large commercial projects, where automatic lighting events are required at predetermined times.
- Flexible mounting solution — DIN-rail mounted device, designed to be installed into a distribution board.



For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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Item	Specification	Details
Hardware	DyNet DC Supply	12 V @ 20 mA from the DyNet network
	Control Inputs/Outputs	One RS-485 DyNet serial port
	User Controls	No user controls - all functions programmed with a PC
	Clock	365 day clock Battery backup Sunrise/sunset tracking Automatic daylight saving adjustment 250 timed events 8 tasks
	Memory	All data stored in 100 year life EEPROM
Physical	Dimensions (H x W x D)	86 mm x 35 mm x 58 mm (3.4" x 1.4" x 2.3") (exposed)
	Packed Weight	0.1 kg
	Construction	ABS DIN-rail enclosure (2 unit)
	Operating Conditions	Temperature: -0 to 45° C ambient Humdity: 10 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDTC001 (Philips 12NC 913703074009)

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One Shelley Street
Sydney, Australia

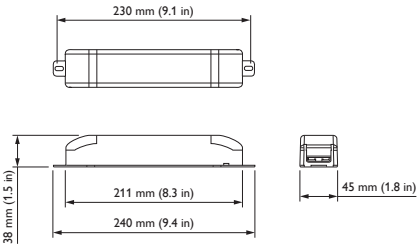
Photograph by
Richard Drew,
Slikpics Photography

Relay **Controllers**

DMRC210 Relay Controller

Intelligent networked control of individual lighting fixtures

The DMRC210 is a two channel device that provides intelligent networked control of individual lighting fixtures. The compact design enables mounting directly within the gear enclosure of many lighting fixtures.



- Incorporates two relay outputs — Used to control mains supply to the fixture and provide an intensity control when used with tapped drivers.
- Gear enclosure mounting — Compact design allows the device to be mounted directly within the gear enclosure of many light fittings.
- Fully rated device — Robust relays provide reliable control of difficult lighting loads.
- Inbuilt diagnostic functionality — Features Device Online/Offline status indication.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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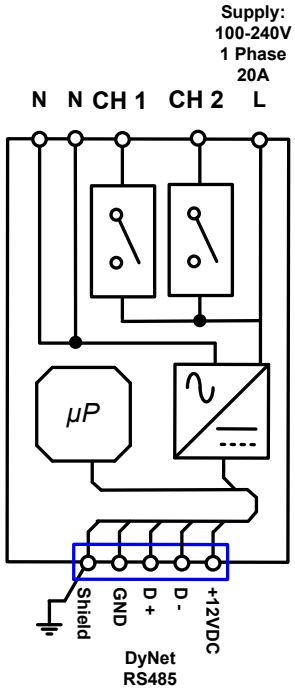
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	100 - 240 VAC 50 / 60 Hz Single Phase @ 20 A
	DyNet DC Supply	12 V @150 mA (supply for approx 7 user interfaces)
	Outputs	2 x switched @ 10 A (inductive) Maximum device load 180 A
	Switching Device	Relay, Tungsten pilot contact, 16 A inductive, 165 A surge
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	Line, Neutral 1 x 4 mm² maximum conductor size
	Output Terminals	Line 1, Line 2, Neutral 1 x 4 mm² maximum conductor size
	Dimensions (L x W x D)	240 mm x 45 mm x 38 mm (9.4" x 1.8" x 1.5")
	Packed Weight	0.19 kg
	Construction	ABS plastic
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DMRC210 (Philips 12NC 913703050009)

Electrical Diagram



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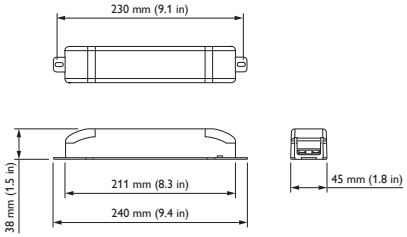
DMRC210-RJ-DA Relay Controller

Intelligent sub-networked control of luminaires

The Philips Dynalite EcoSet DMRC210-RJ-DA relay controller is designed to allow intelligent, sub-networked control of luminaires, when used in combination with the EcoSet DUS804C-RJ-DA occupancy sensor.



- Incorporates two relay outputs — Two independently controlled relay outputs designated for switching lighting loads.
- Gear enclosure mounting — Compact design allows the device to be mounted directly within the gear enclosure of many light fittings.
- Fully rated device — Suitable for large in-rush lighting loads.
- Dipswitch configuration — Allows rapid set area configuration and provides out-of-the-box functionality without the need for a PC and software on-site.
- Standalone or networked operation — Though programmed without PC software, the device can be integrated into a fully networked Philips Dynalite system when extra functionality is required.
- Inbuilt diagnostic functionality — Features Device Online/Offline status indication.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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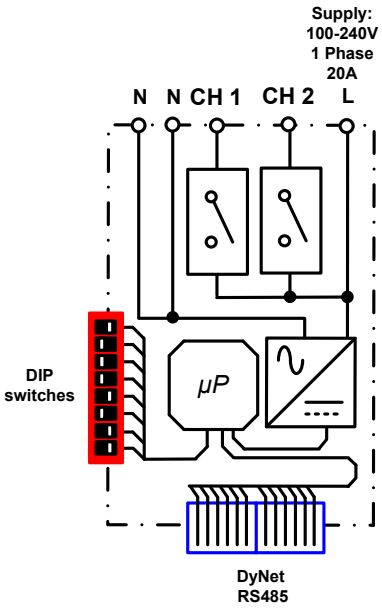
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	100 - 240 VAC 50 / 60 Hz Single Phase @ 20 A
	DyNet DC Supply	12 V @150 mA (supply for approx 7 user interfaces)
	Outputs	2 x switched @ 10 A (inductive) Maximum device load 180 A
	Switching Device	Relay, Tungsten pilot contact, 16 A inductive, 165 A surge
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	Line, Neutral 1 x 4 mm² maximum conductor size
	Output Terminals	Line 1, Line 2, Neutral 1 x 4 mm² maximum conductor size
	Network Terminals	Two RJ12 network sockets
	Dimensions (L x W x D)	240 mm x 45 mm x 38 mm (9.4" x 1.8" x 1.5")
	Packed Weight	0.19 kg
	Construction	ABS plastic
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DMRC210-RJ-DA (Philips 12NC 913703050109)

Electrical Diagram



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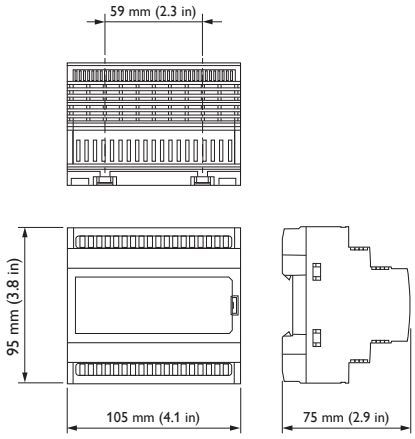
DDRC420FR Relay Controller

Robust control of switched loads

The Philips Dynalite DDRC420FR provides control of any type of switched load, including difficult lighting loads. The four channel device supports all types of switched loads up to 20A inductive.



- Feed-through power circuit design — Electrically equivalent to a 4 pole contactor, with the added advantage of each pole being separately controllable via the DyNet network.
- Flexible mounting solution — A DIN-rail mountable device, designed to be installed into the distribution board supplying power to the controlled circuit.
- Inbuilt diagnostic functionality — Features circuit run time tracking on each channel and Device Online/Offline status indication.
- Multiple wiring schemes supported — Controls Single Phase and Neutral or Three Phase and Neutral (Star) wiring configurations.
- Hardware override — Service override switch accessible from front panel.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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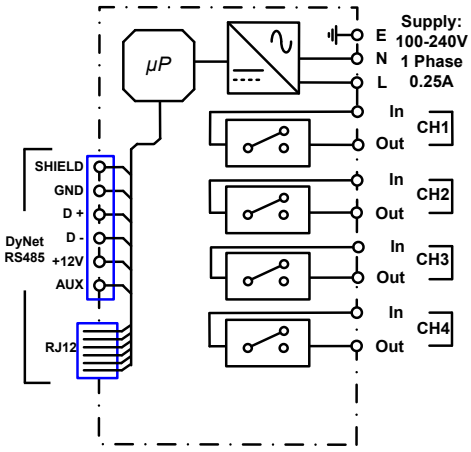
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	100 - 240 VAC 50 / 60 Hz Single Phase @ 0.25 A
	DyNet DC Supply	12 V @120 mA (supply for approx 6 user interfaces)
	Outputs	4 x switched feed-through outputs @ 20 A (inductive) Maximum device load 80A
	Supported wiring schemes	Single Phase and Neutral Three Phase and Neutral (Star)
	Relays	Rated switch current: 50 A resistive 20A lighting load Rated inrush current: 500 A
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service override switch for each channel Diagnostic LED
	Internal Controls	Programmable Logic Controller
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status Ciruit run time tracking
Physical	Supply Terminals	Line, Neutral, Earth 1 x 4 mm² maximum conductor size
	Output Terminals	Line In, Line Out for each channel 1 x 4 mm² maximum conductor size
	Dimensions (H x W x D)	95 mm x 105 mm x 75 mm (3.8" x 4.1" x 2.9")
	Packed Weight	0.8 kg
	Construction	Polycarbonate DIN-rail enclosure (6 unit)
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDRC420FR (Philips 12NC 913703051009)
	Breaker trip detection	DDRC420FR-BT (Philips 12NC 913703053109)

Electrical Diagram



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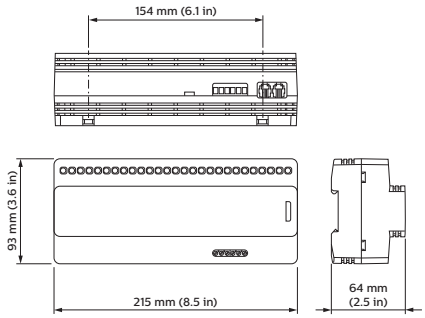
DDRC810DT-GL Relay Controller

Designed to operate any type of switched load

The Philips Dynalite DDRC810DT-GL is ideal for controlling bi-directional motors, such as curtain and blind motors. It is an eight channel device suitable for any switched load up to 10A per channel, with a maximum box load of 40A.



- Voltage free changeover SPDT output relays — Perfect for controlling bi-directional motors.
- Flexible mounting solution — A DIN-rail mountable device, designed to be installed into the distribution board supplying power to the controlled circuit.
- Inbuilt diagnostic functionality — Features circuit run time tracking on each channel.
- Standalone or networked operation — Can operate as a discrete standalone unit, or as part of an integrated control system when connected to the DyNet network.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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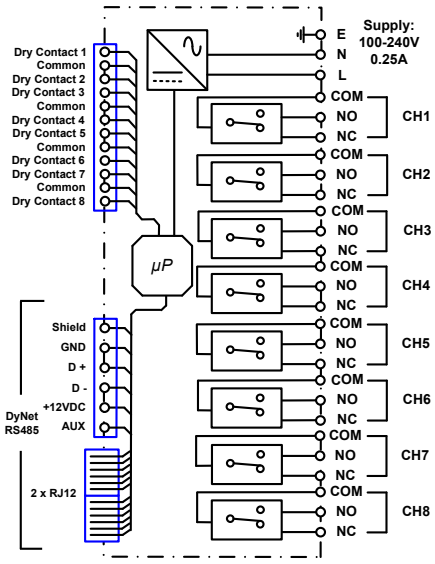
Item	Specification	Details
Electrical	Input Voltage	100 - 240 VAC 50 / 60 Hz Single Phase @ 0.25 A
	DyNet DC Supply	12 V @120 mA (supply for approx 6 user interfaces)
	Outputs	8 x switched SPDT voltage free changeover outputs Maximum ratings for each output: 10 A (NO) / 5 A (NC) 250 VAC (resistive) 24 VDC (resistive) Maximum device load 40 A Note: Snubbers/spark killers not fitted. De-rate for reactive loads. Functional isolation only between switched outputs. Do not mix SELV and non-SELV loads on the same device.
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Manual override switch for each channel Service switch Diagnostic LED
	Internal Controls	Programmable Logic Controller
	Preset Scenes	170
	Diagnostic Functions	Ciruit run time tracking on each channel
Physical	Supply Terminals	Line, Neutral, Earth 0.2-5 mm^2 (24-10 AWG) conductor size
	Output Terminals	COM, NO, NC for each channel 0.2-5 mm^2 (24-10 AWG) conductor size
	Dimensions (H x W x D)	93 mm x 215 mm x 64 mm (3.6" x 8.5" x 2.5")
	Packed Weight	0.54 kg
	Construction	Polycarbonate DIN-rail enclosure (12 unit)
	Operating Conditions	Temperature: 0 to 50° C ambient Humidity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, RCM
Options & Ordering	Standard Product	DDRC810DT-GL (Philips 12NC 913703035209)

Electrical Diagram



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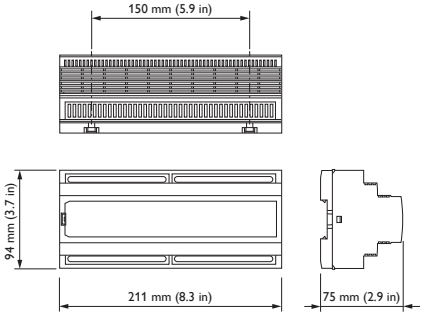
DDRC820FR-CS-BT Relay Controller

Robust control of switched loads

The Philips Dynalite DDRC820FR-CS-BT provides control of any type of switched load. The eight channel device supports all types of switched loads up to 20A inductive.



- Feed-through power circuit design — Electrically equivalent to an 8 pole contactor, with the added advantage of each pole being separately controllable via the DyNet network.
- Flexible mounting solution — A DIN-rail mountable device, designed to be installed into the distribution board supplying power to the controlled circuit.
- Inbuilt diagnostic functionality — Features circuit run time tracking on each channel and Device Online/Offline status indication.
- Multiple wiring schemes supported — Controls Single Phase and Neutral or Three Phase and Neutral (Star) wiring configurations.
- Hardware override — Service override switch accessible from front panel.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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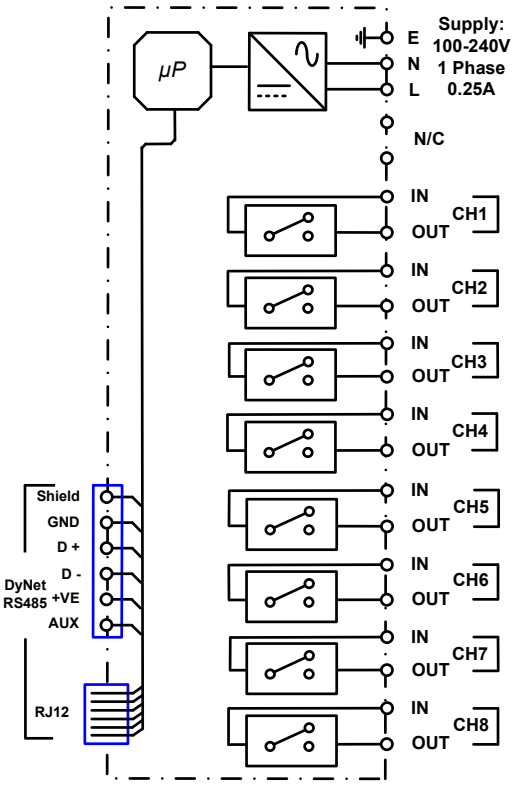
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	100 - 240 VAC 50 / 60 Hz Single Phase @ 0.25 A
	DyNet DC Supply	12 V @120 mA (supply for approx 6 user interfaces)
	Outputs	8 x switched feed-through outputs @ 20 A (inductive) Maximum device load 160A
	Supported wiring schemes	Single Phase and Neutral Three Phase and Neutral (Star)
	Relays	Rated switch current: 50 A resistive 20A lighting load Rated inrush current: 500 A Rated switching voltage: 440 V AC
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service override switch for each channel Diagnostic LED
	Internal Controls	Programmable Logic Controller
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status Ciruit run time tracking
Physical	Supply Terminals	Line, Neutral, Earth 1 x 4 mm² maximum conductor size
	Output Terminals	Line In, Line Out for each channel 1 x 4 mm² maximum conductor size
	Dimensions (H x W x D)	94 mm x 211 mm x 75 mm (3.7" x 8.3" x 2.9")
	Packed Weight	1.0 kg
	Construction	Polycarbonate DIN-rail enclosure (6 unit)
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, RCM
Options & Ordering	Standard Product	DDRC820FR-CS-BT (Philips 12NC 913703053309)

Electrical Diagram



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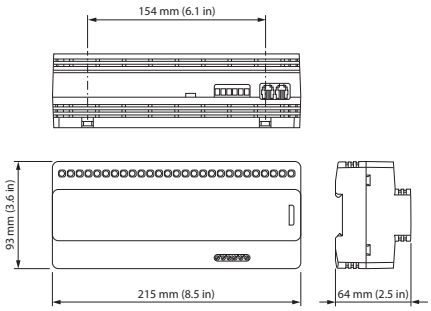
DDRC1220FR-GL Relay Controller

Robust control of switched loads

The Philips Dynalite DDRC1220FR-GL provides control of any type of switched load. All types of switched loads up to 20 A inductive are supported. The maximum load may be limited by 500 A inrush rating.



- Feed-through power circuit design — Electrically equivalent to a 12 pole contactor, with the added advantage of each pole being separately controllable via the DyNet network.
- Flexible mounting solution — A DIN-rail mountable device, designed to be installed into the distribution board supplying power to the controlled circuit.
- Inbuilt diagnostic functionality — Features circuit run time tracking on each channel and Device Online/Offline status indication.
- Multiple wiring schemes supported — Controls Single Phase and Neutral or Three Phase and Neutral (Star) wiring configurations.
- Hardware override — Service override switch accessible from front panel.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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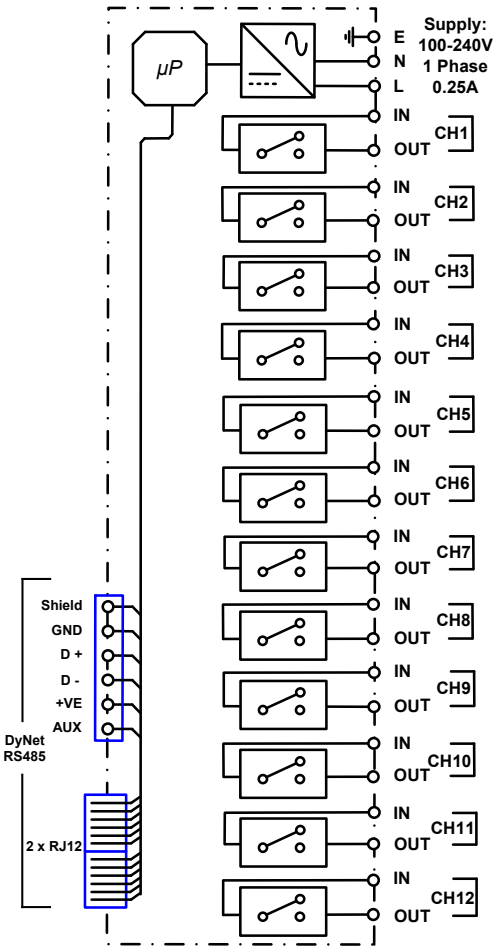
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	100 - 240 VAC 50 / 60 Hz Single Phase @ 0.25 A
	DyNet DC Supply	12 V @120 mA (supply for approx 6 user interfaces)
	Outputs	12 x switched feed-through outputs @ 20 A (inductive) Maximum device load 180 A
	Supported wiring schemes	Single Phase and Neutral Three Phase and Neutral (Star) Maximum device load 180 A
	Relays	Rated switch current: 50 A resistive 20A lighting load Rated inrush current: 500 A
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service override switch for each channel Diagnostic LED
	Internal Controls	Programmable Logic Controller
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status Ciruit run time tracking Network Watchdog
Physical	Supply Terminals	Line, Neutral, Earth 1 x 4 mm² maximum conductor size
	Output Terminals	Line In, Line Out for each channel 1 x 4 mm² maximum conductor size
	Dimensions (H x W x D)	93 mm x 215 mm x 64 mm (3.6" x 8.5" x 2.5")
	Packed Weight	1.1 kg
	Construction	Polycarbonate DIN-rail enclosure (12 unit)
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, RCM
Options & Ordering	Standard Product	DDRC1220FR-GL (Philips 12NC 913703052309)

Electrical Diagram



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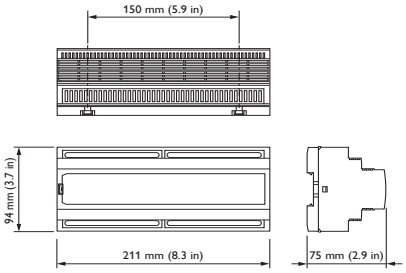
DDRC-GRMS10 Hotel Room Controller

Compact dedicated controller for hotel room control solutions

The DDRC-GRMS10 controller is a purpose built hotel room automation and energy management system. This dedicated controller is completely self-contained and requires no external power supply, relays or processor.



- Dry contact inputs — The unit receives instructions from momentary button presses or card-holder reader within the guest room.
- Pre-programmed — No programming required as the unit is supplied with complex functions such as 'master on/off", 'room unoccupied', 'do not disturb' or 'make-up room' already incorporated.
- Built-in motor directional relays — Provides control of motorized blinds for a full automation solution.
- Two 16 A power relays — Allow a full energy management solution to be implemented, ensuring standby power consumption from GPOs is reduced and air conditioning systems only operational when required.
- Single box solution — Provides an economical full energy management solution for hotel guest rooms and suites.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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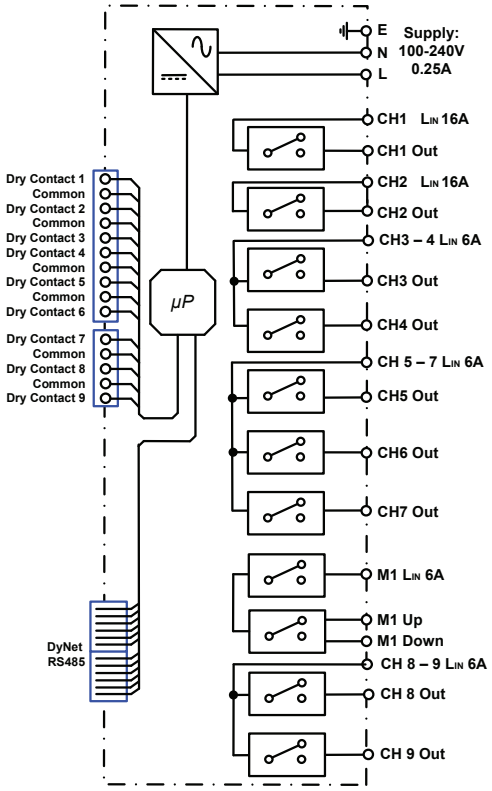
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	100 - 240 VAC 50 / 60 Hz Single Phase @ max 0.25 A
	DyNet DC Supply	12 VDC @ 100mA (supply for approx. 5 user interfaces)
	Outputs	**Ch 1** Switching, feed-through, 240 VAC 16 A resistive, 165 / 800A inrush rated (20mS / 200µS). Mechanical endurance: >5 million cycles, Resistive Load: >100,000 cycles, Load with high inrush: > 25,000 cycles (UL508, TV8). **Ch 2** Switching, feed-through, 240 VAC 16 A resistive, TV8 type relay, 116 A inrush rated (20mS / 200µS). Mechanical endurance: >10 million cycles, Resistive Load: >50,000 cycles (UL508), Load with high inrush: > 25,000 cycles (UL508, TV8). >50,000 cycles (5 / 50 A) and > 100,000 cycles (10 / 100 A) per EN61810-1Ed.2 and EN60255-25 **Ch 3-4** Switching, common feed 6 A max, 240 VAC 8 A rated TV8 type relays, 118 A inrush rating **Ch 5-7** Switching, common feed 6 A max, 240 VAC 8 A rated TV8 type relays, 118 A inrush rating **Ch 8** Switching & direction control, feed 6 A max or ELV supply, Cascaded single SPST 8 A TV-8 and SPDT 8 A TV-5 / TV-3 relays 240 VAC 8 A rated, 118 A inrush rating **Ch 9-10** Switching, common feed 6 A max or ELV/SELV supply*, 240 VAC 8 A rated TV8 type relays, 118 A inrush rating *note: subject to local wiring code, additional segregation may be required. **Ch 3-11** Mechanical endurance > 1 million cycles, Resistive load: >100,000 cycles, load with high inrush: > 25,000 cycles (UL508, TV8) **Maximum device load is 56 A**
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port Nine preprogramed dry contact input; max cable length <20 m
	User Controls	Service switch Diagnostic LED
	Preset Scenes	170
	Internal Controls	Inbuilt Programmable Logic Controller
Physical	Supply Terminals	Line, Neutral, Earth 2 x 2.5mm² or 1 x 4 mm² conductor size
	Output Terminals	2 x 2.5mm² or 1 x 4 mm² conductor size Ch 1 & 2: Line in, line out for each Ch group 3&4, 5,6&7, 10&11: Supply in, Ch out Ch 8: Supply in, motor up, motor down
	DyNet Termination	2 x RJ12 modular jacks
	Dry Contact Terminals	10 + 5 pole pluggable DC1-DC9 with shared COM, 1 x 1.5 mm² or 2 x 1 mm² max conductor size
	Dimensions (H x W x D)	94 mm x 211 mm x 75 mm (3.7" x 8.3" x 2.9")
	Packed Weight	0.82 kg
	Construction	Polycarbonate DIN-rail enclosure (12 unit)
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 70° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDRC-GRMS10 (Philips 12NC 913703051309)

Electrical Diagram



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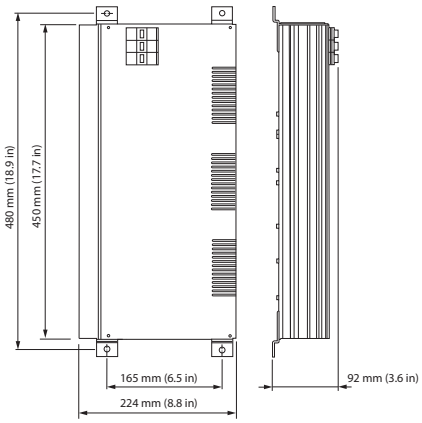
DRC1205 Relay Controller

Robust control of switched loads

The Philips Dynalite DRC1205 is a 12 channel relay controller, featuring a maximum of 5A per channel. It is used for switching both lighting and non-lighting loads.



- Minimize peak demand current — In areas where it is beneficial to sequentially switch on large lighting loads, such as factories and indoor sporting arenas, the devices can be programmed to stagger the switching process.
- Service override switch — Incorporated as standard, forces all channels to 100%.
- Inbuilt diagnostic functionality — Features Device Online/Offline status indication.
- Internal controls — Philips Dynalite accessory module enabled for optional additional functionality. Includes programmable logic controller capable of comprehensive conditional and sequential logic and arithmetic function processing.
- Options available — Including an additional RS-485 DyNet/DMX512 port and combined MCB and RCD protection.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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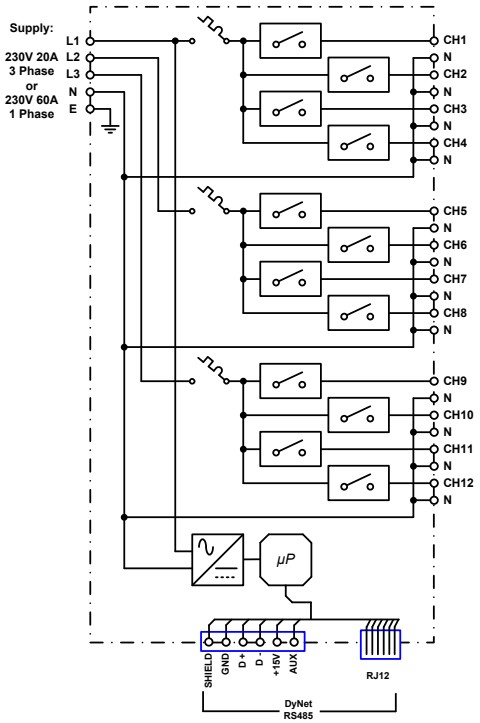
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	230 VAC 50 / 60 Hz 3 Phase 人 @ 20 A per phase or; 230 VAC ± 14% 50 / 60 Hz Single Phase @ 60 A
	DyNet DC Supply	12 V @ 120 mA (supply for approx 6 user interfaces)
	Outputs	12 x switched outputs @ 5A
	Protection	3 x 20 A 6 kA single pole thermal magnetic circuit breakers
	Switching Device	Relay 10 A nom. (resistive)
Control	Control Inputs/Outputs	One RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service override switch - all channels to 100% Diagnostic LED
	Internal Controls	Programmable Logic Controller Philips Dynalite Accessory Module enabled
	Preset Scenes	120
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	L1, L2, L3 1 x 10 mm² maximum conductor size
	Output Terminals	Line, Neutral for each channel 2 x 4 mm² maximum conductor size Earth Link bar provided
	Cable Entries	Mains - 1 x 75 mm x 53 mm removable gland plate Data: 1 x 25 mm dia. knockout
	Dimensions (H x W x D)	450 mm x 224 mm x 92 mm (17.7" x 8.8" x 3.6")
	Packed Weight	4.8 kg
	Construction	Alloy / Steel wall-mount case with epoxy finish
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product Extra DyNet / DMX512 Port	DRC1205 (Philips 12NC 913703054009) DRC1205-A (Philips 12NC 913703054109)

Electrical Diagram



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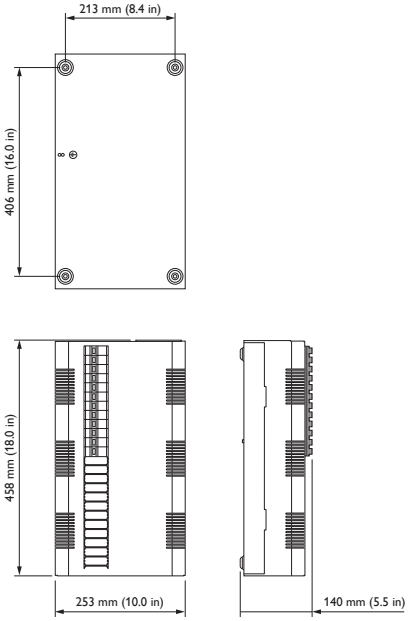
DRC1210 Relay Controller

Heavy-duty switching of lighting and non-lighting loads

The Philips Dynalite DRC1210 is a 12 channel relay controller, featuring a maximum of load of 10A per channel. It is used for switching both lighting and non-lighting loads.



- Minimize peak demand current — In areas where it is beneficial to sequentially switch on large lighting loads, such as factories and indoor sporting arenas, the devices can be programmed to stagger the switching process.
- Service override switch — Incorporated as standard, forces all channels to 100%.
- Inbuilt diagnostic functionality — Features Device Online/Offline status indication.
- Internal controls — Philips Dynalite accessory module enabled for optional additional functionality. Includes programmable logic controller capable of comprehensive conditional and sequential logic and arithmetic function processing.
- Options available — Including an additional RS485 DyNet/DMX512 port or earth leakage and overload protection on each channel.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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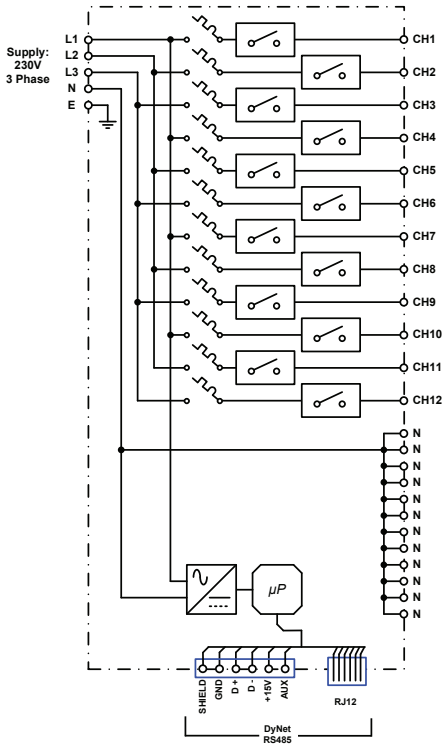
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	230 VAC ± 14% 50 / 60 Hz Single Phase @ 10 A or; 230 V ± 14% 50 / 60 Hz 3 Phase ⅄ @ 40 A per phase
	DyNet DC Supply	12 V @ 200 mA (supply for approx 10 user interfaces)
	Outputs	12 x switched outputs @ 10 A Maximum device load is 120 A
	Protection	2 x 10 A 6 kA single pole thermal magnetic circuit breakers
	Switching Device	Relay 50 A, 230 VAC resistive (5000 W lighting load rated)
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service override switch - all channels to 100% Diagnostic LED
	Internal Controls	Programmable Logic Controller
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	L1, L2, L3, 1 x 16 mm² maximum conductor size
	Output Terminals	Line for each channel 1 x 10 mm² maximum conductor size Neutral Link bar provided Earth Link bar provided
	Cable Entries	Mains - 4 x 25 mm dia. knockouts mounted on 100 mm x 50 mm removable gland plate Data: 1 x 25 mm dia. knockout Outputs: 6 x 25 mm
	Dimensions (H x W x D)	Std: 458 mm x 253 mm x 140 mm (18.0" x 10.0" x 5.5") -RCBO: 585 mm x 252 x 126 (23.0" x 9.9" x 5.0")
	Packed Weight	10.25 kg
	Construction	Alloy / Steel wall-mount case with epoxy finish
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DRC1210 (Philips 12NC 913703056009)
	Extra DyNet / DMX512 Port (-A)	DRC1210-A (Philips 12NC 913703056109)
	Earth leakage and overload protection on each channel (-RCBO)	DRC1210-RCBO (Philips 12NC 913703056509) Note: Necessitates larger enclosure

Electrical Diagram



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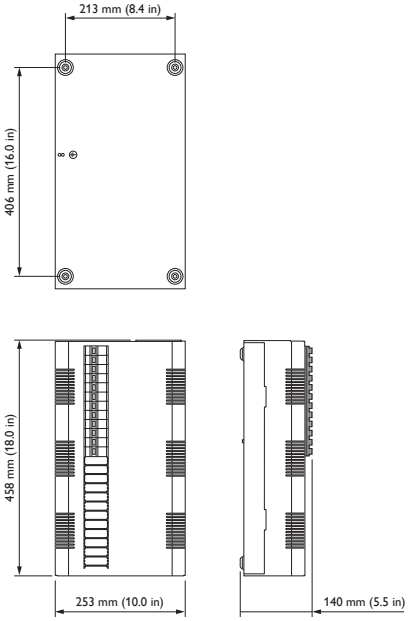
DRC1220GL Relay Controller

Heavy-duty switching of lighting and non-lighting loads

The Philips Dynalite DRC1220GL is a 12 channel relay controller, featuring a maximum of load of 20A per channel and a total device load of 180A. It is used for switching both lighting and non-lighting loads.



- Minimize peak demand current — In areas where it is beneficial to sequentially switch on large lighting loads, such as factories and indoor sporting arenas, the devices can be programmed to stagger the switching process.
- Service override switch — Incorporated as standard, forces all channels to 100%.
- Inbuilt diagnostic functionality — Features Device Online/Offline status indication.
- Internal controls — Philips Dynalite accessory module enabled for optional additional functionality. Includes programmable logic controller capable of comprehensive conditional and sequential logic and arithmetic function processing.
- Options available — Including an additional RS485 DyNet/DMX512 port or earth leakage and overload protection on each channel.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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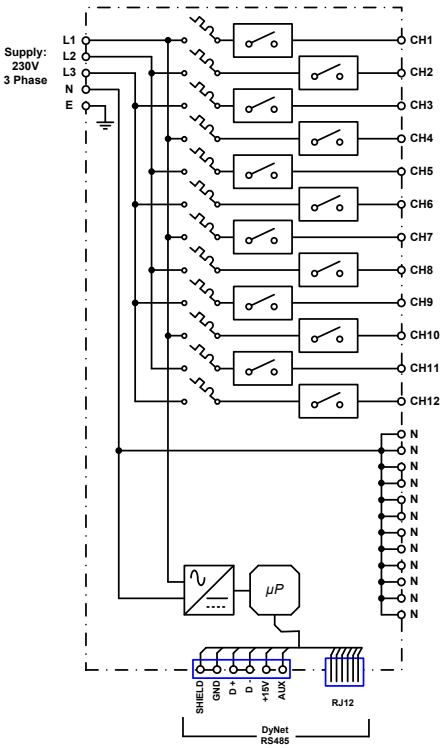
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	230 VAC ± 14% 50 / 60 Hz 3 Phase ⅄ @ 63 A per phase
	DyNet DC Supply	12 V @ 200 mA (supply for approx 10 user interfaces)
	Outputs	12 x switched outputs @ 20 A Maximum device load is 180 A
	Protection	12 x 20 A 6 kA single pole thermal magnetic circuit breakers
	Switching Device	Relay 50 A, 230 VAC resistive (5000 W lighting load rated)
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service override switch - all channels to 100% Diagnostic LED
	Internal Controls	Programmable Logic Controller
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	L1, L2, L3, 1 x 35 mm² maximum conductor size
	Output Terminals	Line for each channel 1 x 10 mm² maximum conductor size Neutral Link bar provided Earth Link bar provided
	Cable Entries	Mains - 4 x 25 mm dia. knockouts mounted on 100 mm x 50 mm removable gland plate Data: 1 x 25 mm dia. knockout Outputs: 6 x 25 mm
	Dimensions (H x W x D)	Std: 458 mm x 253 mm x 140 mm (18.0" x 10.0" x 5.5") -RCBO: 585 mm x 252 x 126 (23.0" x 9.9" x 5.0")
	Packed Weight	10.25 kg
	Construction	Alloy / Steel wall-mount case with epoxy finish
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DRC1220GL (Philips 12NC 913703057909)
	Extra DyNet / DMX512 Port (-A)	DRC1220GL-A (Philips 12NC 913703058709)
	Earth leakage and overload protection on each channel (-RCBO)	DRC1220GL-RCBO (Philips 12NC 913703000609) Note: Necessitates larger enclosure

Electrical Diagram



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Leading Edge
Dimmer Controllers

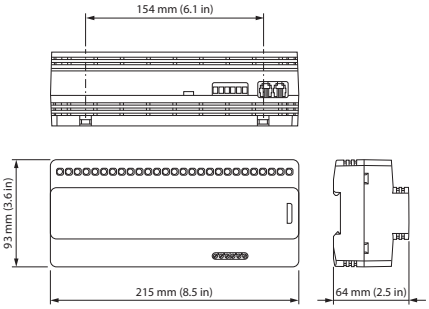
The Star
Sydney, Australia

Photograph by
Brent Winstone
Photography

DDLE801 Leading Edge Dimmer Controller

Superior LED dimming technology

The DDLE801 supports eight channels of leading edge dimming at 1A per channel. It is suitable for use with incandescent lighting, as well as leading edge compatible magnetic and electronic transformers. Advanced LED dimming technology makes the unit particularly suited to residential and hotel room applications.



- Active Load technology on each channel — Dramatically improves LED dimming stability through detection of supply fluctuations and application of control compensation.
- Soft start and voltage regulation technologies — Protects lamps from over voltage and dramatically improves lamp life, reducing maintenance costs.
- Superior internal drive componentry tuning — Removes issues of "clipping" that are normally associated with leading edge dimmers controlling LED lamps.
- Flexible mounting solution — A DIN-rail mountable device, designed to be installed into the distribution board supplying power to the controlled circuit.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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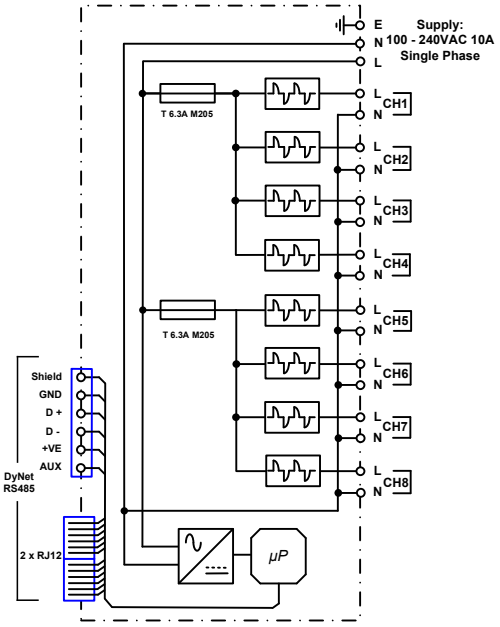
Item	Specification	Details
Electrical	Input Voltage	100 - 240 VAC 50 / 60 Hz Single Phase @ 10 A
	DyNet DC Supply	15 VDC @200 mA (supply for approx 8 user interfaces)
	Outputs	8 x dimmed outputs leading edge phase control @ 1 A Maximum device load is 8A
	Protection	1 x internal 6.3 A time delay fuse for a group of 4 output channels
	Regulating Device	Triac - 20 A, 600 V, 200 A surge
	Power Conditioning	Regulated outputs Over voltage protection Surge protection Brownout / Sag protection Spike protection Soft start 16 bit fade resolution (65,536 steps) Active load Active phase angle firing compensation
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Channel override Service switch Service indicating LED
	Diagnostic Functions	Circuit run time tracking on each channel Device online/offline status
Physical	DyNet Terminations	2 x RJ12 modular jack and six way screw terminals
	Supply Terminals	2 x 2.5mm² or 1 x 4 mm² conductor size Line, Neutral, Earth
	Output Terminals	Line, Neutral for each channel 2 x 2.5mm² or 1 x 4 mm² conductor size
	Cooling System	Naturally ventilated, no forced cooling, no maintenance
	Dimensions (H x W x D)	93 mm x 215 mm x 64 mm (3.6" x 8.5" x 2.5")
	Packed Weight	0.69 kg
	Construction	Polycarbonate DIN-rail enclosure (12 unit)
	Operating Conditions	Temperature: -5 to 40° C ambient Humdity: 0 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 70° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDLE801 (Philips 12NC - 913703061509)

Electrical Diagram



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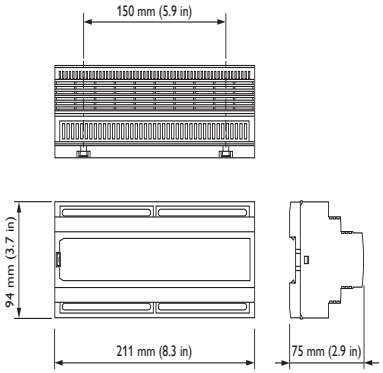
DDLE802 Leading Edge Dimmer Controller

Control lighting loads in residential or hotel room environments

The DDLE802 is an eight channel leading edge dimmer controller with a maximum load per channel of 2A. It is suitable for use with incandescent, low voltage, neon and selected fluorescent fixtures.



- Optional manual override LED illuminated server switch — Provides diagnostic and local override capability.
- Soft start and voltage regulation technologies — Protects lamps from over voltage and dramatically improves lamp life, reducing maintenance costs.
- Naturally ventilated — No forced cooling required, no maintenance required.
- Flexible mounting solution — A DIN-rail mountable device, designed to be installed into the distribution board supplying power to the controlled circuit.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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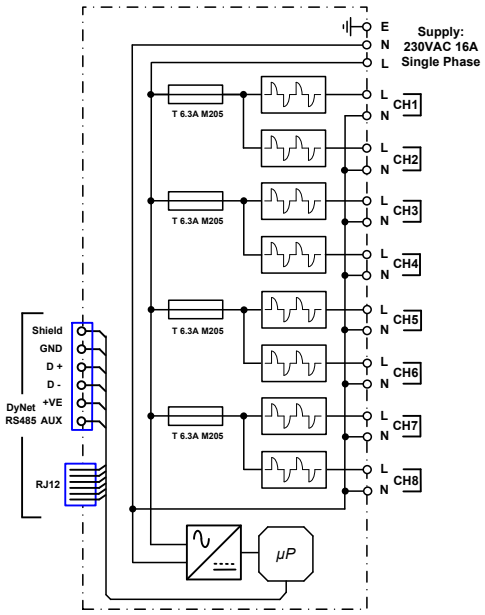
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	230 VAC ±14% 50 / 60 Hz Single Phase @ 16 A
	DyNet DC Supply	12 VDC @ 120 mA (supply for approx 6 user interfaces)
	Outputs	8 x dimmed outputs leading edge phase control @ 2 A Maximum device load is 16A
	Protection	Each pair of channels protected by a replaceable 6.3A time delay M205 fuse
	Regulating Device	Triac - 20 A, 600 V, 200 A surge
	Power Conditioning	Regulated outputs Over voltage protection Surge protection Brownout / Sag protection Spike protection Soft start 16 bit fade resolution (65,536 steps)
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service switch Service indicating LED
	Diagnostic Functions	Circuit run time tracking on each channel Device online/offline status
Physical	Supply Terminals	2 x 2.5mm² or 1 x 4 mm² conductor size Line, Neutral, Earth
	Output Terminals	Line, Neutral for each channel 2 x 2.5mm² or 1 x 4 mm² conductor size
	Cooling System	Naturally ventilated, no forced cooling, no maintenance
	Dimensions (H x W x D)	94 mm x 211 mm x 75 mm (3.7" x 8.3" x 2.9")
	Packed Weight	0.94 kg
	Construction	Polycarbonate DIN-rail enclosure (12 unit)
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 70° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDLE802 (Philips 12NC - 913703000009)
	Manual Override	DDLE802-MO (Philips 12NC - 913703000109)

Electrical Diagram



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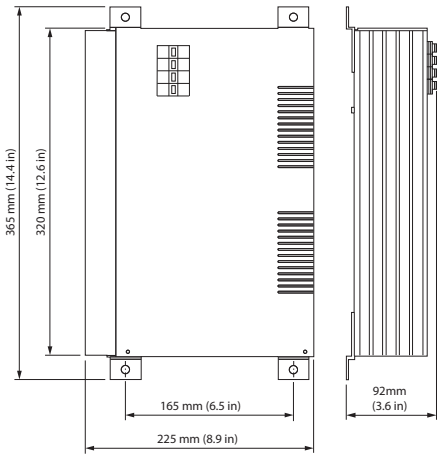
DLE405 Leading Edge Dimmer Controller

Dimming control for retail and hospitality applications

The DLE405 is a four channel leading edge dimmer controller with a maximum load per channel of 5A. It is suitable for use with incandescent and neon light sources, as well as iron core and leading edge electronic transformers.



- Suitable for small retail and hospitality applications — Provides robust control in situations where a small number of lighting circuits require control.
- Interference suppression — Iron powder core toroidal choke lessens effects of interference from other equipment, such as transformers.
- Naturally ventilated — Requires no forced cooling or maintenance.
- Soft start and voltage regulation technologies — Protects lamps from over voltage and dramatically improves lamp life, reducing maintenance costs.
- Diagnostic functionality — Device Online/ Offline status reporting.
- User controls — Incorporates service override switch - all channels to 100% and a diagnostic LED.
- Options available — Including an additional RS485 DyNet/DMX512 port, circuit breaker trip reporting, neutral disconnect breakers or earth leakage and overload protection on each channel.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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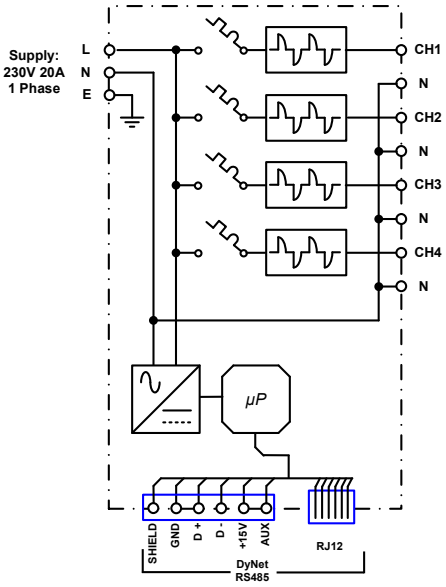
Item	Specification	Details
Electrical	Input Voltage	230 VAC ±14% 50 / 60 Hz Single Phase @ 20 A
	DyNet DC Supply	12 VDC @ 120 mA (supply for approx 6 user interfaces)
	Outputs	4 x dimmed outputs leading edge phase control @ 5 A.
	Protection	4 x 6 A 6 kA single pole thermal magnetic circuit breakers
	Regulating Device	Triac - 40 A nom., 600 V, 400 A surge
	Power Conditioning	Regulated outputs Over voltage protection Surge protection Brownout / Sag protection Spike protection Soft start 16 bit fade resolution (65,536 steps)
	Interference Suppression	Iron powder toroidal choke
Control	Control Inputs/Outputs	One RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service override switch - all channels to 100% Diagnostic LED
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	Line, Neutral 2 x 4 mm² max conductor size
	Output Terminals	Line, Neutral for each channel 2 x 4 mm² max conductor size Earth link bar provided
	Cable Entries	Mains - 1 x 75 mm x 53 mm removable gland plate Data - 1 x 25 mm dia. knockout
	Cooling System	Naturally ventilated, no forced cooling, no maintenance
	Dimensions (H x W x D)	320 mm x 225 mm x 92 mm (12.6" x 8.9" x 3.6")
	Packed Weight	4.2 kg
	Construction	Alloy / Steel wall mount case with epoxy finish
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DLE405 (Philips 12NC - 913703004009)
	Extra DyNet / DMX512 Port	DLE405-A (Philips 12NC - 913703004109)
	Circuit breaker trip reporting	DLE405-BT (Philips 12NC - 913703004209)
	Neutral disconnect breakers	DLE405-ND (Philips 12NC - 913703004409)

Electrical Diagram



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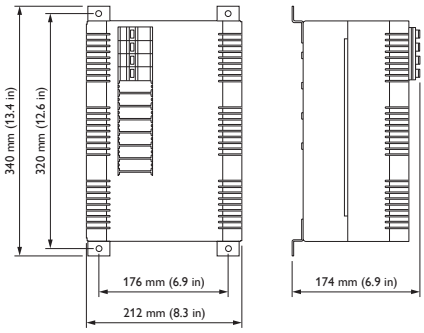
DLE410 Leading Edge Dimmer Controller

Ideal for lecture theater and presentation applications

The DLE410 is a four channel leading edge dimmer controller, with a maximum load per channel of 10A. It is suitable for use with incandescent, neon and selected fluorescent light sources, as well as iron core and leading edge electronic transformers.



- Ideal for applications where multiple user settings are required — Provides robust control in situations where a small number of lighting circuits require control.
- Interference suppression — Iron powder core toroidal choke lessens effects of interference from other equipment, such as transformers.
- Naturally ventilated — Requires no forced cooling or maintenance.
- Soft start and voltage regulation technologies — Protects lamps from over voltage and dramatically improves lamp life, reducing maintenance costs.
- Diagnostic functionality — Device Online/ Offline status reporting.
- User controls — Incorporates service override switch - all channels to 100%, a diagnostic LED and hardware bypass switches for each channel.
- Options available — Including an additional RS485 DyNet/DMX512 port, circuit breaker trip reporting, double pole circuit breakers or earth leakage and overload protection on each channel.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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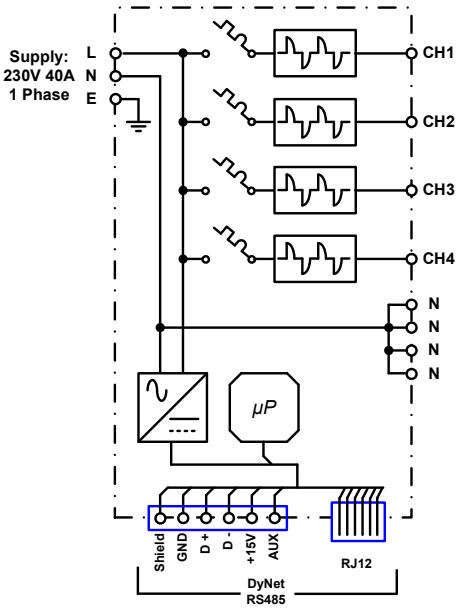
Item	Specification	Details
Electrical	Input Voltage	230 V ±14% 50 / 60 Hz Single Phase @ 40 A
	DyNet DC Supply	12 V @ 200 mA (supply for approx 10 user interfaces)
	Outputs	4 x dimmed outputs leading edge phase control @ 10 A
	Protection	4 x 10 A 6 kA single pole thermal magnetic circuit breakers
	Regulating Device	Triac - 40 A nom., 600 V, 400 A surge
	Power Conditioning	Regulated outputs Over voltage protection Surge protection Brownout / Sag protection Spike protection Soft start 16 bit fade resolution (65,536 steps)
	Interference Suppression	Iron powder toroidal choke
	Rise Time	100µS @ 230 V
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service override switch - all channels to 100% Diagnostic LED Hardware bypass switches for each channel
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	Line, Neutral 2 x 10 mm² max conductor size
	Output Terminals	Line, Neutral for each channel 2 x 4 mm² max conductor size Earth Link bar provided
	Cable Entries	Mains - 7 x 25 mm dia. knockout Data - 1 x 25 mm dia. knockout
	Cooling System	Naturally ventilated, no forced cooling, no maintenance
	Dimensions (H x W x D)	340 mm x 212 mm x 174 mm (13.4" x 8.3" x 6.9")
	Packed Weight	8.8 kg
	Construction	Alloy / Steel wall mount case with epoxy finish
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DLE410 (Philips 12NC - 913703006009)
	Extra DyNet / DMX512 Port	DLE410-A (Philips 12NC - 913703006109)
	Circuit breaker trip reporting	DLE410-BT (Philips 12NC - 913703006309)
	Double pole cct breakers	DLE410-DP (Philips 12NC - 913703006409)
	Earth leakage & overload protection on each channel	DLE410-RCBO (Philips 12NC - 913703006709)
	Dual port & RCBO	DLE410-A-RCBO (Philips 12NC - 913703006909)

Electrical Diagram



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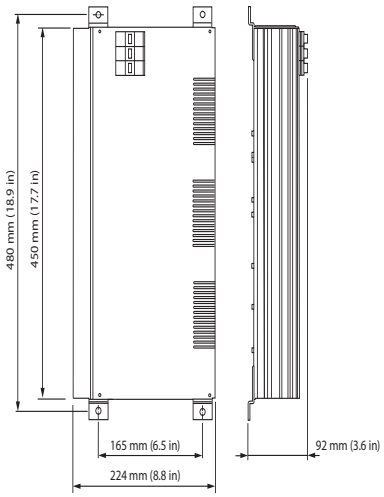
DLE1203 Leading Edge Dimmer Controller

Control lighting loads in residential applications

The DLE1203 is a 12 channel leading edge dimmer controller, with a maximum load of 3A per channel and a total device load of 32A. It is suitable for use with incandescent, neon and selected fluorescent lighting, as well as iron core and leading edge electronic transformers.



- Suited to small loads as found in residential settings — Performs powerful smart home control functions when combined with Philips Dynalite Systems Integrator; control security, HVAC, home theater, blinds and lighting.
- Interference suppression — Iron powder core toroidal choke lessens effects of interference from other equipment, such as transformers.
- Naturally ventilated — Requires no forced cooling or maintenance.
- Soft start and voltage regulation technologies — Protects lamps from over voltage and dramatically improves lamp life, reducing maintenance costs.
- Diagnostic functionality — Device Online/ Offline status reporting.
- Options available — Including an additional RS485 DyNet/DMX512 port and circuit breaker trip reporting.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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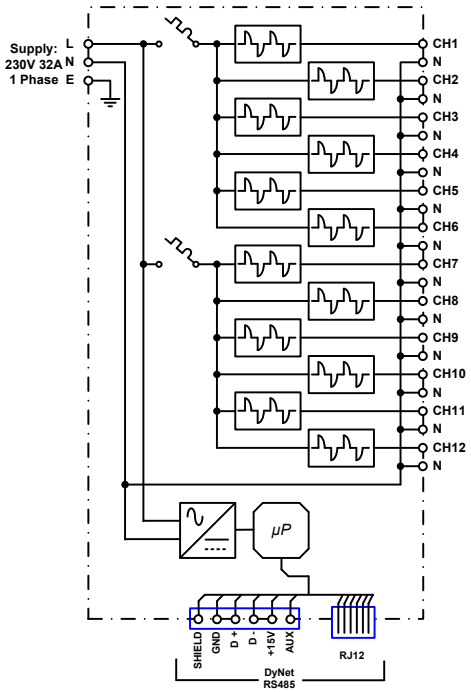
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	230 VAC ±14% 50 / 60 Hz Single Phase @ 32 A
	DyNet DC Supply	12 VDC @ 120 mA (supply for approx 6 user interfaces)
	Outputs	12 x dimmed outputs leading edge phase control @ 3 A Maximum device load is 32A
	Protection	2 x 16 A 6 kA single pole thermal magnetic circuit breakers
	Regulating Device	Triac - 40 A nom., 600 V, 400 A surge
	Power Conditioning	Regulated outputs Over voltage protection Surge protection Brownout / Sag protection Spike protection Soft start 16 bit fade resolution (65,536 steps)
	Interference Suppression	Iron powder toroidal choke
Control	Control Inputs/Outputs	One RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service switch Diagnostic LED
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	Line, Neutral 2 x 4 mm² max conductor size
	Output Terminals	Line, Neutral for each channel 2 x 4 mm² max conductor size Earth link bar provided
	Cable Entries	Mains - 1 x 75 mm x 53 mm removable gland plate Data - 1 x 25 mm dia. knockout
	Cooling System	Naturally ventilated, no forced cooling, no maintenance
	Dimensions (H x W x D)	450 mm x 224 mm x 92 mm (17.7" x 8.8" x 3.6")
	Packed Weight	6.0 kg
	Construction	Alloy / Steel wall mount case with epoxy finish
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DLE1203 (Philips 12NC - 913703008009)
	Extra DyNet / DMX512 Port	DLE1203-A (Philips 12NC - 913703008109)
	Neutral Disconnect	DLE1203-ND (Philips 12NC - 913703008409)

Electrical Diagram



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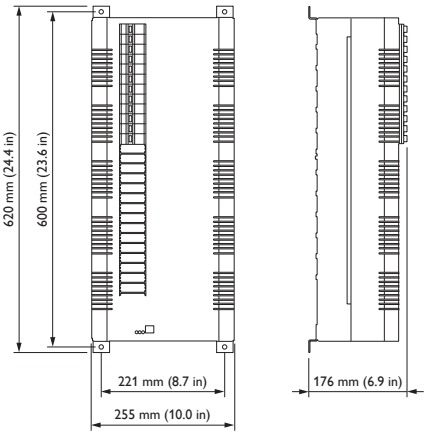
DLE1205 Leading Edge Dimmer Controller

Economical lighting control in small commercial applications

The DLE1205 is a 12 channel leading edge dimmer controller with a maximum load per channel of 5A. It is suitable for use with incandescent and neon light sources, as well as iron core and leading edge electronic transformers.



- Fully rated device — The combination of load capacity and sub-circuit protection delivers a superior solution for small scale commercial applications.
- Interference suppression — Iron powder core toroidal choke lessens effects of interference from other equipment, such as transformers.
- Naturally ventilated — Requires no forced cooling or maintenance.
- Soft start and voltage regulation technologies — Protects lamps from over voltage and dramatically improves lamp life, reducing maintenance costs.
- Diagnostic functionality — Device Online/ Offline status reporting.
- User controls — Incorporates service override switch and three phase indicator LED. Hardware bypass switches are provided for each channel.
- Options available — Including circuit breaker trip reporting, earth leakage and overload protection on each channel, provision of two or three pole circuit breakers, or neutral disconnect circuit breakers.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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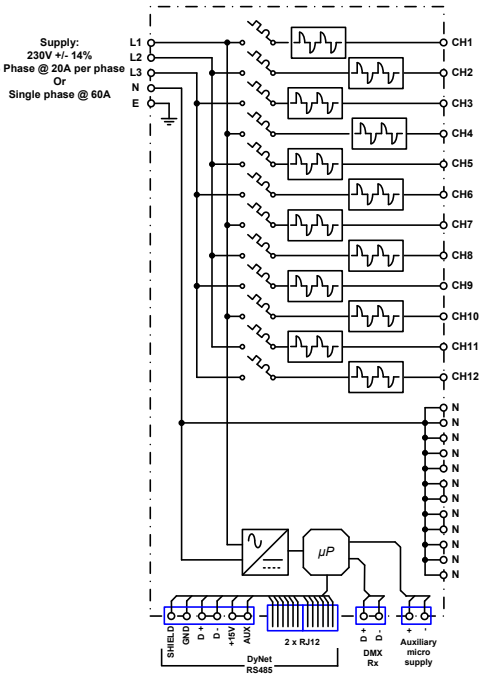
Item	Specification	Details
Electrical	Input Voltage	100 - 240 VAC 50 / 60 Hz 3 Phase ⅄ @ 20 A per phase or; 100 - 240 VAC 50 / 60 Hz Single Phase @ 60 A
	DyNet DC Supply	12 VDC @ 200 mA (supply for approx 10 user interfaces)
	Outputs	12 x dimmed outputs leading edge phase control @ 5 A
	Protection	12 x 6 A 6 kA single pole thermal magnetic circuit breakers
	Regulating Device	Triac - 40 A nom., 600 V, 400 A surge
	Power Conditioning	Regulated outputs Over voltage protection Surge protection Brownout / Sag protection Spike protection Soft start 16 bit fade resolution (65,536 steps) Active phase angle firing compensation
	Interference Suppression	Iron powder toroidal choke
	Auxiliary Micro Supply	12 V @ 1 A
	Rise Time	100µS @ 230 V
Control	Control Inputs/Outputs	One RS-485 DyNet serial port One DMX512 receive port One programmable dry contact AUX input
	User Controls	Service override switch/Override Diagnostic LED 3 Phase indicator LED Hardware bypass switch for each channel
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	L1, L2, L3 1 x 10 mm² max conductor size
	Output Terminals	Line for each channel 1 x 4 mm² max conductor size Neutral Link bar provided Earth Link bar provided
	Cable Entries	Mains - 4 x 25 mm dia. knockouts mounted on 100 mm x 50 mm removable gland plate and 6 x 25 mm dia. knockouts on right side of enclosure Data - 1 x 25 mm dia. knockout
	Cooling System	Naturally ventilated, no forced cooling, no maintenance
	Dimensions (H x W x D)	620 mm x 255 mm x 176 mm (24.4" x 10.0" x 6.9")
	Packed Weight	14.0 kg
	Construction	Alloy / Steel wall mount case with epoxy finish
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard product	DLE1205 (Philips 12NC - 913703010009)
	Circuit breaker trip reporting	DLE1205-BT (Philips 12NC - 913703010309)
	Double pole cct breakers	DLE1205-DP (Philips 12NC - 913703003309)
	Three pole cct breakers	DLE1205-3POLE (Philips12NC - 913703010109)
	Neutral disconnect cct breakers	DLE1205-ND (Philips 12NC - 913703010409)
	Earth leakage/overload protection	DLE1205-RCBO (Philips 12NC - 913703010509)

Electrical Diagram



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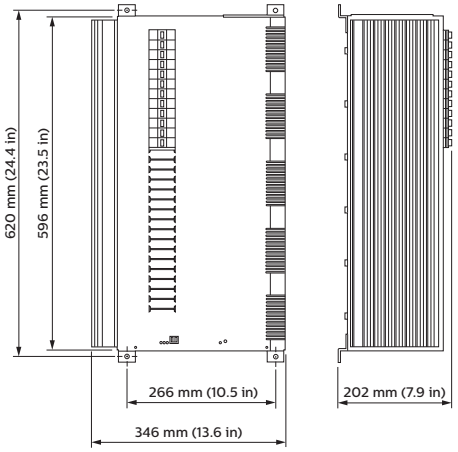
DLE1210 Leading Edge Dimmer Controller

Control large loads in applications requiring reliability and large power handling

The DLE1210 is a 12 channel leading edge dimmer controller, with a maximum load per channel of 10A and total device load of 120A. It is suitable for use with incandescent, neon and selected fluorescent light sources, as well as iron core and leading edge dimmable electronic transformers.



- Large load capability — Ideal for applications that require reliability combined with large power handling.
- DMX512 compatibility — Perfect for use in theaters, shopping centers and auditoria.
- Interference suppression — Iron powder core toroidal choke lessens effects of interference from other equipment, such as transformers.
- Naturally ventilated — Requires no forced cooling or maintenance.
- Soft start and voltage regulation technologies — Protects lamps from over voltage and dramatically improves lamp life, reducing maintenance costs.
- Diagnostic functionality — Device Online/ Offline status reporting.
- User controls — Incorporates service override switch and three phase indicator LED. Hardware bypass switches are provided for each channel.
- Options available — Including circuit breaker trip reporting, earth leakage and overload protection on each channel and two or three pole circuit breakers.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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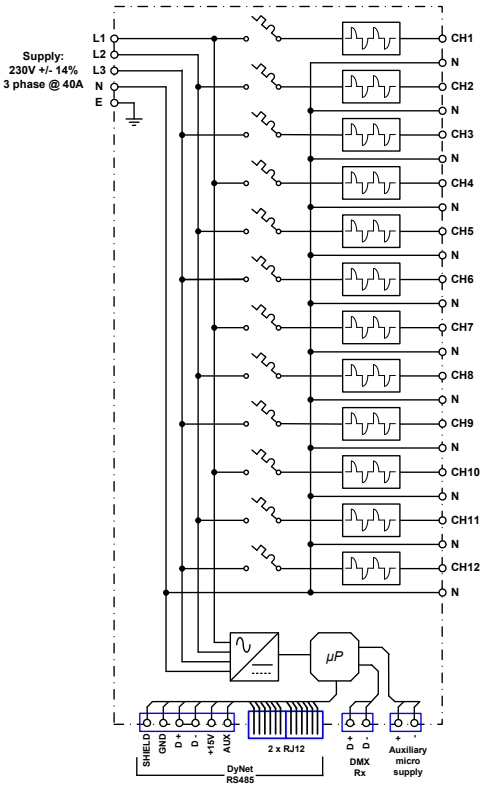
Item	Specification	Details
Electrical	Input Voltage	100 - 240 VAC 50 / 60 Hz 3 Phase ⅄ @ 40 A per phase
	DyNet DC Supply	12 VDC @ 200 mA (supply for approx 10 user interfaces)
	Outputs	12 x dimmed outputs leading edge phase control @ 10 A
	Protection	12 x 10 A 6 kA single pole thermal magnetic circuit breakers
	Regulating Device	Triac - 40 A nom., 600 V, 400 A surge
	Power Conditioning	Regulated outputs Over voltage protection Surge protection Brownout / Sag protection Spike protection Soft start 16 bit fade resolution (65,536 steps) Active phase angle firing compensation
	Interference Suppression	Iron powder toroidal choke
	Auxiliary Micro Supply	12 V @ 1 A
	Rise Time	200µS @ 230 V
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input One DMX512 receive port
	User Controls	Service override switch Diagnostic LED 3 x Phase indicator LEDs Hardware bypass switches for each channel
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	L1, L2, L3 1 x 16 mm² max conductor size Neutral Link bar provided Earth Link bar provided
	Output Terminals	Line output for each channel 1 x 4 mm² max conductor size Neutral Link bar provided Earth Link bar provided
	Cable Entries	Mains - 4 x 25 mm dia. knockouts mounted on 105 mm x 145 mm removable gland plate Data - 1 x 25 mm dia. knockout
	Cooling System	Naturally ventilated, no forced cooling, no maintenance
	Dimensions (H x W x D)	596 mm x 346 mm x 202 mm (23.5" x 13.6" x 7.9")
	Packed Weight	30.0 kg
	Construction	Alloy / Steel wall mount case with epoxy finish
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product Cct breaker trip reporting Double Pole cct breakers 3 Pole cct breakers Earth leakage & overload protection on each channel	DLE1210 (Philips 12NC - 913703012009) DLE1210-BT (Philips 12NC - 913703012209) DLE1210-DP (Philips 12NC - 913703012309) DLE1210-3POLE (Philips 12NC - 913703012809) DLE1210-RCBO (Philips 12NC - 913703012709)

Electrical Diagram



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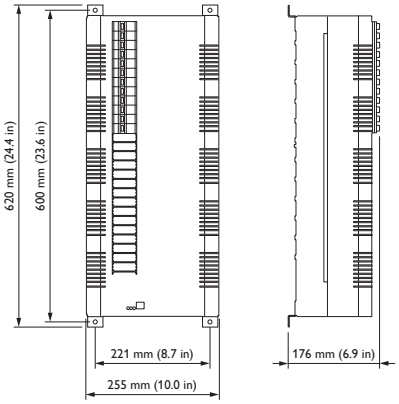
DLE1210GL Leading Edge Dimmer Controller

Control large loads in applications requiring reliability and large power handling

The DLE1210GL is a 12 channel leading edge dimmer controller, with a maximum load per channel of 10A and total device load of 75A. It is suitable for use with incandescent, neon and selected fluorescent light sources, as well as iron core and leading edge dimmable electronic transformers.



- Large load capability — Ideal for applications that require reliability combined with large power handling.
- DMX512 compatibility — Perfect for use in theaters, shopping centers and auditoria.
- Interference suppression — Iron powder core toroidal choke lessens effects of interference from other equipment, such as transformers.
- Naturally ventilated — Requires no forced cooling or maintenance.
- Soft start and voltage regulation technologies — Protects lamps from over voltage and dramatically improves lamp life, reducing maintenance costs.
- Diagnostic functionality — Device Online/ Offline status reporting.
- User controls — Incorporates service override switch and three phase indicator LED. Hardware bypass switches are provided for each channel.
- Option available — Earth leakage and overload protection on each channel.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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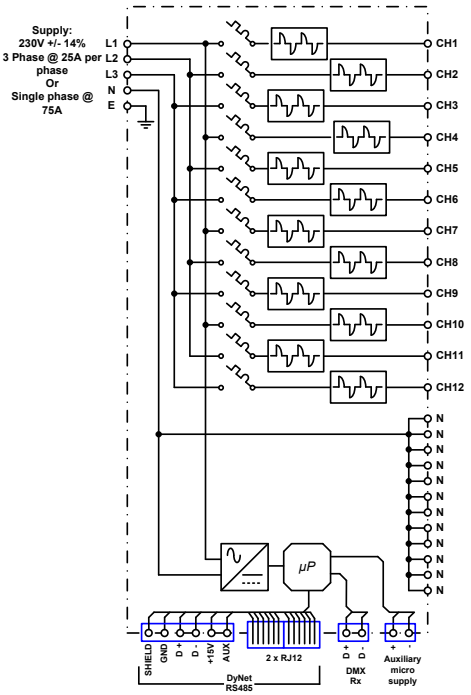
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	100 - 240 VAC 50 / 60 Hz 3 Phase ⅄ @ 25 A per phase or; 100 - 240 VAC 50 / 60 Hz Single Phase @ 75 A
	DyNet DC Supply	12 VDC @ 200 mA (supply for approx 10 user interfaces)
	Outputs	12 x dimmed outputs leading edge phase control @ 10 A. Total device load is 75 A
	Protection	12 x 10 A 6 kA single pole thermal magnetic circuit breakers
	Regulating Device	Triac - 40 A nom., 600 V, 400 A surge
	Power Conditioning	Regulated outputs Over voltage protection Surge protection Brownout / Sag protection Spike protection Soft start 16 bit fade resolution (65,536 steps) Active phase angle firing compensation
	Interference Suppression	Iron powder toroidal choke
	Auxiliary Micro Supply	12 V @ 1 A
	Rise Time	100µS @ 230 V
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input One DMX512 receive port
	User Controls	Service override switch Diagnostic LED 3 x Phase indicator LEDs Hardware bypass switches for each channel
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	L1, L2, L3 1 x 16 mm² max conductor size
	Output Terminals	Line output for each channel 1 x 4 mm² max conductor size Neutral Link bar provided Earth Link bar provided
	Cable Entries	Mains - 4 x 25 mm dia. knockouts mounted on 100 mm x 50 mm removable gland plate and 6 x 25 mm dia. knockouts on right side of enclosure Data - 1 x 25 mm dia. knockout
	Cooling System	Naturally ventilated, no forced cooling, no maintenance
	Dimensions (H x W x D)	620 mm x 255 mm x 176 mm (24.4" x 10.0" x 6.9")
	Packed Weight	18.0 kg
	Construction	Alloy / Steel wall mount case with epoxy finish
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product Earth leakage & overload protection on each channel	DLE1210GL (Philips 12NC - 913703014009) DLE1210GL-RCBO (Philips 12NC - 913703014409)

Electrical Diagram



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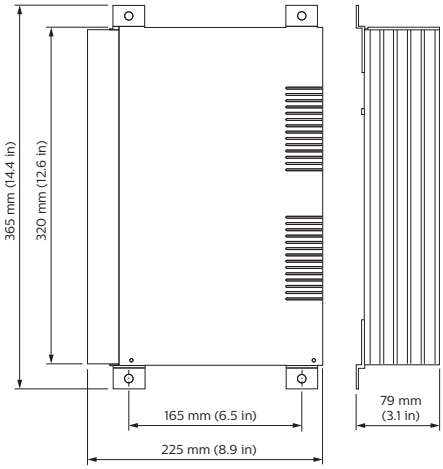
DLE120-S Leading Edge Dimmer Controller

Designed for applications where lamp life is critical

The DLE120-S is a one channel leading edge dimmer controller, with a maximum load of 20A. It is suitable for use with incandescent, neon and selected fluorescent light sources, as well as iron core and leading edge dimmable electronic transformers.



- Large load capability — Complements multi-channel dimmers by providing an extra channel where additional capacity is required.
- Reliable control — Suitable for applications where lamp life is critical, such as where lamp replacement is difficult or expensive.
- Interference suppression — Iron powder core toroidal choke lessens effects of interference from other equipment, such as transformers.
- Naturally ventilated — Requires no forced cooling or maintenance.
- Soft start and voltage regulation technologies — Protects lamps from over voltage and dramatically improves lamp life, reducing maintenance costs.
- Diagnostic functionality — Device Online/ Offline status reporting.
- User controls — Incorporates service override switch - all channels to 100% and a diagnostic LED.
- Option available — Includes an additional RS485 DyNet/DMX control port.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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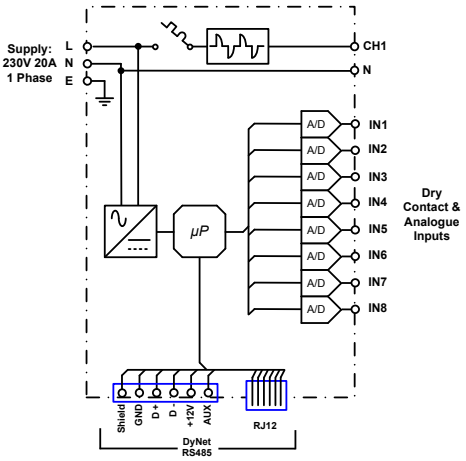
Item	Specification	Details
Electrical	Input Voltage	230 VAC ±14% 50 / 60 Hz Single Phase @ 20 A
	DyNet DC Supply	12 VDC @ 200 mA (supply for approx 10 user interfaces)
	Outputs	1 x dimmed output leading edge phase control @ 20 A
	Protection	No internal protection, supply from a 20A circuit breaker
	Regulating Device	Dual SCRs - 65 A nom., 800 V, 800 A surge
	Power Conditioning	Regulated outputs Over voltage protection Surge protection Brownout / Sag protection Spike protection Soft start 16 bit fade resolution (65,536 steps)
	Interference Suppression	Iron powder toroidal choke
	Rise Time	200µS @ 230 V
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port Eight dry contact / 0-5 V / 0-10V analogue inputs One programmable dry contact AUX input
	User Controls	Service override switch Diagnostic LED Hardware override switch on each channel
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	Line, Neutral 1 x 16 mm² max conductor size Earth Link bar provided
	Output Terminals	Line, Neutral for each channel 1 x 16 mm² max conductor size Earth Link bar provided
	Cable Entries	Mains - 3 x 25 mm dia. knockouts Data - 1 x 25 mm dia. knockout
	Cooling System	Naturally ventilated, no forced cooling, no maintenance
	Dimensions (H x W x D)	320 mm x 225 mm x 79 mm (12.6" x 8.9" x 3.1")
	Packed Weight	3.5 kg
	Construction	Alloy / Steel wall mount case with epoxy finish
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DLE120-S (Philips 12NC - 913703001009)
	Extra DyNet / DMX512 Port	DLE120-S-A (Philips 12NC - 913703001209)

Electrical Diagram



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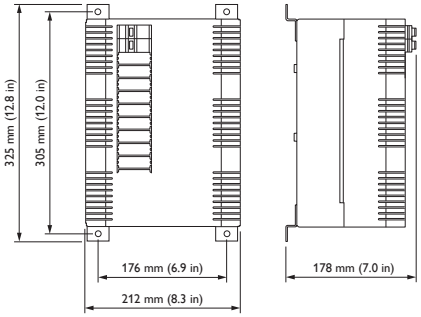
DLE220-S Leading Edge Dimmer Controller

Designed for applications where lamp life is critical

The DLE220-S is a two channel leading edge dimmer controller, with a maximum load of 20A per channel. It is suitable for use with incandescent, neon and selected fluorescent light sources, as well as iron core and leading edge dimmable electronic transformers.



- Large load capability — Complements multi-channel dimmers by providing extra channels where additional capacity is required.
- Reliable control — Suitable for applications where lamp life is critical, such as where lamp replacement is difficult or expensive.
- Interference suppression — Iron powder core toroidal choke lessens effects of interference from other equipment, such as transformers.
- Naturally ventilated — Requires no forced cooling or maintenance.
- Soft start and voltage regulation technologies — Protects lamps from over voltage and dramatically improves lamp life, reducing maintenance costs.
- Diagnostic functionality — Device Online/ Offline status reporting.
- User controls — Incorporates service override switch - all channels to 100% and a diagnostic LED.
- Options available — Including an additional RS485 DyNet/DMX512 port, circuit breaker trip reporting or neutral disconnect breakers.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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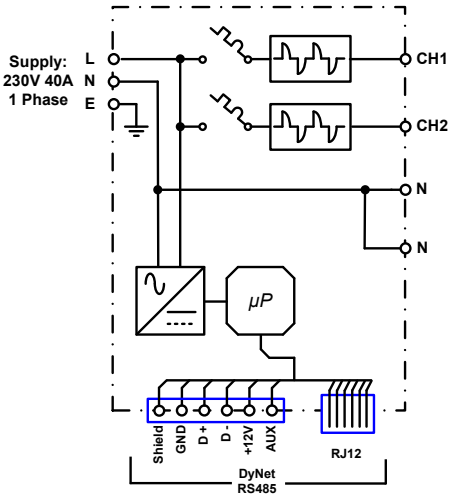
Item	Specification	Details
Electrical	Input Voltage	230 VAC ±14% 50 / 60 Hz Single Phase @ 20 A
	DyNet DC Supply	12 VDC @ 200 mA (supply for approx 10 user interfaces)
	Outputs	2 x dimmed outputs leading edge phase control @ 20 A
	Protection	2 x 20 A 6 kA single pole thermal magnetic circuit breakers
	Regulating Device	Dual SCRs - 65 A nom., 800 V, 800 A surge
	Power Conditioning	Regulated outputs Over voltage protection Surge protection Brownout / Sag protection Spike protection Soft start 16 bit fade resolution (65,536 steps)
	Interference Suppression	Iron powder toroidal choke
	Rise Time	200µS @ 230 V
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port Eight dry contact / 0-5 V / 0-10V analogue inputs One programmable dry contact AUX input
	User Controls	Service override switch Diagnostic LED Hardware override switch on each channel
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	Line, Neutral 1 x 16 mm² max conductor size Earth Link bar provided
	Output Terminals	Line, Neutral for each channel 1 x 16 mm² max conductor size Earth Link bar provided
	Cable Entries	Mains - 3 x 25 mm dia. knockouts Data - 1 x 25 mm dia. knockout
	Cooling System	Naturally ventilated, no forced cooling, no maintenance
	Dimensions (H x W x D)	325 mm x 212 mm x 178 mm (12.8" x 8.3" x 7.0")
	Packed Weight	4.2 kg
	Construction	Alloy / Steel wall mount case with epoxy finish
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DLE220 (Philips 12NC - 913703002009)
	Extra DyNet / DMX512 Port	DLE220-S-A (Philips 12NC - 913703002109)
	Cct breaker trip reporting	DLE220-S-BT (Philips 12NC - 913703002309)
	Neutral disconnect breakers	DLE220-S-ND (Philips 12NC - 913703002509)

Electrical Diagram



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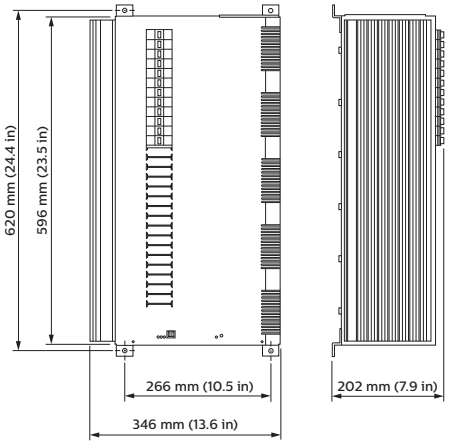
DLE1220GL-S Leading Edge Dimmer Controller

Control large loads in applications requiring reliability and large power handling

The DLE1220GL-S is a 12 channel leading edge dimmer controller, with a maximum load per channel of 20A and total device load of 180A. It is suitable for use with incandescent, neon and selected fluorescent light sources, as well as iron core and leading edge dimmable electronic transformers.



- Large load capability — Ideal for applications that require reliability combined with large power handling.
- DMX512 compatibility — Perfect for use in theaters, shopping centers and auditoria.
- Interference suppression — Iron powder core toroidal choke lessens effects of interference from other equipment, such as transformers.
- Naturally ventilated — Requires no forced cooling or maintenance.
- Soft start and voltage regulation technologies — Protects lamps from over voltage and dramatically improves lamp life, reducing maintenance costs.
- Diagnostic functionality — Device Online/ Offline status reporting and channel override switches.
- User controls — Incorporates service override switch and three phase indicator LED. Hardware bypass switches are provided for each channel.
- Options available — Including circuit breaker trip reporting, earth leakage and overload protection on each channel, or three pole circuit breakers.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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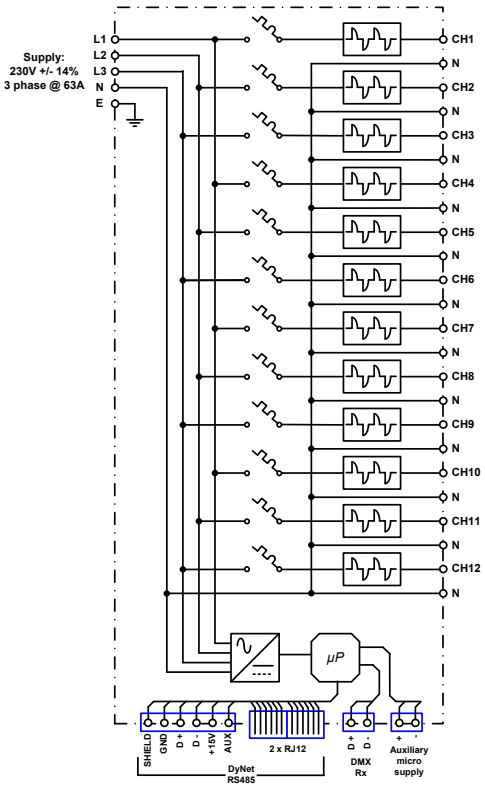
Item	Specification	Details
Electrical	Input Voltage	400 / 230 V ±14% 50 / 60 Hz 3 Phase ⅄ @ 63 A per phase
	DyNet DC Supply	12 V @ 200 mA (supply for approx 10 user interfaces)
	Outputs	12 x dimmed outputs leading edge phase control @ 20 A Maximum device load is 180 A
	Protection	12 x 20 A 6 kA single pole thermal magnetic circuit breakers
	Regulating Device	Dual SCRs - 65 A nom., 800 V, 800 A surge
	Power Conditioning	Regulated outputs Over voltage protection Surge protection Brownout / Sag protection Spike protection Soft start 16 bit fade resolution (65,536 steps) Active phase angle firing compensation
	Interference Suppression	Iron powder toroidal choke
	Auxiliary Micro Supply	12 V @ 1 A
	Rise Time	200µS @ 230 V
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input One DMX512 receive port
	User Controls	Service override switch Diagnostic LED 3 x Phase indicator LEDs Hardware bypass switches for each channel
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status Channel override switches
Physical	Supply Terminals	L1, L2, L3 1 x 35 mm² max conductor size Neutral Link bar provided Earth Link bar provided
	Output Terminals	Line output for each channel 1 x 16 mm² max conductor size Neutral Link bar provided Earth Link bar provided
	Cable Entries	Mains - 5 x 25 mm dia. knockouts mounted on 105 mm x 145 mm removable gland plate Data - 1 x 25 mm dia. knockout
	Cooling System	Naturally ventilated, no forced cooling, no maintenance
	Dimensions (H x W x D)	596 mm x 346 mm x 202 mm (23.5" x 13.6" x 7.9")
	Packed Weight	35.0 kg
	Construction	Alloy / Steel wall mount case with epoxy finish
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DLE1220GL-S (Philips 12NC - 913703016009)
	Earth leakage & overload protection on each channel	DLE1210-RCBO (Philips 12NC - 913703016609)
	RCBO & 3 Pole breakers	DLE1210-RCBO-3POLE (Philips 12NC - 913703016609)

Electrical Diagram



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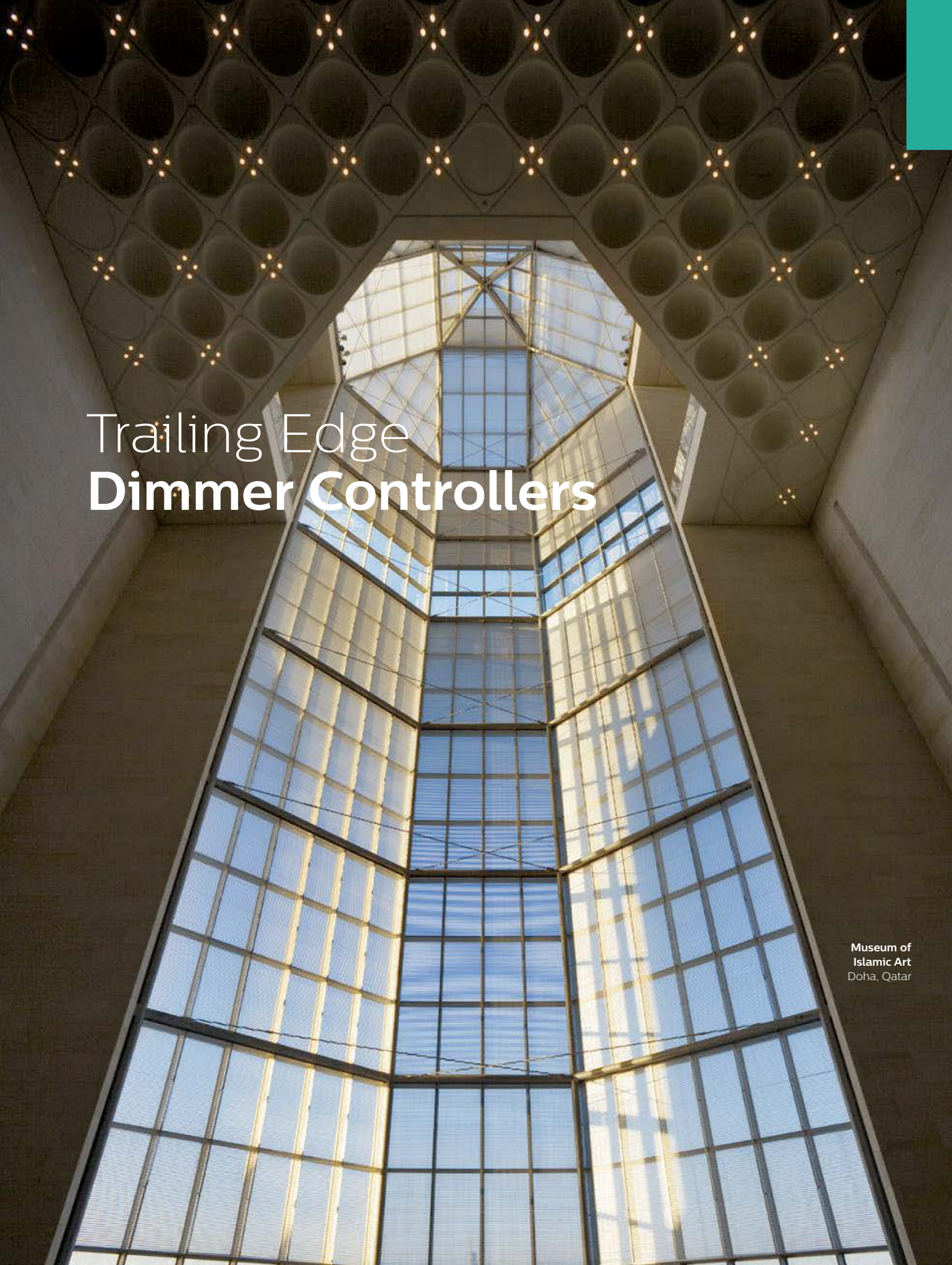


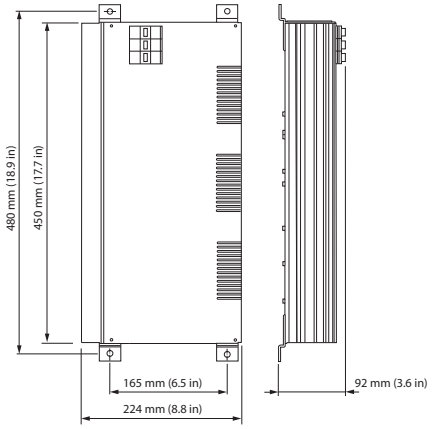
Trailing Edge
Dimmer Controllers

Museum of Islamic Art
Doha, Qatar

DTE310 Trailing Edge Dimmer Controller

Controls most types of dimmable electronic transformers

The DTE310 trailing edge dimmer controller features three channels, with a maximum load per channel of 10A. The trailing edge output makes this device suitable for control of both trailing and leading edge electronic transformers, as well as incandescent lamps and track lighting.



- Operates from three phase or single phase supply — Using a three phase supply when connected to a three circuit track permits the track to be loaded to maximum rating.
- Voltage regulation and soft start technologies — Protects lamps and extends life dramatically, minimizing re-lamping and ongoing maintenance requirements.
- Naturally ventilated — Integral ventilation in the housing of the unit means that no forced cooling is required, thereby reducing maintenance.
- Interface to other devices — Incorporates multipurpose programmable dry contact and analog inputs for interfacing to other devices.
- Internal controls — Programmable logic controller capable of comprehensive conditional and sequential logic and arithmetic function processing.
- Options available — Including earth leakage and overload protection on each channel, or three pole circuit breakers.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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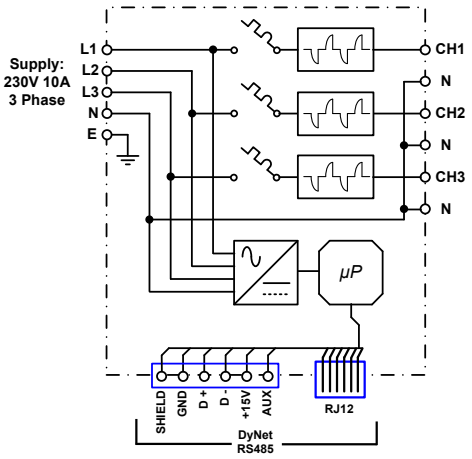
Item	Specification	Details
Electrical	Input Voltage	230 V ±14% 50 / 60 Hz Single Phase @ 30 A or; 230 V ±14% 50 / 60 Hz 3 Phase ⅄ @ 10 A per phase
	DyNet DC Supply	12 V @ 200 mA (supply for approx 10 user interfaces)
	Outputs	3 x dimmed outputs trailing edge phase control @ 10 A
	Protection	3 x 10 A 6 kA single pole thermal magnetic circuit breakers Internal inductive load detection Over-voltage / current detection
	Regulating Device	Dual MOSFETs - 47 A, 650 V, 141 A surge
	Power Conditioning	Regulated outputs Over voltage protection Surge protection Brownout / Sag protection Spike protection Soft start 16 bit fade resolution (65,536 steps) Active phase angle firing compensation
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input Eight dry contact / 0-5 V / 0-10V analogue inputs
	User Controls	Service override switch Diagnostic LED Hardware bypass switches for each channel
	Internal Controls	Programmable Logic Controller
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	L1, L2, L3 1 x 16 mm² max conductor size
	Output Terminals	Line, Neutral for each channel 1 x 16 mm² max conductor size Earth Link bar provided
	Dry Contact Terminals	1 x 1 mm² max conductor size
	Cooling System	Naturally ventilated, no forced cooling, no maintenance
	Dimensions (H x W x D)	450 mm x 224 mm x 92 mm (17.7" x 8.8" x 3.6")
	Packed Weight	6.0 kg
	Construction	Alloy / Steel wall mount case with epoxy finish
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product 3 Pole cct breakers Earth leakage & overload protection on each channel	DTE310 (Philips 12NC - 913703021009) DTE310-3POLE (Philips 12NC - 913703021209) DTE310-RCBO (Philips 12NC - 913703021309)

Electrical Diagram



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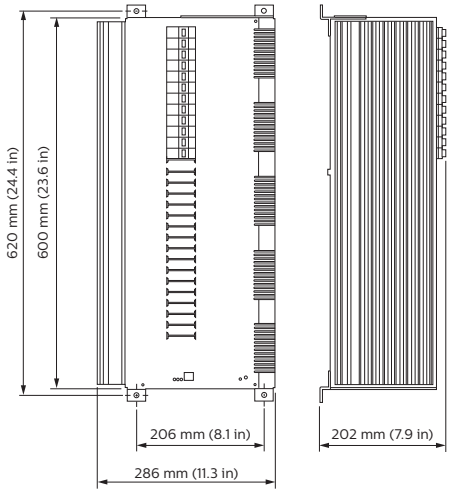
DTE1210 Trailing Edge Dimmer Controller

Controls most types of dimmable electronic transformers

The DTE1210 trailing edge dimmer controller features 12 channels, with a maximum load per channel of 10A and a total box load of 120A. The trailing edge output makes the device suitable for control of both trailing and leading edge electronic transformers, as well as incandescent lamps and track lighting.



- Operates from three phase supply — Using a three phase supply when connected to a three circuit track permits the track to be loaded to maximum rating.
- Voltage regulation and soft start technologies — Protects lamps and extends life dramatically, minimizing re-lamping and ongoing maintenance requirements.
- Naturally ventilated — Integral ventilation in the housing of the unit means that no forced cooling is required, thereby reducing maintenance.
- Interface to other devices — Incorporates multipurpose programmable dry contact and analog inputs for interfacing to other devices.
- Internal controls — Programmable logic controller capable of comprehensive conditional and sequential logic and arithmetic function processing.
- Options available — Including earth leakage and overload protection on each channel, or three pole circuit breakers.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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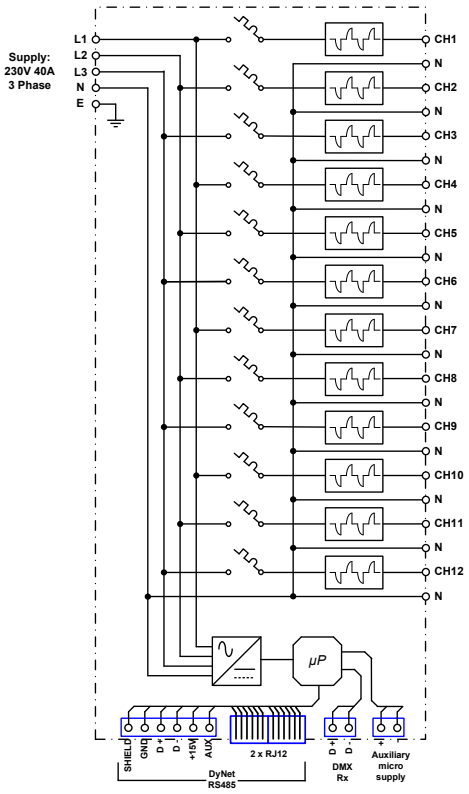
Item	Specification	Details
Electrical	Input Voltage	230 VAC ±14% 50 / 60 Hz 3 Phase ⅄ @ 40 A per phase
	DyNet DC Supply	12 V @ 200 mA (supply for approx 10 user interfaces)
	Outputs	12 x dimmed outputs trailing edge phase control @ 10 A
	Protection	12 x 10 A 6 kA single pole thermal magnetic circuit breakers Internal inductive load detection Over-voltage / current detection
	Regulating Device	Dual MOSFETs - 47 A, 650 V, 141 A surge
	Power Conditioning	Regulated outputs Over voltage protection Surge protection Brownout / Sag protection Spike protection Soft start 16 bit fade resolution (65,536 steps) Active phase angle firing compensation
	Auxiliary Micro Supply	12 V @ 1 A
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input One DMX512 receive port
	User Controls	Service override switch Diagnostic LED 3 x Phase indicator LEDs Hardware bypass switches for each channel
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	L1, L2, L3, Neutral 1 x 16 mm² max conductor size Earth Link bar provided
	Output Terminals	Line, Neutral for each channel 1 x 16 mm² max conductor size Earth Link bar provided
	Cable Entries	Mains - 4 x 25 mm dia. knockouts mounted on 133 mm x 44 mm removable gland plate Data - 1 x 25 mm dia. knockout
	Cooling System	Naturally ventilated, no forced cooling, no maintenance
	Dimensions (H x W x D)	600 mm x 286 mm x 202 mm (23.6" x 11.3" x 7.9")
	Packed Weight	16.7 kg
	Construction	Alloy / Steel wall mount case with epoxy finish
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DTE1210 (Philips 12NC - 913703022009)
	Earth leakage & overload protection on each channel	DTE1210-RCBO (Philips 12NC - 913703022609)
	Earth leakage & overload & 3 pole circuit protection	DTE1210-RCBO-3POLE (Philips 12NC - 913703021609)

Electrical Diagram



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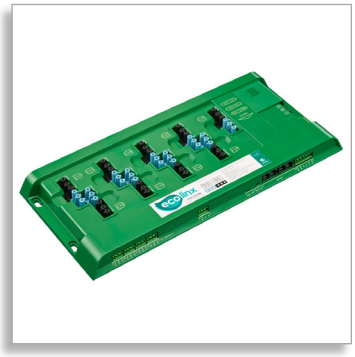
Signal
Dimmer Controllers

Westfield Headquarters
Sydney, Australia

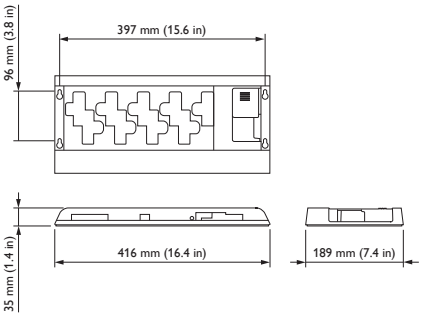
Photograph by
Brent Winstone Photography



DBC905 Signal Dimmer Controller

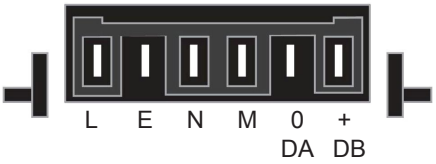
Control of HF drivers and non-lighting loads

The Philips Dynalite DBC905 is a nine channel high frequency fluorescent signal dimmer controller, designed for direct installation within ceiling cavities. The device incorporates structured wiring connectors, to enable ready connection without the use of tools.

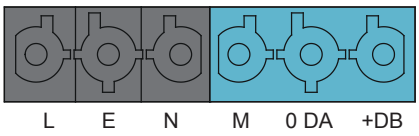


- Multiple protocols supported — Each control output supports DALI broadcast, DALI addressed, 1-10V and DSI protocols.
- Integration ease — The DBC905 integrates easily with a Building Management System (BMS) via the DyNet control network, making it ideally suited to commercial office installations.
- No tools required — The device is available with connectors suited to three major modular wiring brands - CMS Electracom, Wieland and Wago.
- Inbuilt diagnostic functionality — Includes lamp and driver failure, circuit run time tracking/lamp life, automated battery tests and Device Online/Offline status indication.
- Option available — Offers increased capacity, 165 A surge switched ouputs and 10 DALI loads per channel.

DBC905C output connector pole assignments



DBC905W output connector pole assignments



For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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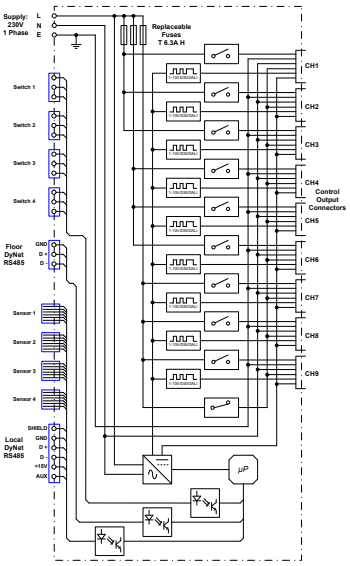
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	230 VAC ± 14% 50 / 60 Hz Single Phase @ 16 A
	DyNet DC Supply	12 VDC @ 400 mA
	Outputs	1 x Maintained NC switched output @ 5 A resistive (not in WA) 9 x Switched outputs, each rated @ 5 A resistive, 2 A electronic driver, 100 A surge (max load per block of 3 channels is 5 A)
	Protection	3 x 6.3 A replaceable HRC fuses Fuse 1 - Ch 1,2,3 (max load for sum is 5 A) Fuse 2 - Ch 4,5,6 (max load for sum is 5 A) Fuse 3 - Ch 7,8,9, MO (max load for sum is 5 A)
	Control Outputs	9 Control outputs, each selectable to; - DALI broadcast,; max 5 DALI loads per ch - DALI addressed; max 5 DALI loads per ch - 1-10V; max 10mA sink or source per ch - DSI; max 5 DSI loads per ch
	Control Inputs	4 x voltage free single pole double throw (SPDT) switch inputs, momentary or latch
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input Four RJ12 DyNet connections for multifunction sensors, user panels and other interfaces. Recommended total devices per RJ12 socket = 5 to a max of 10. Max devices for all sockets = 20. Floor DyNet RS-485 One RS-485 DyNet serial port (functionally isolated from mains)
	User Controls	Service override switch - all channels to 100% Diagnostic LED
	Preset Scenes	170
	Diagnostic Functions*	Lamp failure Driver failure Circuit run time tracking/lamp life Automated battery tests Device online/offline status * EnvisonManager interface is required for analyzing diagnostic data. The availability of some diagnostics is dependent on the driver type.
Physical	Dimensions (H x W x D)	189 mm x 416 mm x 35 mm (7.4" x 16.4" x 1.4")
	Packed Weight	2.0 kg
	Construction	Moulded ABS
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	CMS Electracom Connect	DBC905C (Philips 12NC - 913703040509)
	Wieland Connect	DBC905W (Philips 12NC - 913703040009)
	High Capacity - Wago	DBC905WA-HD (Philips 12NC - 913703040209)
	High Capacity - CMS	DBC905C-HD (Philips 12NC - 913703040609)
	High Capacity - Wieland	DBC905W-HD (Philips 12NC - 913703040109)

Electrical Diagram



Connector Order Codes

Terminals	Vendor	Details
Local DyNet Terminals		4 x RJ12 and 6 pole removable terminal socket
	Wieland compatible screw terminal connectors	Standard version: Wiecon 8113 Wieland Part No: 25.320.3653.0 (box 50) Strain relieved version: Wiecon 8113 Wieland Part No: 25.320.8653.0 (box 50)
	Phoenix Contact compatible screw terminal connectors	Standard version: Combicon MSTB 2, 5/6-ST Phoenix Contact Part No: 1754520 (box 50)
	PTR compatible screw terminal connectors	Standard version: PTR Part No: AK950/6-5-0-GREEN Strain relieved version: PTR Part No: AK950/6L-5.0-GREEN
Switch Input & Floor Network Terminals		5 x 3 pole removable terminal sockets
	Wieland compatible screw terminal connectors	Standard version: Wiecon 8113 Wieland Part No: 25.320.3353.0 (box 50) Strain relieved version: Wiecon 8113 Wieland Part No: 25.320.8353.0 (box 50)
	Phoenix Contact compatible screw terminal connectors	Standard version: Combicon MSTB 2, 5/3-ST Phoenix Contact Part No: 1754465 (box 50) Strain relieved version: Combicon MSTB 2, 5/3-STZ-5,08 Phoenix Contact Part No: 1776168 (box 50)
	PTR compatible screw terminal connectors	Standard version: PTR Part No: AK950/3-5.0-GREEN Strain relieved version: PTR Part No: AK950/3L-5.0-GREEN

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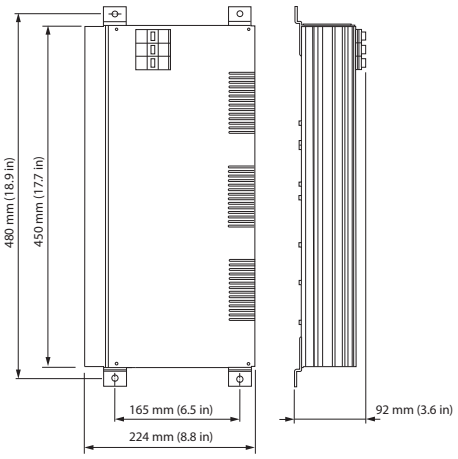
DBC1205 Signal Dimmer Controller

Robust control of switched loads

The Philips Dynalite DBC1205 is designed for use with electronic dimmable fluorescent drivers, either 1-10V or DSI. Twelve heavy duty 5 A relay outputs are supplied to switch fluorescent lighting or other loads in a DyNet energy management system.



- Compatible with a range of loads and devices — Including DSI HF fluorescent drivers, DSI low voltage tranformers, 1-10 V high frequency fixtures and switched loads.
- Service override switch — Incorporated as standard, service override switch forces all channels to 100%.
- Inbuilt diagnostic functionality — Features Device Online/Offline status indication.
- Option available — Additional RS-485 DyNet serial port.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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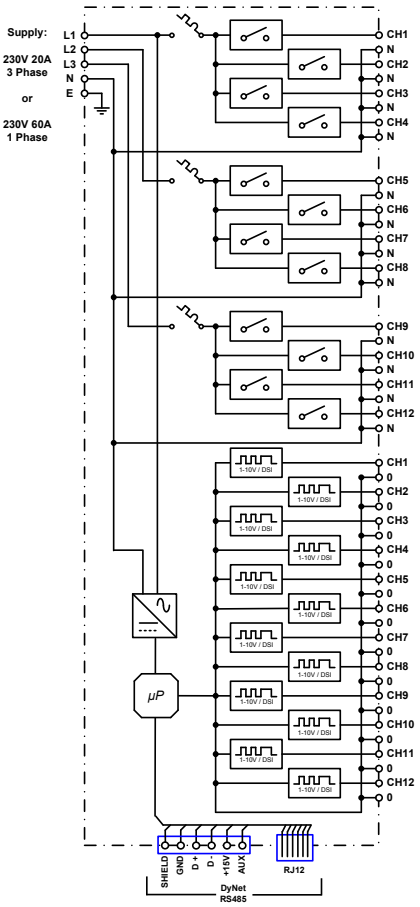
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	230 VAC ± 14% 50 / 60 Hz 3 Phase 人 @ 20 A per phase or; 230 VAC ± 14% 50 / 60 Hz Single Phase @ 60 A
	DyNet DC Supply	12 VDC @ 90 mA (supply for approx 4 user interfaces)
	Outputs	12 x switched outputs @ 5A 12 x HF driver control outputs, selectable to 1-10V DC & DSI
	Protection	3 x 20 A 6 kA single pole thermal magnetic circuit breakers
	Switching Device	Relay 10 A nom. (resistive)
Control	Control Inputs/Outputs	One RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service override switch - all channels to 100% Diagnostic LED
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	L1, L2, L3, N 1 x 10 mm² maximum conductor size
	Output Terminals	Line, Neutral for each channel 2 x 4 mm² maximum conductor size Earth Link bar provided V/DSI, +V/DSI for each channel 1 x 2 mm² maximum conductor size
	Cable Entries	Mains - 1 x 75 mm x 53 mm removable gland plate Data: 1 x 25 mm dia. knockout
	Dimensions (H x W x D)	450 mm x 224 mm x 92 mm (17.7" x 8.8" x 3.6")
	Packed Weight	5.2 kg
	Construction	Alloy / Steel wall-mount case with epoxy finish
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DBC1205 (Philips 12NC - 913703034009)
	Extra RS-485 DyNet Port	DBC1205-A (Philips 12NC - 913703034109)

Electrical Diagram



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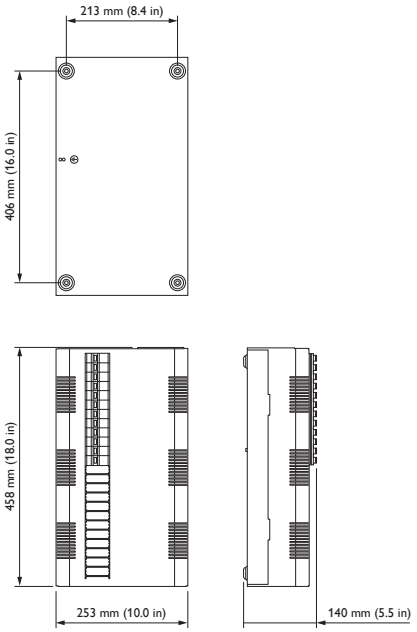
DBC1210 Signal Dimmer Controller

Control of HF drivers and non-lighting loads

The Philips Dynalite DBC1210 is a 12 channel signal dimmer controller, featuring a maximum of load of 10A per channel. It is designed for use with DALI, 1-10V and DSI dimmable fluorescent drivers and transformers.



- Multiple protocols supported — Compatible with a range of fittings and devices including; DSI HF fluorescent drivers, DSI electronic low voltage transformers, DALI HF fluorescent drivers (broadcast mode only), DALI electronic low voltage transformers (broadcast mode only), 1-10V HF fluorescent drivers and other switched loads.
- Service override switch — Incorporated as standard, forces all channels to 100%.
- Inbuilt diagnostic functionality — Features Device Online/Offline status indication.
- Options available — Including an additional RS485 DyNet/DMX512 port, circuit breaker trip reporting or earth leakage and overload protection on each channel.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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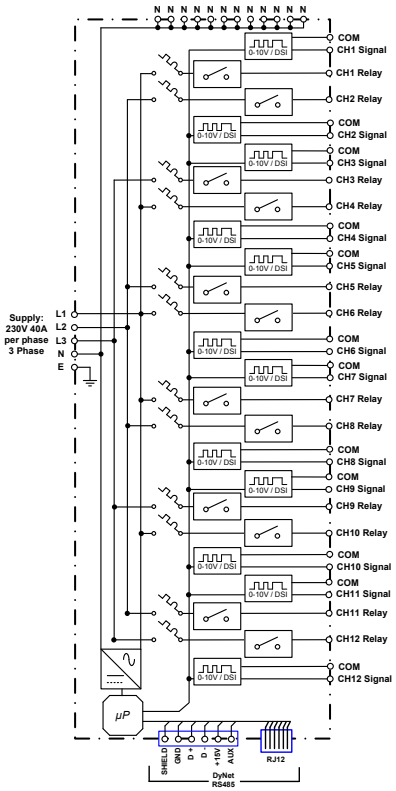
Item	Specification	Details
Electrical	Input Voltage	230 VAC ± 14% 50 / 60 Hz 3 Phase ⅄ @ 40 A per phase
	DyNet DC Supply	12 VDC @ 120 mA (supply for approx 6 user interfaces)
	Switched Outputs	12 x switched outputs @ 10 A Maximum device load is 120 A
	Control Outputs	DALI broadcast mode: 64 drivers per ch, maximum 400 1-10V mode: 50mA sink/source per ch DSI mode: 100 drivers per ch, maximum 1200
	Overload Protection	12 x 10 A 6 kA single pole thermal magnetic circuit breakers
	Switching Device	Relay 50 A, 230 VAC resistive (5000 W lighting load rated)
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service override switch - all channels to 100% Diagnostic LED
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	L1, L2, L3, 1 x 16 mm² maximum conductor size
	Output Terminals	Line for each channel 1 x 10 mm² maximum conductor size Neutral Link bar provided Earth Link bar provided -V/DSI/DALI, +V/DSI/DALI for each channel 1 x 4 mm² maximum conductor size
	Cable Entries	Mains: 4 x 25 mm dia. knockouts mounted on 88 mm x 88 mm removable gland plate Data: 1 x 25 mm dia. knockout Outputs: 6 x 25 mm dia knockouts on side of chassis
	Dimensions (H x W x D)	Std: 458 mm x 253 mm x 140 mm (18.0" x 10.0" x 5.5") -RCBO: 585 mm x 252 mm x 126 mm (23.0" x 9.9" x 5.0")
	Packed Weight	10.25 kg
	Construction	Alloy / Steel wall-mount case with epoxy finish
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DBC1210 (Philips 12NC - 913703036009)
	Extra DyNet/DMX512 Port	DBC1210-A (Philips 12NC - 913703036109)
	Cct breaker trip reporting	DBC1210-BT (Philips 12NC - 913703036209)
	Earth leakage and overload protection on each channel	DBC1210-RCBO (Philips 12NC - 913703036509) Note: necessitates larger enclosure
	Dual Port & RCBO	DBC1210-A-RCBO (Philips 12NC - 913703033009) Note: necessitates larger enclosure

Electrical Diagram



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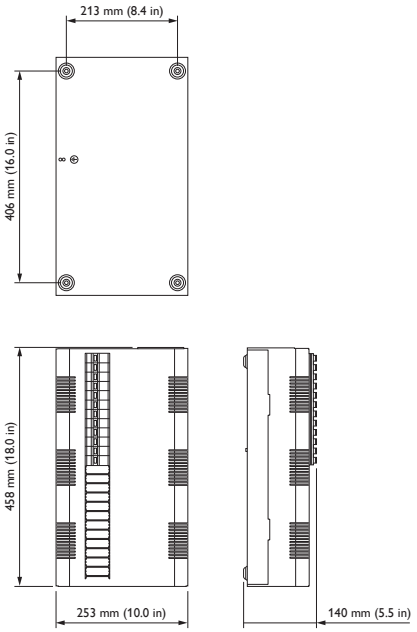
DBC1220GL Signal Dimmer Controller

Control of HF drivers and non-lighting loads

The Philips Dynalite DBC1220GL is a 12 channel signal dimmer controller, featuring a maximum of load of 20A per channel and a total device load of 180A. It is designed for use with DALI, 1-10V and DSI dimmable fluorescent drivers and transformers.



- Multiple protocols supported — Compatible with a range of fittings and devices including; DSI HF fluorescent drivers, DSI electronic low voltage transformers, DALI HF fluorescent drivers (broadcast mode only), DALI electronic low voltage transformers (broadcast mode only), 1-10 V HF fluorescent drivers and other switched loads.
- Service override switch — Incorporated as standard, forces all channels to 100%.
- Inbuilt diagnostic functionality — Features Device Online/Offline status indication.
- Options available — Including an additional RS485 DyNet/DMX512 port or earth leakage and overload protection on each channel.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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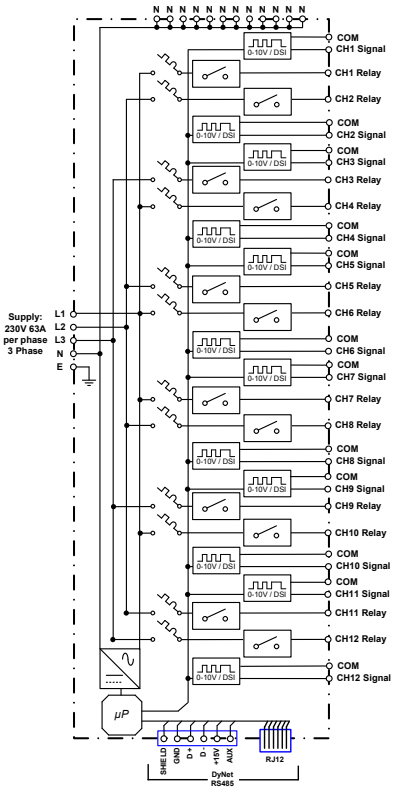
Item	Specification	Details
Electrical	Input Voltage	230 VAC ± 14% 50 / 60 Hz 3 Phase ⅄ @ 63 A per phase
	DyNet DC Supply	12 VDC @ 120 mA (supply for approx 6 user interfaces)
	Switched Outputs	12 x switched outputs @ 20 A Maximum device load is 180 A
	Control Outputs	DALI broadcast mode: 64 drivers per ch, maximum 400 1-10V mode: 50mA sink/source per ch DSI mode: 100 drivers per ch, maximum 1200
	Overload Protection	12 x 20 A 6 kA single pole thermal magnetic circuit breakers
	Switching Device	Relay 50 A, 230 VAC resistive (5000 W lighting load rated)
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service override switch - all channels to 100% Diagnostic LED
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	L1, L2, L3, 1 x 35 mm² maximum conductor size
	Output Terminals	Line for each channel 1 x 10 mm² maximum conductor size Neutral Link bar provided Earth Link bar provided -V/DSI/DALI, +V/DSI/DALI for each channel 1 x 4 mm² maximum conductor size
	Cable Entries	Mains: 4 x 25 mm dia. knockouts mounted on 88 mm x 88 mm removable gland plate Data: 1 x 25 mm dia. knockout Outputs: 6 x 25 mm dia knockouts on side of chassis
	Dimensions (H x W x D)	Std: 458 mm x 253 mm x 140 mm (18.0" x 10.0" x 5.5") -RCBO: 585 mm x 252 mm x 126 mm (23.0" x 9.9" x 5.0")
	Packed Weight	10.25 kg
	Construction	Alloy / Steel wall-mount case with epoxy finish
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DBC1220GL (Philips 12NC - 913703038009)
	Extra DyNet/DMX512 Port	DBC1220GL-A (Philips 12NC - 913703038109)
	Earth leakage and overload protection on each channel	DBC1220GL-RCBO (Philips 12NC - 913703038509) Note: necessitates larger enclosure
	Dual Port & RCBO	DBC1220GL-A-RCBO (Philips 12NC - 913703032809) Note: necessitates larger enclosure

Electrical Diagram



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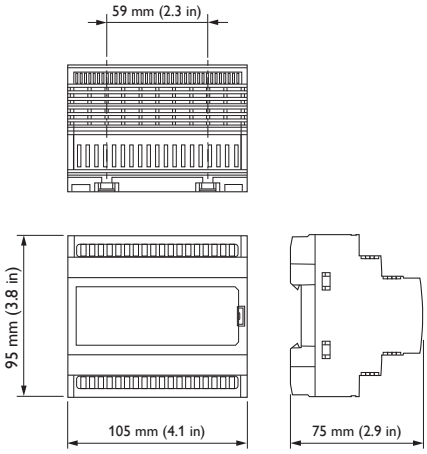
DDBC120-DALI

MultiMaster DALI Driver Controller

Providing a full universe of 64 DALI addresses

The DDBC120-DALI delivers cost-effective control of DALI high frequency fluorescent drivers through provision of a full universe of 64 DALI addresses. The device communicates seamlessly with Philips Dynalite DALI user interfaces.



- DALI MultiMaster solution — Compatible with a range of DALI fittings and devices including; DALI HF fluorescent drivers, DALI electronic low voltage transformers, DALI LED fixtures, DALI emergency lighting fixtures and Philips Dynalite DALI user interfaces.
- Fully scalable network solution — Direct mapping from DALI to the Philips Dynalite DyNet network protocol eliminates DALI imposed limits, such as maximum group sizes.
- Dual functionality — Leverage advantages of a true DALI network solution, whilst still allowing full function set of DyNet network control.
- Flexible mounting solution — A DIN-rail mountable device, designed to be installed into the distribution board supplying power to the controlled lighting circuit.
- Integral DALI bus power supply — Removes the need for provision of a separate external power supply and reduces distribution board wiring complexity.
- Inbuilt diagnostic functionality — Features lamp and driver failure reporting, driver run time tracking for each driver, emergency test reporting and Device Online/Offline status indication.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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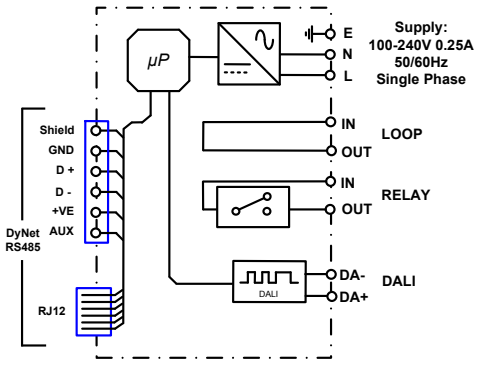
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	100 - 240 VAC 50 / 60 Hz Single Phase @ 0.25 A
	DyNet DC Supply	12 VDC @ 120 mA (supply for approx 6 user interfaces)
	Outputs	1 x DALI control output, supporting one full DALI universe of 64 addresses, including backward channel & communication to Philips Dynalite DALI user interfaces
	Power Relay	1 x feed-through switched circuit rated @ 20 A (500 A surge) for supply to lighting driver
	Bus Power Supply	Inbuilt DALI bus power supply rated 220 mA @16 VDC Typical (64 drivers and 10 user interfaces) Currrent unit maximum 250 mA
Control	DALI Insulation System	Basic
	Control Inputs/Outputs	One RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service switch Diagnostic LED
	Preset Scenes	64
	Diagnostic Functions*	Lamp failure reporting Driver failure reporting Driver run time tracking for each driver and the switched output Emergency test reporting Device online/offline status * EnvisionManager interface required for analyzing diagnostic data. The availability of some diagnostics is dependent on driver type.
Physical	Supply Terminals	Line, Neutral, Earth 1 x 4 mm² maximum conductor size
	Output Terminals	1 x DALI driver circuit: DA -, DA + 1 x 1.5 mm² maximum conductor size
	Dimensions (H x W x D)	95 mm x 105 mm x 75 mm (3.8" x 4.1" x 2.9")
	Packed Weight	0.35 kg
	Construction	Polycarbonate DIN-rail enclosure (6 unit)
	Operating Conditions	Temperature: 0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick, IEC62386
Options & Ordering	Standard Product	DDBC120-DALI (Philips 12NC - 913703031609)

Electrical Diagram



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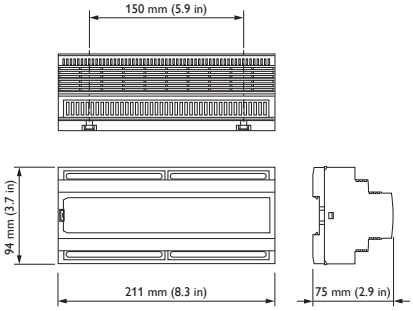
DDBC300-DALI DALI Driver Controller

Cost-effective DALI control solution

The DDBC300-DALI delivers cost-effective control of DALI high frequency fluorescent drivers through provision of three full universes totalling 192 DALI addresses.



- Compatible with a range of DALI fittings and devices — Including; DALI HF fluorescent drivers, DALI electronic low voltage transformer and DALI LED fixtures.
- Fully scalable network solution — Direct mapping from DALI to the Philips Dynalite DyNet network protocol eliminates DALI imposed limits, such as maximum group sizes.
- Flexible mounting solution — A DIN-rail mountable device, designed to be installed into the distribution board supplying power to the controlled lighting circuit.
- Integral DALI bus power supply — Removes the need for provision of a separate external power supply and reduces distribution board wiring complexity.
- Inbuilt diagnostic functionality — Features lamp and driver failure reporting, driver run time tracking for each driver and Device Online/Offline status indication.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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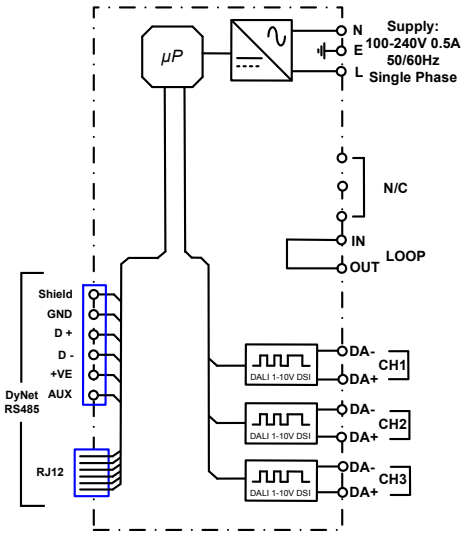
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	100 - 240 VAC 50 / 60 Hz Single Phase @ 0.5 A
	DyNet DC Supply	12 VDC @ 200 mA (supply for approx 10 user interfaces)
	Outputs	3 x DALI control outputs, each supporting one full DALI universe of 64 addresses (192 total), including backward channel
	Bus Power Supply	Inbuilt DALI bus power supply 15 V rated 128 mA per universe
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service override switch Diagnostic LED
	Preset Scenes	64
	Diagnostic Functions*	Lamp failure reporting Driver failure reporting Driver run time tracking for each driver and the switched output Device online/offline status * EnvisionManager interface required for analyzing diagnostic data. The availability of some diagnostics is dependent on driver type.
Physical	Supply Terminals	Line, Neutral, Earth 1 x 4 mm² maximum conductor size
	Output Terminals	3 x DALI driver circuits: DA -, DA + 1 x 4 mm² maximum conductor size
	Dimensions (H x W x D)	94 mm x 211 mm x 75 mm (3.7" x 8.3" x 2.9")
	Packed Weight	0.49 kg
	Construction	Polycarbonate DIN-rail enclosure (12 unit)
	Operating Conditions	Temperature: 0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, RCM, IEC62386
Options & Ordering	Standard Product	DDBC300-DALI (Philips 12NC - 913703031109)

Electrical Diagram



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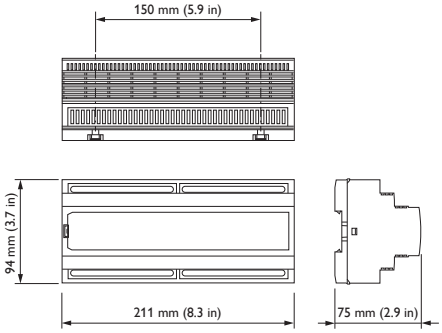
DDBC320-DALI DALI Driver Controller

Control up to 192 DALI devices

The DDBC320-DALI features three DALI outputs, allowing control of up to 192 DALI devices. It also features 3 x 20 A feed-through switched cicuits for DALI driver mains supply.



- Compatible with a range of DALI fittings and devices — Including; DALI HF fluorescent drivers, DALI electronic low voltage tranformer and DALI LED fixtures.
- Innate energy savings — Control signals can be programmed to operate in tandem with three internal switched outputs, which will automatically isolate the power circuit when all associated channels are at 0%. This is a useful feature as DALI drivers still draw significant power when lamps are turned off via a DALI command.
- Fully scalable network solution — Direct mapping from DALI to the Philips Dynalite DyNet network protocol eliminates DALI imposed limits, such as maximum group sizes.
- Flexible mounting solution — A DIN-rail mountable device, designed to be installed into the distribution board supplying power to the controlled lighting circuit.
- Integral DALI bus power supply — Removes the need for provision of a separate external power supply and reduces distribution board wiring complexity.
- Inbuilt diagnostic functionality — Features lamp and driver failure reporting, driver run time tracking for each driver and Device Online/Offline status indication.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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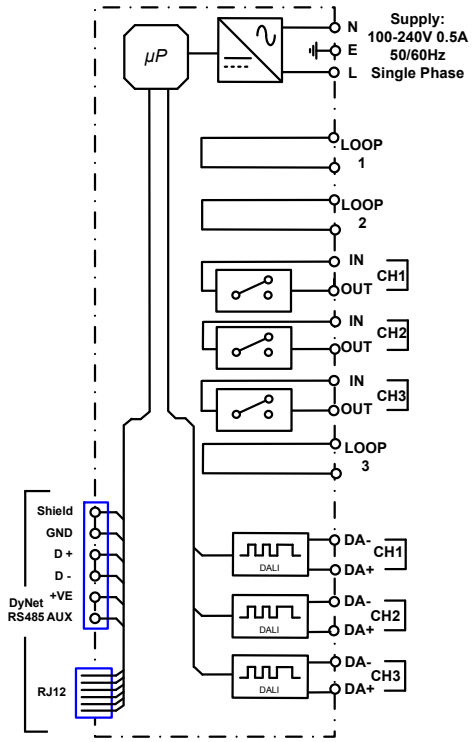
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	100 - 240 VAC 50 / 60 Hz Single Phase @ 0.5 A
	DyNet DC Supply	12 VDC @ 200 mA (supply for approx 10 user interfaces)
	Outputs	3 x DALI control outputs, each supporting one full DALI universe of 64 addresses (192 total), including backward channel
	Bus Power Supply	Inbuilt DALI bus power supply 15 V rated 128 mA per universe
	Mains Outputs	3 x 20 A feed-through switched circuits for DALI driver mains supply
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service override switch Diagnostic LED
	Preset Scenes	64
	Diagnostic Functions*	Lamp failure reporting Driver failure reporting Driver run time tracking for each driver and the switched output Device online/offline status * EnvisionManager interface required for analyzing diagnostic data. The availability of some diagnostics is dependent on driver type.
Physical	Supply Terminals	Line, Neutral, Earth 1 x 4 mm² maximum conductor size
	Output Terminals	3 x Driver power circuit: Line in, Line out, Loop, Loop, 1 x 4 mm² maximum conductor size 3 x DALI driver circuits: DA -, DA + 1 x 4 mm² maximum conductor size
	Dimensions (H x W x D)	94 mm x 211 mm x 75 mm (3.7" x 8.3" x 2.9")
	Packed Weight	0.49 kg
	Construction	Polycarbonate DIN-rail enclosure (12 unit)
	Operating Conditions	Temperature: 0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	v
Options & Ordering	Standard Product	DDBC320-DALI (Philips 12NC - 913703031209)

Electrical Diagram



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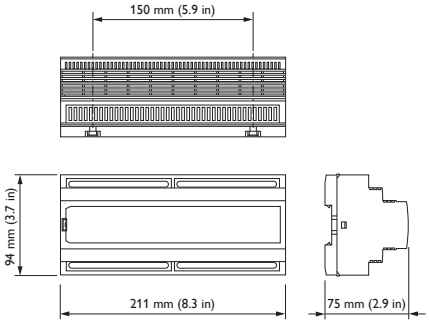
DDBC516FR Signal Dimmer Controller

Cost effective control of DALI high frequency fluorescent drivers

The Philips Dynalite DDBC516FR is a five channel device for controlling DALI HF fluorescent drivers. Each control output is selectable to; DALI broadcast (maximum ten DALI loads/channel); DALI addressed (maximum ten DALI loads/channel); 1-10V (maximum 10mA Sink or Source/channel or; DSI (maximum five DSI loads/channel).



- Multiple protocols supported — Each of the five control outputs supports DALI broadcast, DALI addressed, 1-10V and DSI protocols.
- Innate energy savings — Control signals can be programmed to operate in tandem with five internal switched outputs, which will automatically isolate the power circuit when all associated channels are at 0%. This is a useful feature as DALI drivers still draw significant power when lamps are turned off via a DALI command.
- Integral DALI bus power supply — Removes the need for an additional external device.
- Flexible mounting solution — A DIN-rail mountable device, designed to be installed into the distribution board supplying power to the controlled circuit.
- Inbuilt diagnostic functionality — Features lamp and driver failure reporting, driver run time tracking for each driver and the switched output, as well as Device Online/ Offline status indication.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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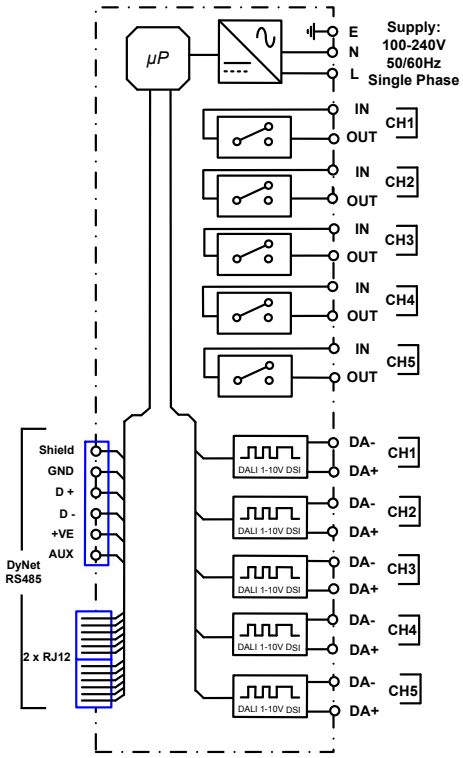
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	100 - 240 VAC 50 / 60 Hz Single Phase @ 0.5 A
	DyNet DC Supply	12 V @200 mA (supply for approx 10 user interfaces)
	Outputs	5 x control outputs, each selectable to; - DALI broadcast. Max 10 DALI loads/ch - DALI addressed. Max 10 DALI loads/ch - 1-10V. Max 10 mA Sink or Source/ch - DSI. Max 5 DSI loads/ch
	Mains Outputs	5 x 16 A feed-through switched cicuits for driver mains supply
	Bus Power Supply	Internal DALI bus power supply
Control	Control Inputs/Outputs	One RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service override switch for each switched channel On/Off status indicator for each switched output Service switch Diagnostic LED
	Preset Scenes	170
	Diagnostic Functions	Lamp failure reporting Driver failure reporting Driver run time tracking for each driver and the switched output Device online/offline status
Physical	Supply Terminals	Line, Neutral, Earth 1 x 4 mm² maximum conductor size
	Output Terminals	5 x Driver power circuit: Line In, Line Out 1 x 4 mm² maximum conductor size 5 x Driver control circuit - D+, D- 1 x 4 mm² maximum conductor size
	Dimensions (H x W x D)	94 mm x 211 mm x 75 mm (3.7" x 8.3" x 2.9")
	Packed Weight	0.8 kg
	Construction	Polycarbonate DIN-rail enclosure (12 unit)
	Operating Conditions	Temperature: 0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDBC516FR (Philips 12NC - 913703031509)

Electrical Diagram



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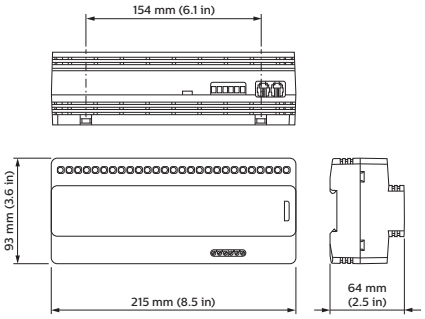
DDBC1200 Signal Dimmer Controller

Choice of HF driver control methodologies

The Philips Dynalite DDBC1200 features 12 independent output channels, each selectable to DALI Broadcast, 0-10 V or DSI. The device can also be linked to a separate relay module for control of 1-10V HF fluorescent drivers.



- Multiple protocols supported — Compatible with a range of fittings and devices including; DSI HF fluorescent drivers, DSI electronic low voltage transformers, DALI HF fluorescent drivers (broadcast mode only), DALI electronic low voltage transformers (broadcast mode only), 1-10 V HF fluorescent drivers and devices that require 0-10 V analog control signals.
- LED status indicators — Instant visual feedback on channel status of all 12 outputs.
- Flexible mounting solution — A DIN-rail mountable device, designed to be installed into the distribution board supplying power to the controlled lighting circuit.
- Inbuilt diagnostic functionality — Features lamp and driver failure reporting, driver run time tracking for each driver and Device Online/Offline status indication.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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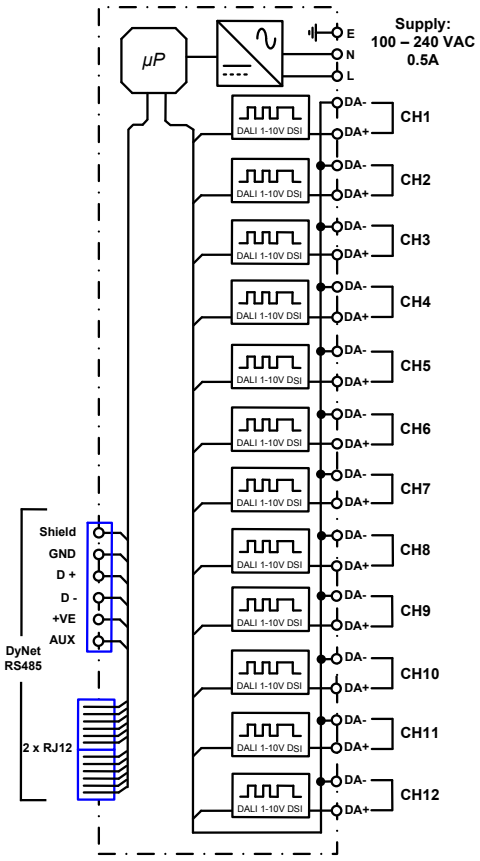
Item	Specification	Details
Electrical	Input Voltage	100 - 240 VAC 50 / 60 Hz Single Phase @ 0.5 A
	DyNet DC Supply	12 V @ 200 mA (supply for approx 9 user interfaces)
	Outputs	12 x control outputs, selectable to DALI, 0-10 V or DSI
	Output Capacity	DALI Broadcast Mode: 80 DALI drivers per channel, 300 total 0-10V Mode: 50 mA sink or source per channel, Max 600 mA per box DSI Mode: 100 DSI drivers per channel, 1200 total
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Manual override switch for each channel Service switch Diagnostic LED
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	Line, Neutral, Earth 0.2 – 5 mm² (24-10 AWG) conductor size
	Output Terminals	12 x DALI, 0-10V, DSI driver circuits: DA+, DA- 0.2 – 5 mm² (24-10 AWG) conductor size
	Dimensions (H x W x D)	93 mm x 215 mm x 64 mm (3.6" x 8.5" x 2.5")
	Packed Weight	0.54 kg
	Construction	Polycarbonate DIN-rail enclosure (12 unit)
	Operating Conditions	Temperature: 0 to 40° C ambient Humidity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 70° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, RCM
Options & Ordering	Standard Product	DDBC1200 (Philips 12NC - 913703035109)

Electrical Diagram



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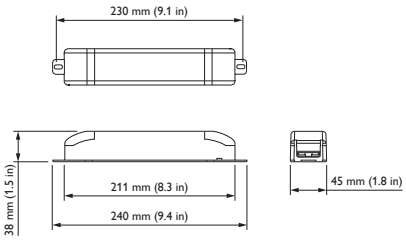
DMBC110 Signal Dimmer & Relay Controller

Intelligent networked control of individual lighting fixtures

The DMBC110 provides intelligent networked control of individual lighting fixtures. The compact design enables mounting directly within the gear enclosure of many lighting fixtures.



- Incorporates one relay output and one HF driver output — Used to provide dimming control of DALI, 1-10V and DSI compatible drivers and transformers.
- Gear enclosure mounting — Compact design allows the device to be mounted directly within the gear enclosure of many light fittings.
- Fully rated device — Robust relays provide reliable control of difficult lighting loads.
- Inbuilt diagnostic functionality — Features Device Online/Offline status indication.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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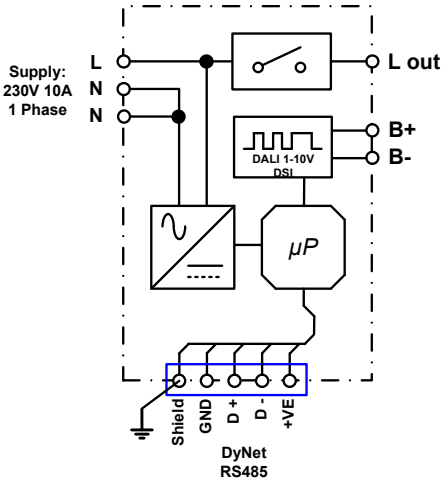
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	230 VAC ± 14% 50 / 60 Hz Single Phase @ 10 A
	DyNet DC Supply	12 V @120 mA (supply for approx 6 user interfaces)
	Switched Output	1 x relay output @ 10 A (inductive)
	Control Output	1 x output selectable to: DALI Broadcast, 1-10V, DSI
	Control Output Capacity	DALI drivers and transformers: 5 0-10 V: 10 mA source or 20 mA sink DSI drivers and transformers: 15
	Switching Device	Relay, Tungsten pilot contact, 16 A inductive, 165 A surge
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	Line in, Neutral 1 x 4 mm² maximum conductor size
	Output Terminals	Mains: Line 1, Line 2, Neutral 1 x 4 mm² maximum conductor size Control: D+, D- 1 x 1.5 mm² maximum conductor size
	Dimensions (L x W x D)	240 mm x 45 mm x 38 mm (9.4" x 1.8" x 1.5")
	Packed Weight	0.19 kg
	Construction	ABS plastic
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick,
Options & Ordering	Standard Product	DMBC110 (Philips 12NC - 913703030009)

Electrical Diagram



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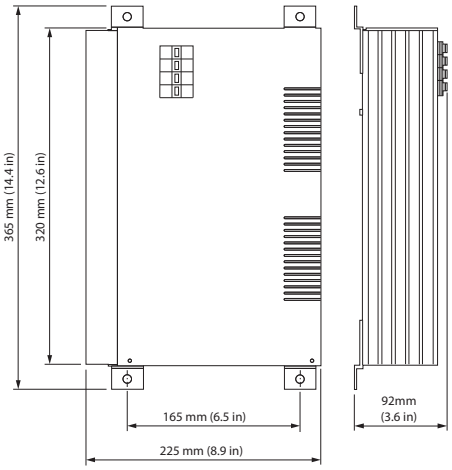
DBC410 Signal Dimmer Controller

Heavy duty driver control

The Philips Dynalite DBC410 is designed for use with electronic dimmable fluorescent drivers, either 1-10V or DSI. It has four heavy duty 10 A relay outputs to switch fluorescent lighting or other loads in a DyNet energy management system.

- Compatible with a range of loads and devices — Including; DSI HF fluorescent drivers, DSI low voltage transformers; 1-10 V high frequency fixtures and switched loads.
- Dual control option — Control signals can be operated in tandem with, or separately from, the switched outputs.
- Inbuilt diagnostic functionality — Features Device Online/Offline status indication.
- User controls — Including service override - all channels to 100% and diagnostic status LED.



For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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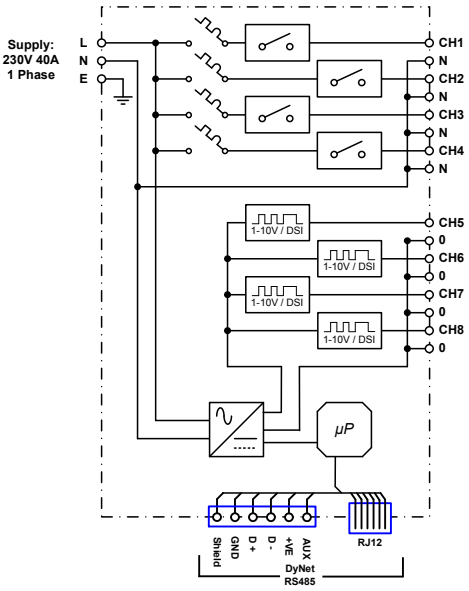
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	230 VAC ± 14% 50 / 60 Hz Single Phase @ 40 A
	DyNet DC Supply	12 V @ 90 mA (supply for approx 4 user interfaces)
	Outputs	4 x switched outputs @ 10 A
	Control Outputs	4 x 1-10VDC, 0-10VDC or DSI outputs **DSI Mode**: 100 DSI drivers per channel **1-10 V Mode**: 50 mA sink, 50 mA source per channel
	Overload Protection	4 x 10 A 6 kA single pole thermal magnetic circuit breakers
	Switching Device	Relay 16 A nom. (resistive), 165 A surge
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service override switch - all channels to 100% Diagnostic LED
	Internal Controls	Programmable Logic Controller
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	Line, Neutral 1 x 10 mm² maximum conductor size Earth Link bar provided
	Output Terminals	Line, Neutral for each channel 2 x 4 mm² maximum conductor size Earth bar link provided V / DSI, +V / DSI for each channel 1 x 2 mm² maximum conductor size
	Cable Entries	Mains: One 75 mm x 53 mm removable gland plate Data: One 25 mm dia. knockout
	Dimensions (H x W x D)	320 mm x 225 mm x 92 mm (12.6" x 8.9" x 3.6")
	Packed Weight	4.0 kg
	Construction	Alloy / Steel wall-mount case with epoxy finish
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard product	DBC410 (Philips 12NC - 913703032009)
	Extra DyNet / DMX512 Port	DBC410-A (Philips 12NC - 913703032109)
	Circuit breaker trip reporting	DBC410-BT (Philips 12NC - 913703032209)
	Neutral disconnect	DBC410-ND (Philips 12NC - 913703032409)

Electrical Diagram



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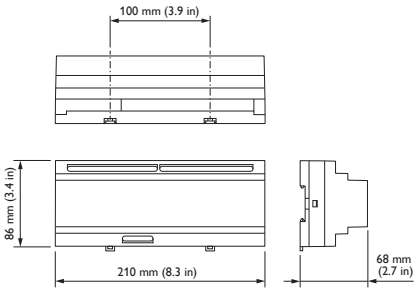
LED **PWM Controllers**

DDLEDC60035 PWM Controller

Directly drive LED fittings with pulse width modulation technology

The DDLEDC60035 is designed to control LED loads in decorative architectural lighting applications where creative color mixing and sequencing is required. The controller provides six pulse width modulated common anode current mode ouputs suitable for directly driving 350mA nominal current rated high intensity LED sources.



- Internal current regulation — The controller is designed to directly operate series connected LED arrays without the need for any additional circuit devices.
- DMX512 compatible — Capable of receiving native DMX512, allowing use in color mixing or chase sequence applications, such as those found in display lighting.
- Diagnostic functionality — Device Online/ Offline status reporting.
- Flexible mounting solution — A DIN-rail mountable device, designed to be installed into a distribution board or other electical enclosure.
- Naturally ventilated — Requires no forced cooling or maintenance.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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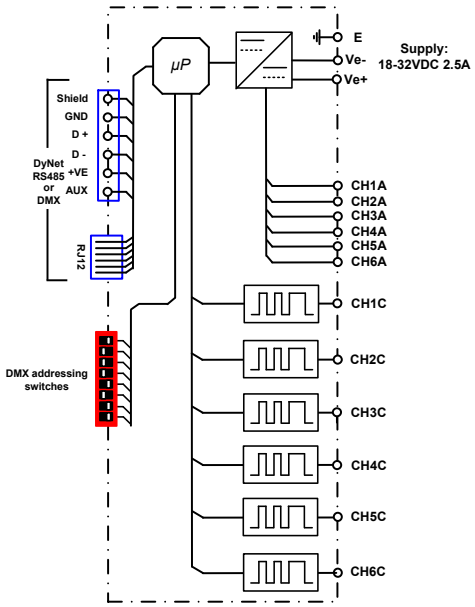
Item	Specification	Details
Electrical	Input Voltage	Regulated 19 - 32 V @ 2.5 A
	DyNet DC Supply	12 V @ 120 mA (supply for approx 6 user interfaces)
	LED Outputs	6 x 350 mA current mode, common anode Minimum internal voltage drop 0.5 V Outputs are short circuit protected Integral self-resetting thermal overload protection
	Maximum Power Dissipation	6 Watts combined total for consecutive pairs of channels (Ch 1&2, Ch 3&4, Ch 5&6). 4 Watts per individual channel. Total device load 18 Watts Pd = (Vs-(Vdf x n)) x 0.35 Pd = Power dissipation per channel Vs = Supply voltage Vdf = Diode forward foltage n = Number of diodes in series per channel
	Maximum Supply Voltage	Vs max = 8.5 + (n x Vled) or 32 VDC (whichever is less) Vs max = maximum supply voltage n = number of diodes in series per channel Vled = LED forward voltage
	Minimum Supply Voltage	Vs min = 4 + (n x Vled) or 18 V DC (whichever is greater) Vs min = Minimum supply voltage n = Number of diodes in series per channel Vled = LED forward voltage
Control	Control Inputs/Outputs	One RS-485 DyNet serial port
	User Controls	Service switch Diagnostic LED
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	Positive, Negative, Earth 1 x 2.5 mm² max conductor size
	Output Terminals	CH, COM for each channel 1 x 2.5 mm² max conductor size
	Dimensions (H x W x D)	86 mm x 210 mm x 68 mm (3.4" x 8.3" x 2.7")
	Packed Weight	1.0 kg
	Construction	ABS DIN-rail enclosure (12 unit)
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDLEDC60035 (Philips 12NC - 913703061309)

Electrical Diagram



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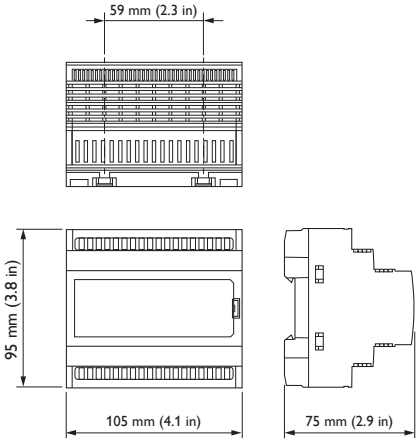
DDLEDC605-GL PWM Controller

Directly drive LED fittings with pulse width modulation technology

The DDLEDC605-GL is designed to control LED loads in decorative architectural lighting applications where creative color mixing and sequencing is required. The controller provides six pulse width modulated common anode voltage mode ouputs, suitable for directly driving high intensity LED sources. The controller is designed for connection to an external DC power supply, enabling the unit to deliver a range of nominal output voltages. The DDLEDC605-GL is DMX512 compatible and is suitable for the high chase speeds commonly found in display lighting.



- Designed for connection to external power supply — The device is connected to an external DC power supply, enabling the unit to deliver a range of nominal output voltages.
- DMX512 compatible — Capable of receiving native DMX512, allowing use in color mixing or chase sequence applications, such as those found in display lighting.
- Diagnostic functionality — Device Online/ Offline status reporting.
- Flexible mounting solution — A DIN-rail mountable device, designed to be installed into a distribution board or other electical enclosure.
- Naturally ventilated — Requires no forced cooling or maintenance.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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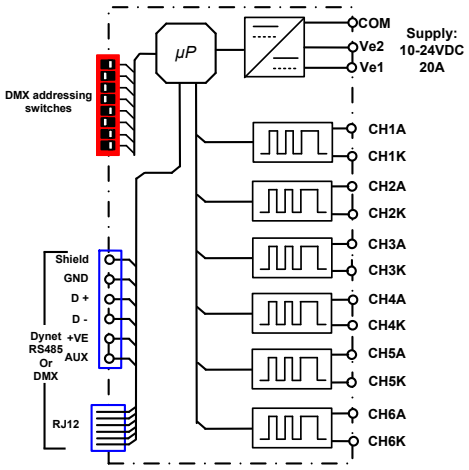
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	External 20 A regulated power supply Controller supply voltage range 10 - 24 VDC
	DyNet DC Supply	12 V @ 120 mA (supply for approx 6 user interfaces)
	LED Outputs	6 x 5 A voltage mode, common anode Nominal output voltage is equal to the supply voltage, less internal voltage drop max of 0.5 V Outputs are short circuit protected Integral self-resetting thermal overload protection Total device load 20 A
Control	Control Inputs/Outputs	One RS-485 DyNet serial port
	User Controls	Service switch Diagnostic LED
	Preset Scenes	170
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	Positive, Negative, Earth 1 x 4 mm² max conductor size
	Output Terminals	CH, COM for each channel 1 x 2.5 mm² max conductor size
	Dimensions (H x W x D)	95 mm x 105 mm x 75 mm (3.8" x 4.1" x 2.9")
	Packed Weight	1.0 kg
	Construction	Polycarbonate DIN-rail enclosure (12 unit)
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDLEDC605-GL (Philips 12NC - 913703061209)

Electrical Diagram



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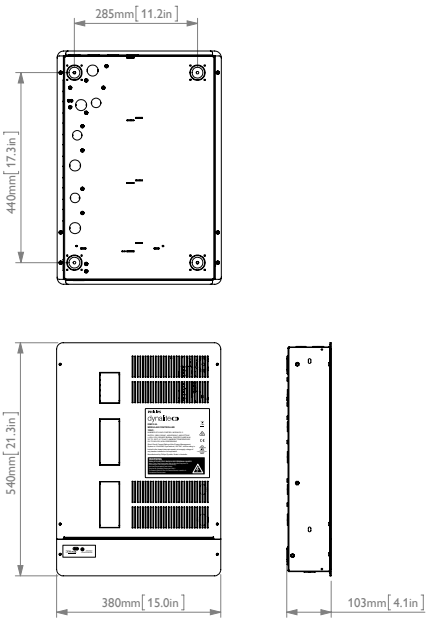
Multipurpose **Controllers**

DMC2-CE Multipurpose Modular Controller

Control different load types with one device

The Philips Dynalite DMC2 provides multichannel control via two interchangeable modules. The device is available with a variety of control modules to handle various load types and capacities. This model is suitable for use in CE markets.



- Single controller solution — Control a multitude of load types from one device, suited to any segment requiring indoor lighting or relay control.
- Phase cut dimmer module — Selectable per channel for Leading or Trailing Edge output. Compatible with most dimming loads.
- Driver control module — Suitable for controlling 1-10V, DSI and DALI Broadcast drivers. A built-in relay removes power when channel level is at 0%.
- Relay control module — Suitable for controlling most types of switched loads.
- Flexible mounting solution — Surface or recess mountable enclosure.
- Passive cooling — Fanless design reduces noise, power consumption and maintenance costs.

For detailed product information, please refer to the product information pages at http://www.lighting.philips.com/

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Specifications

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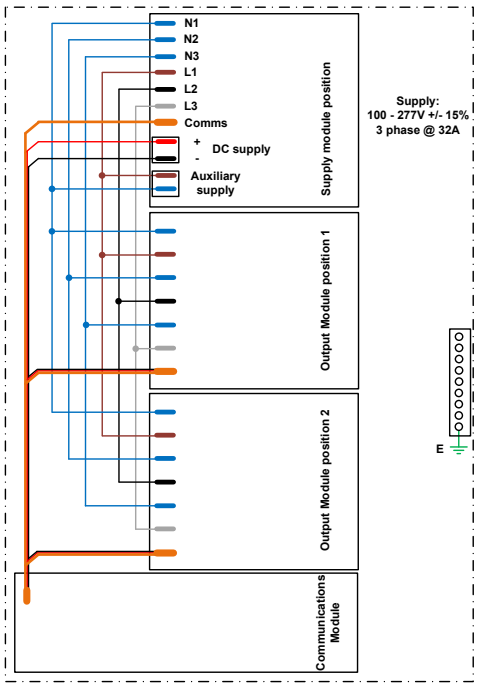
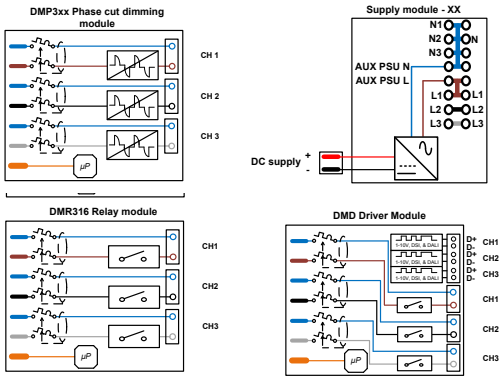
Item	Specification	Details
Electrical	Input Voltage	120/208, 230/400, 277/480 VAC (+10% / -15%)
	Input Current	32A per phase or single phase 63A max
	Input Frequency	50/60Hz 3-Phase Y
	Protection	2 x Groups of output protection options
	DyNet DC Supply	12/24VDC (selectable) @ max 200mA (Class 2)
	Control Modules	**DMD310-CE***: 3 x 10A 1-10 V, DSI or DALI broadcast **DMD316-CE***: 3 x 16A 1-10 V, DSI or DALI broadcast 1-10V: 50mA sink/source, max 100 drivers per channel DALI/DSI: 16VDC 130mA nom. max drivers: 64 per channel (192 per module) max current: 190mA per channel **DMP310-GL-CE***: 3 x 10A Leading/Trailing Edge dimming. Maximum module output 14A Current limited to 4.3A per channel at 277V Regulating Device: dual MOSFETs – 83A, 650V, 297A surge **DMR310-CE***: 3 x 10A relay (lighting and resistive load), 1HP (120/230/277V) (motor load) Inrush current rating: 500A for 200µs Protection: 3 x dual pole 10A IEC approved circuit breaker **DMR316-CE***: 3 x 16A relay (lighting and resistive load), 1HP (120V), 2HP (230/277V) (motor load) Inrush current rating: 500A for 200µs * Line, Neutral for each channel, 1 x 16 mm² (AWG6) conductor size
Control	Communication Module	One RS-485 DyNet serial port (1 x 5-way pluggable screw terminal + 3 x RJ-12 sockets) One DMX512 Rx port Four programmable dry contact AUX inputs (non-isolated) One UL924 trigger input* Service switch Diagnostic LED Channel override keypad *This function must only be used with systems complying to UL924, and must not be used with any other system.
	Diagnostic Functions	Device online/offline status Channel on/off/faulty status DyNet Watchdog
Physical	Supply Module	Line 1, Line 2, Line 3, Neutral 1x16mm² (#6-20 AWG) max conductor size. Earth link bar provided
	Dimensions (H x W x D)	540mm(21.3") x 380mm (15") x 103mm (4.1")
	Packed Weight	DMC2 8.9kg (19.6lbs) DSM2-XX 1.1kg (2.4lbs) DCM-DyNet 0.8kg (1.8lbs) DMR31X 1.7kg (3.7lbs) DMD31X 1.8kg (4lbs) DMP310-GL 2.1kg (4.6lbs)
	Construction	Galvanized steel case with powder coated front covers
	Operating Conditions	Temperature: 0 to 40°C (32 to 104°F) ambient Humidity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60°C (-13 to 140°F) ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, RCM, Overvoltage category III, Pollution Degree II
Options & Ordering	Naming Format	DMC2-CE (Philips 12NC - 913703666109) DMD310-CE (Philips 12NC - 913703666609) DMD316-CE (Philips 12NC - 913703666709) DMP310-GL-CE (Philips 12NC - 913703666809) DMR310-CE (Philips 12NC - 913703666409) DMR316-CE (Philips 12NC - 913703666509) DCM-DyNet (Philips 12NC - 913703666209) DSM2-XX (Philips 12NC - 913703500509)

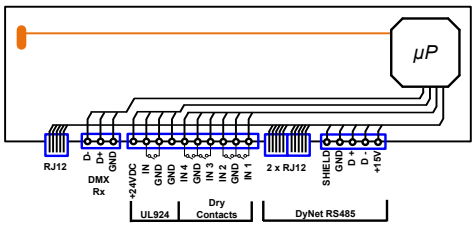
Electrical Diagrams



Electrical Diagram modules



Communications Module



RCBO modules	DMD310-RCBO-CE	(Philips 12NC - 913703667109)
	DMD316-RCBO-CE	(Philips 12NC - 913703667209)
	DMP310-GL-RCBO-CE	(Philips 12NC - 913703667309)
	DMR310-RCBO-CE	(Philips 12NC - 913703666909)
	DMR316-RCBO-CE	(Philips 12NC - 913703667009)

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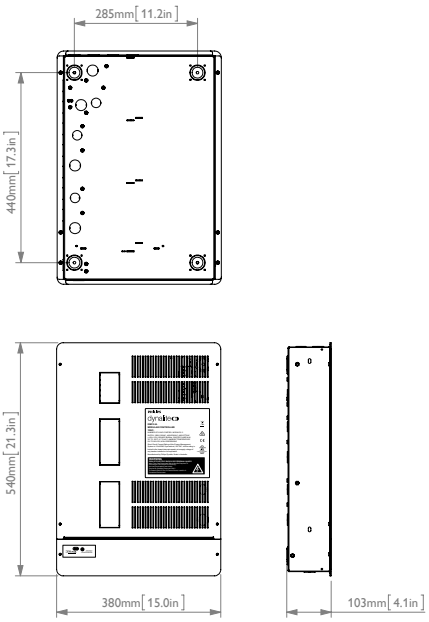
DMC2-UL Multipurpose Modular Controller

Control different load types with one device

The Philips Dynalite DMC2 provides multichannel control via two interchangeable modules. The device is available with a variety of control modules to handle various load types and capacities. This model is suitable for use in UL markets.



- Single controller solution — Control a multitude of load types from one device, suited to any segment requiring indoor lighting or relay control.
- Phase cut dimmer module — Selectable per channel for Leading or Trailing Edge output. Compatible with most dimming loads.
- Driver control module — Suitable for controlling 1-10V, DSI and DALI Broadcast drivers. A built-in relay removes power when channel level is at 0%.
- Relay control module — Suitable for controlling most types of switched loads.
- Flexible mounting solution — Surface or recess mountable enclosure.
- Passive cooling — Fanless design reduces noise, power consumption and maintenance costs.

For detailed product information, please refer to the product information pages at http://www.lighting.philips.com/

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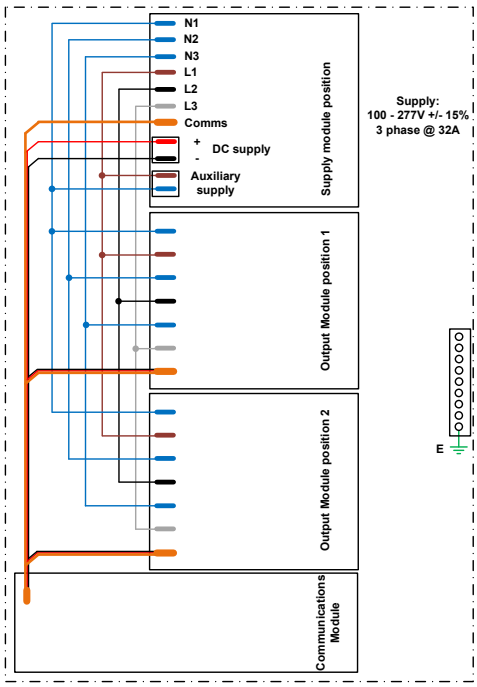
Specifications

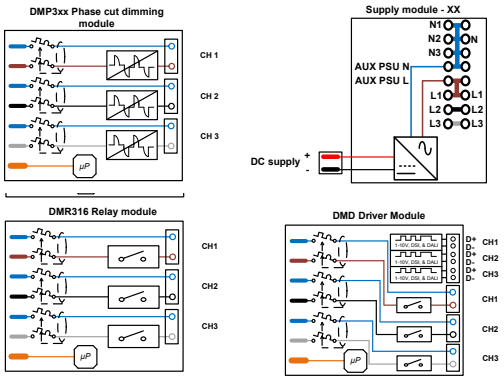
Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	120/208, 230/400, 277/480 VAC (+10% / -15%)
	Input Current	32A per phase or single phase 63A max
	Input Frequency	50/60Hz 3-Phase Y
	DyNet DC Supply	12/24VDC (selectable) @ max 200mA (Class 2)
	Control Modules	**DMD316-UL***: 3 x 16A 1-10 V, DSI or DALI broadcast 1-10V: 50mA sink/source, max 100 drivers per channel DALI/DSI: 16VDC 130mA nom. max drivers: 64 per channel (192 per module) max current: 190mA per channel **DMP310-GL-UL***: 3 x 10A Leading/Trailing Edge dimming Maximum module output 14A Current limited to 4.3A per channel at 277V Regulating Device: dual MOSFETs – 83A, 650V, 297A surge **DMR316-UL***: 3 x 16A relay (lighting and resistive load) 1HP (120V), 2HP (230/277V) (motor load) Inrush current rating: 500A for 200µs * Line, Neutral for each channel, 1 x 16mm² (#6-20 AWG) conductor size * Protection: 3 x dual pole 20A UL489 listed circuit breaker
Control	Communication Module	One RS-485 DyNet serial port (1 x 5-way pluggable screw terminal + 3 x RJ-12 sockets) One DMX512 Rx port Four programmable dry contact AUX inputs (non-isolated) One UL924 trigger input* Service switch Diagnostic LED Channel override keypad *This function must only be used with systems complying to UL924, and must not be used with any other system
	Diagnostic Functions	Device online/offline status Channel on/off/faulty status DyNet Watchdog
Physical	Supply Module	Line 1, Line 2, Line 3, Neutral 1x16mm² (#6-20 AWG) max conductor size. Earth link bar provided
	Dimensions (H x W x D)	540mm(21.3") x 380mm (15") x 103mm (4.1")
	Packed Weight	DMC2 8.9kg (19.6lbs) DSM2-XX 1.1kg (2.4lbs) DCM-DyNet 0.8kg (1.8lbs) DMR31X 1.7kg (3.7lbs) DMD31X 1.8kg (4lbs) DMP310-GL 2.1kg (4.6lbs)
	Construction	Galvanized steel case with powder coated front covers
	Operating Conditions	Temperature: 0 to 40°C (32 to 104°F) ambient Humidity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60°C (-13 to 140°F) ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, RCM, UL, FCC, ICES-003 OSHPD ICC-ES AC156 standard for seismic testing Overvoltage category III, Pollution Degree II
Options & Ordering	Naming Format	DMC2-UL (Philips 12NC - 913703666009) DMD316-UL (Philips 12NC - 913703667509) DMP310-GL-UL (Philips 12NC - 913703667609) DMR316-UL (Philips 12NC - 913703667409) DCM-DyNet (Philips 12NC - 913703666209) DSM2-XX (Philips 12NC - 913703500509)

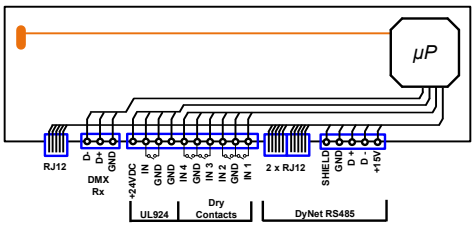
Electrical Diagrams



Electrical Diagram modules



Communications Module



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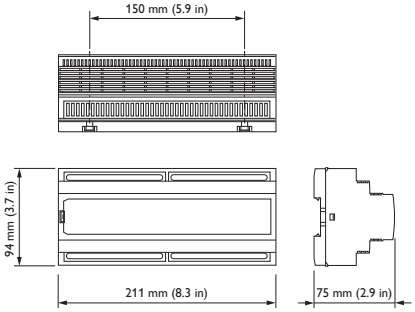
DDMC802 Multipurpose Modular Controller

Control different load types with one device

The Philips Dynalite DDMC802 provides eight channels of control, with a maximum load per channel of 2A. The device is available with a variety of output modules to provide control of differing load types. The DDMC802 can be fully loaded to 16A.



- Single controller solution specifically suited to residential and hotel applications — Control a multitude of load types from one device.
- Trailing edge phase control dimmer module — Suitable for use with most types of dimmable electronic transformers.
- Leading edge phase control dimmer module — Suitable for use with incandescent lamps and some types of dimmable electronic transformers.
- HF driver control module — Suitable for controlling 0-10V and digital drivers and transformers. An additional relay control module is required to be paired when controlling 0-10V drivers.
- Relay control module — Suitable for controlling most types of switched loads.
- Fan control module — 400 VA fan control module.
- Curtain control module — Provides control of curtains, blinds and other window treatments.
- Flexible mounting solution — A DIN-rail mountable device, designed to be installed into the distribution board supplying power to the controlled circuit.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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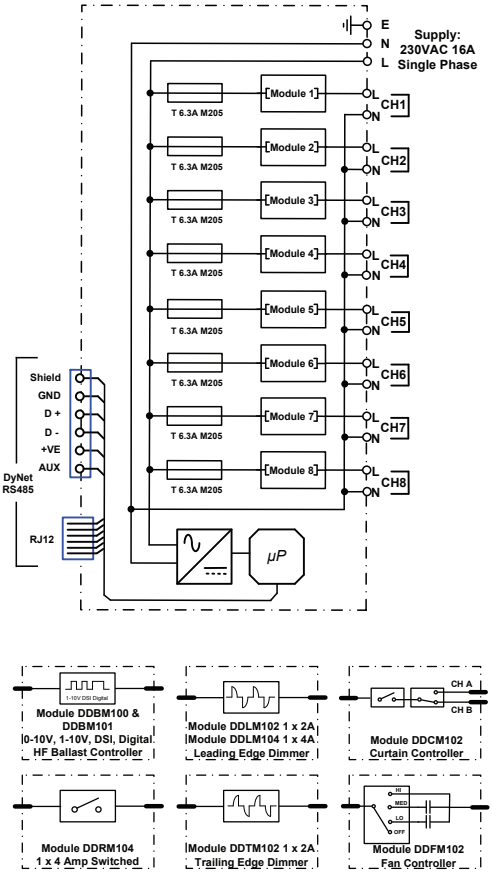
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	230 V ±14% 50 / 60 Hz Single Phase @ 16 A
	DyNet DC Supply	12 V @ 120 mA (supply for approx 6 user interfaces)
	Outputs	8 x output slots @ 2 A each. Maximum device load 16 A. A derating factor may need to be applied if installed in a smaller sealed switchboard when using Leading or Trailing Edge dimmer modules. See Instruction Manual for details. Some modules occupy 2 slots. Available modules include: **DDBM100**: 1 channel; 1-10 V or digital HF driver control. Occupies 1 slot **DDBM101**: 1 channel; 1-10 V or digital HF driver control. For fittings that require full isolation from mains. Occupies 1 slot **DDCM102:** 1 channel 2 A SPDT curtain control. Occupies 2 slots **DDFM102**: 1 channel 400 VA fan control. Occupies 2 slots **DDLM102**: 1 channel 2 A Leading Edge dimmer. Regulating device: Triac 20 A, 600 V. Occupies 1 slot **DDLM104**: 1 channel 4 A Leading Edge dimmer. Regulating device: Triac 20 A, 600 V. Occupies 2 slots **DDRM104**: 1 channel 4 A relay. Switching device: Relay, 16 A / 250 V. Occupies 1 slot **DDTM102**: 1 channel 2 A Trailing Edge dimmer. Regulating device: Dual MOSFETs 22 A, 500 V, 88 A surge. Occupies 1 slot
	Power Conditioning	Regulated outputs Over voltage protection Surge protection Brownout / Sag protection Spike protection Soft start 16 bit fade resolution (65,536 steps)
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port One programmable dry contact AUX input
	User Controls	Service switch Diagnostic LED
	Preset Scenes	170
	Diagnostic Functions	Circuit run time tracking on each channel Device online/offline status
	Front Panel Controls (Optional -MO version only)	Channel override switches Channel status indicators Service switch Service LED
Physical	Supply Terminals	2 x 2.5mm² or 1 x 4 mm² conductor size Line, Neutral, Earth
	Output Terminals	Line, Neutral for each channel 2 x 2.5mm² or 1 x 4 mm² conductor size
	Dimensions (H x W x D)	94 mm x 211 mm x 75 mm (3.7" x 8.3" 2.9")
	Packed Weight	0.94 kg
	Construction	Polycarbonate DIN-rail enclosure (12 unit)
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 70° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDMC802 (Philips 12NC - 913703024009)
	Manual Override	DDMC802-MO (Philips 12NC - 913703024109)

Electrical Diagram



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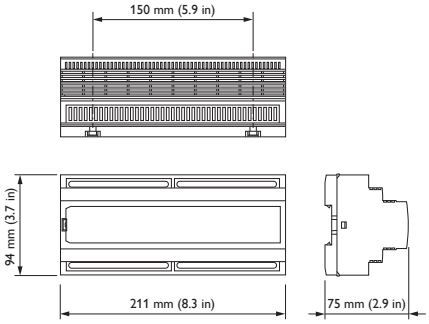
DDMC802GL Multipurpose Modular Controller

Control different load types with one device

The Philips Dynalite DDMC802GL provides eight channels of control, with a maximum load per channel of 2A. The device is available with a variety of output modules to provide control of differing load types. The DDMC802GL can generally be loaded to a total of 10A.



- Single controller solution specifically suited to residential and hotel applications — Control a multitude of load types from one device.
- Trailing edge phase control dimmer module — Suitable for use with most types of dimmable electronic transformers.
- Leading edge phase control dimmer module — Suitable for use with incandescent lamps and some types of dimmable electronic transformers.
- HF driver control module — Suitable for controlling 0-10V and digital drivers and transformers.
- Relay control module — Suitable for controlling most types of switched loads.
- Fan control module — 400 VA fan control module.
- Curtain control module — Provides control of curtains, blinds and other window treatments.
- Flexible mounting solution — A DIN-rail mountable device, designed to be installed into the distribution board supplying power to the controlled circuit.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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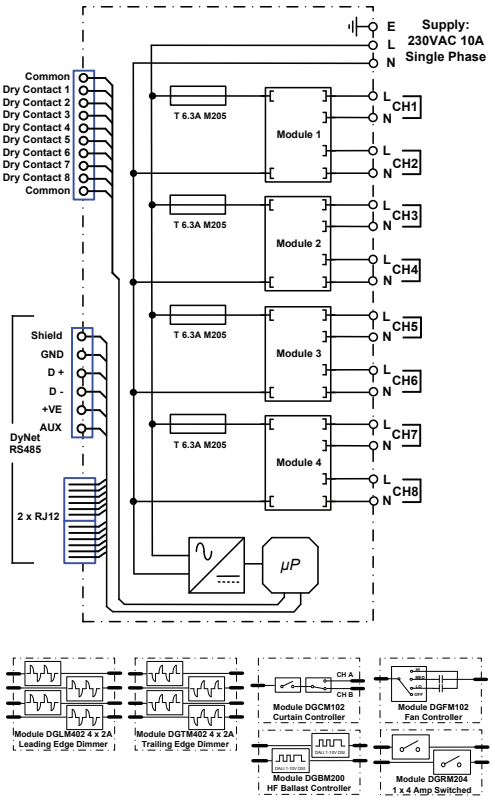
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	230 V ±14% 50 / 60 Hz Single Phase @ 10 A
	DyNet DC Supply	12 V @ 120 mA (supply for approx 6 user interfaces)
	Outputs	8 x output slots @ 2 A each. Maximum device load 10 A Some modules occupy 2 slots. Available modules include: **DGBM200**: 2 channel; DALI Broadcast, 1-10 V or digital HF driver control. Occupies 1 slot **DGCM102:** 1 channel 2 A SPDT curtain control. Occupies 1 slot **DGFM102**: 1 channel 400 VA fan control. Occupies 1 slot **DGLM402**: 4 channel 2 A Leading Edge dimmer. Maximum module load 5 A. Regulating device: Triac 20 A, 600 V. Occupies 2 slots **DGLM105**: 1 channel 5 A Leading Edge dimmer. Regulating device: Triac 20 A, 600 V. Occupies 2 slots **DGRM204**: 2 channel 4 A relay. Switching device: Relay, 16 A, TV5, 100 A surge. Occupies 1 slot **DGLEDM401**: 4 channel 1 A mains rated LED analogue dimmer. MOSFETs 25 A, 500 V, 62 A surge. Occupies 2 slots **DGTM402**: 4 channel 2 A Trailing Edge dimmer. Maximum module load 4 A. Regulating device: MOSFETs 25 A, 500 V, 62 A surge. Occupies 2 slots **DGTM105**: 1 channel 5 A Trailing Edge dimmer. Regulating device: MOSFETs 25 A, 500 V, 62 A surge. Occupies 2 slots
Control	Control Inputs/Outputs	One DMX512 / RS-485 DyNet serial port
	Dry Contacts	Eight programmable dry contact AUX input Max cable length <20m
	User Controls	Service switch Diagnostic LED
	Preset Scenes	170
	Diagnostic Functions	Circuit run time tracking on each channel Device online/offline status
Physical	Supply Terminals	Line, Neutral, Earth 2 x 2.5mm² or 1 x 4 mm² conductor size
	Output Terminals	Channel, Common for each channel 2 x 2.5mm² or 1 x 4 mm² conductor size
	Dry Contact Input Terminals	1 x 10 pole removable terminal socket PTR item code: AK950/10-5-0-GREEN
	Dimensions (H x W x D)	94 mm x 211 mm x 75 mm (3.7" x 8.3" x 2.9")
	Packed Weight	0.94 kg
	Construction	Polycarbonate DIN-rail enclosure (12 unit)
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 70° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDMC802GL (Philips 12NC - 913703026009)

Electrical Diagram



CE

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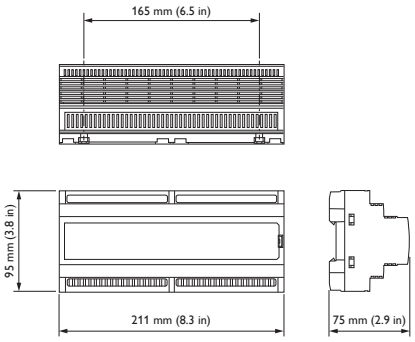
DDMC-GRMSPLUS Hotel Room Controller

Compact dedicated controller for hotel room control solutions

The DDMC-GRMSPLUS is designed specifically for use in hotel rooms and suites. Featuring a range of outputs suitable for control of services found in hospitality environments, the compact unit delivers the ultimate in guest comfort through seamless control of lighting, curtains and blinds, as well as limiting standby current consumption from electronic devices connected to GPOs.



- 16 A power relay — Stops standby power consumption from electronic devices still connected to general purpose outlets once guests have left.
- Five trailing edge dimming channels — For use with LED lighting as commonly found in hotel room applications.
- Three switching channels — Provide additional on/off control of other lighting fixture types.
- Two motor directional relays — For use with motorized blinds and curtains.
- Sixteen DMX512 output channels — In situations where color changing lighting is required as part of overall room ambience.
- Built-in dipswitches — Allow the device's network address to be configured without commissioning software, providing faster installation.
- Supports two DyNet ports — The device can be used as a standalone solution, or integrated with other Philips Dynalite network devices, as part of a larger scale system.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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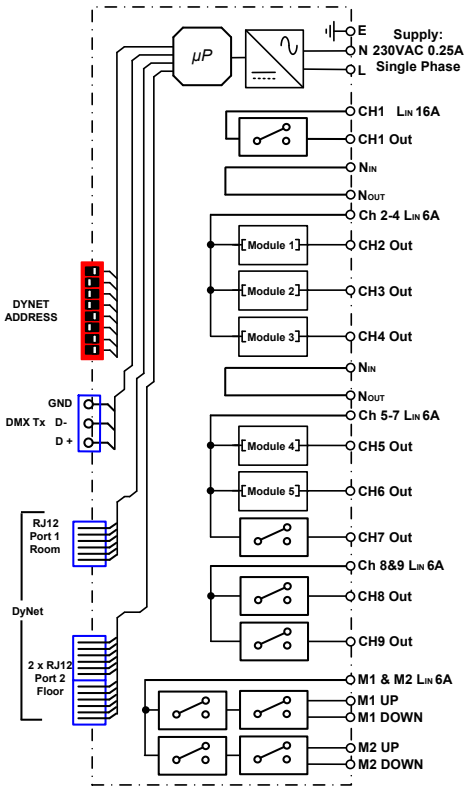
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	Device feed 230 V ±14% 50 / 60 Hz Single Phase @ max 0.25 A (must be on the same phase as feeds for Ch 2-4 & 5-7). Ch 1 feed 16A Ch 2 - 4 group feed 6A Ch 5 - 7 group feed 6A Ch 8 - 9 group feed 6A M1 & M2 group feed 6A A derating factor may be needed if installed in a smaller sealed switchboard
	DyNet DC Supply	DyNet 1 Port: 12 VDC @ 200mA DyNet 2 Port: 12 VDC @ 50mA
	Outputs	**Ch 1** Switching, feed from any phase, 240 VAC 16 A resistive, 165 / 800A inrush rated **Ch 2-4 & 5-7** Ch 2-6: 2A Trailing Edge Dimmer Regulating device - Dual MOSFETs, 21 A, 500 V, 84 A surge Dimmer Channel Power Conditioning: • Over voltage protection • Surge protection • Brownout/Sag protection • Spike protection • Soft start • 16 bit fade resolution (65,536 steps) Ch 7: 6 A max switching 240 VAC 8 A rated TV-8 type relays, 100 A inrush rating 30,000 switching cycles **M1 & M2** Switching and motor direction control. Feed 6 A max from any phase or ELV supply. Cascaded single SPST 8 A TV-8 and SPDT 8 A TV-5 / TV-3 relays, 240 VAC, 100 inrush rating. 30,000 switching cycles **DMX512 Transmit** Single DMX512 port, max 16 channels
Control	Control Inputs/Outputs	1 DyNet 1 RS-485 Serial Port 1 DyNet 2 RS-485 Serial Port
	User Controls	Service switch Diagnostic LED DyNet addressing dipswitches
	Preset Scenes	170
	Internal Controls	Inbuilt Programmable Logic Controller
Physical	Supply Terminals	Line, Neutral, Earth 2 x 2.5mm² or 1 x 4 mm² conductor size
	Output Terminals	1 Common Feed In per group, single or multiple Ch Out, up to 1 x 2.5mm² or 2 x 1.5 mm² conductor size
	DyNet Termination	DyNet 1 Port: 1 RJ12 modular jack DyNet 2 Port: 2 RJ12 modular jacks
	DMX Termination	3 pole pluggable screw clamp terminal, 2 x 1.5 mm² max conductor size
	Dimensions (H x W x D)	95 mm x 211 mm x 75 mm (3.8" x 8.3" x 2.9")
	Packed Weight	0.82 kg
	Construction	Polycarbonate DIN-rail enclosure (12 unit)
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 70° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDMC-GRMSPLUS (Philips 12NC - 913703051809)

Electrical Diagram



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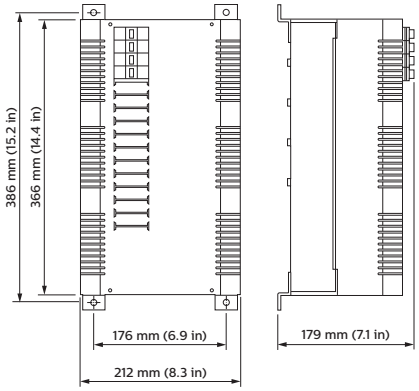
DMC810GL Multipurpose Controller

Combining leading edge and signal dimming control

The DMC810GL is an eight channel device that provides a combination of control technologies. The ability to control mixed load types from one device provides savings in initial capital costs, installation costs and a reduction in ongoing maintenance.



- Four channels for control of dimmable loads — Leading edge phase control for use with incandescent, neon, leading edge electronic and iron core transformers.
- Four signal control outputs — Selectable to 1-10 VDC, DSI and DALI broadcast for control of HF drivers.
- Four switched outputs — Signal control outputs can operate in tandem with, or separately from, switched outputs.
- Interference supression — Iron powder core toroidal choke lessens effects of interference from other equipment, such as transformers.
- Naturally ventilated — Requires no forced cooling or maintenance.
- Diagnostic functionality — Device Online/ Offline status reporting.
- User controls — Incorporates service override switch - all channels to 100% and a diagnostic LED.
- Options available — Including an additional RS485 DyNet/DMX512 port or earth leakage and overload protection on each channel.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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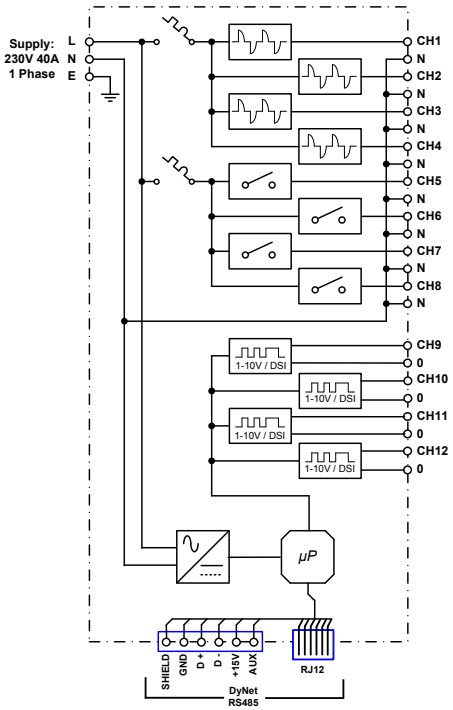
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	230 V ±14% 50 / 60 Hz Single Phase @ 40 A
	DyNet DC Supply	12 V @ 200 mA (supply for approx 10 user interfaces)
	Outputs	4 x dimmed outputs leading edge phase control @ 10 A 4 x switched outputs @ 10 A 4 x HF ballast control outputs, selectable to 1-10 VDC, DSI and DALI Maximum device load is 40 A Total switched load is 40 A **or**; Total dimmed load is 40 A
	Overload Protection	4 x 10 A 6 kA single pole thermal magnetic circuit breakers
	Regulating Device	Triac - 40 A nom., 600 V, 400 A surge
	Switching Device	Relay 16 A nom., 165 A surge
	Interference Suppression	Iron powder toroidal choke
Control	Control Inputs/Outputs	One RS-485 DyNet / DMX512 serial port One programmable dry contact AUX input
	User Controls	Service override switch - all channels to 100% Diagnostic LED
	Preset Scenes	170
	Rise Time	100µS @ 230 V
	Internal Controls	Programmable Logic Controller
	Diagnostic Functions	Device online/offline status
Physical	Supply Terminals	Line, Neutral 2 x 10 mm² max conductor size
	Output Terminals	Line, Neutral for each channel (Channels 1-8) 2 x 4 mm² max conductor size Earth link bar provided 0V / DSI / DALI + V / DSI / DALI (Channels 9-12 1 x 2.5 mm² max conductor size
	Cable Entries	Mains - 8 x 25 mm dia. knockout Data - 1 x 25 mm dia. knockout
	Cooling System	Naturally ventilated, no forced cooling, no maintenance
	Dimensions (H x W x D)	366 mm x 212 mm x 179 mm (14.4" x 8.3" x 7.1")
	Packed Weight	7.5 kg
	Construction	Alloy / Steel wall mount case with epoxy finish
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DMC810GL (Philips 12NC - 913703028009)
	Extra DyNet / DMX512 Port	DMC810GL-A (Philips 12NC - 913703028709)
	Earth leakage and overload protection on each channel	DMC810GL-RCBO (Philips 12NC - 913703028509)
	Dual Port & RCBO	DMC810GL-A-RCBO (Philips 12NC - 913703028909)

Electrical Diagram



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Park Hyatt Hotel
Sydney, Australia

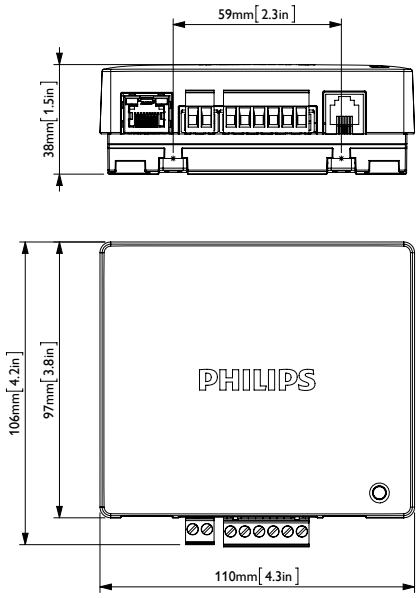
Image courtesy of
Park Hyatt Sydney

Integration
Devices

EnvisionGateway 10/100 BaseT Gateway

Multipurpose Ethernet connection

EnvisionGateway provides a multipurpose Ethernet connection to a Philips lighting control system. It supports access to both the home or office lighting via a dedicated Philips app as well as providing a web interface delivering access to the inbuilt timeclock and schedule editor functions. It provides bridging functionality between Ethernet backbone and the DyNet fieldbus devices.



- Large storage capacity — The device stores large project files internally, which apps use to autoconfigure their settings. This saves configuration time and ensures accuracy for phone and tablet control.
- Inbuilt web server — Allows the user to check system settings via the Network Hardware Checker and System Roll Call tools.
- No technical skills needed — Inbuilt timeclock and schedule manager allow the user to manage operation and task scheduling without advanced technical knowledge.
- Powerful custom task engine — Allows users or third-party systems to run macros, such as 'After Hours', 'Shut Down', 'Welcome' and more.
- Advanced interoperability — Supports management of Philips Dynalite and LightMaster-IP fittings on a single system.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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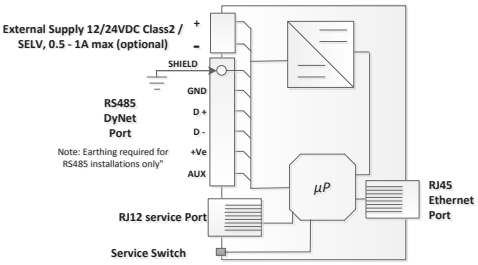
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Dual supply option	12 / 24 VDC from an external regulated SELV / Class 2 power supply. Max 100 mA @ 12 V plus DyNet load, max 50 mA @ 24 V plus DyNet load **or**; 12 / 24 VDC from DyNet (no external PS connected). Max 100 mA @ 12 V, max 50 mA @ 24 V
	DyNet DC Supply	Max 200 mA contribution to the network (when powered from external power supply) Power supply voltage shall match network voltage
Control	Communications Ports	One RS-485 DyNet serial port One 10/100BaseT Ethernet port
	Supported Ethernet Protocols	TCP/IP (TCP, UDP) HTTP, FTP IPv4, IPv6
	Storage Capacity	Max 16 MB for XML file storage 28 day rolling network log
	User Controls	Service switch Service LED Ethernet LED's status
	Diagnostic Functions	Device Online / Offline status
Physical	RS-485 Port Connections	Shield, GND, D-, D+, +Ve, AUX All available on screw terminals 1 x 2.5 mm² conductor size Also available on RJ12 socket
	Ethernet Port Connections	Female RJ45 socket
	Supply Terminals	1 x 2 pole 5 mm pluggable screw terminal (+, -), 1 x 2.5 mm² max conductor size per pole
	Dimensions (H x W x D)	97 mm x 110 mm x 38 mm (3.8" x 4.3" x 1.5")
	Packed Weight	0.21 kg
	Construction	Low profile DIN-rail polycarbonate (6 unit)
	Operating Conditions	Temperature: -5 to 50° C ambient Humdity: 0 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 70° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick, UL, FCC, ICES
Options & Ordering	Standard Product	EnvisionGateway DL-ETHENVG-101 (Philips 12 NC - 913703013809)

Electrical Diagram



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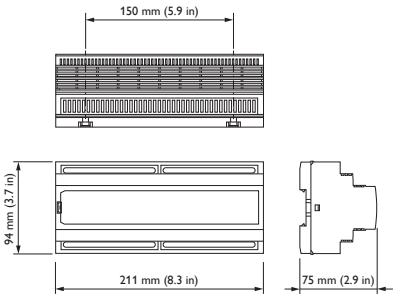
DDNG232 RS232 Network Gateway

Cost-effective serial port integration

The Philips Dynalite DDNG232 network gateway provides cost-effective serial port integration between a DyNet network and third-party systems.



- Seamless integration with third-party systems — Including AV systems, lighting desks, data projectors, HVAC, BMS and security systems.
- Internal controls — Including programmable logic controller capable of comprehensive conditional and sequential logic and arithmetic function processing.
- Utilize data format library or create your own — A library of data formats is available for systems integrators, or can be created using the onboard conditional logic engine to assemble and transmit user-defined data strings.
- Macro functions available — To simplify the control of multiple devices.
- Flexible mounting solution — DIN-rail mountable, designed to be installed into a distribution board or other electrical enclosure.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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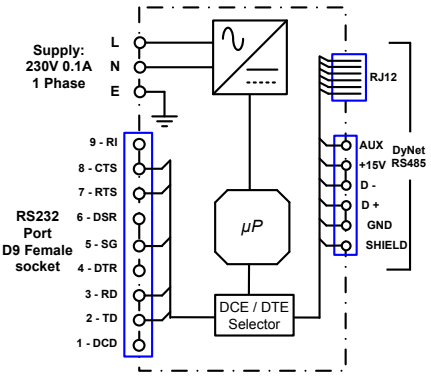
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	230 VAC ± 14% 50 / 60 Hz Single Phase @ < 0.1 A
	DyNet DC supply	12 V @ 90 mA (supply for approx 6 user interfaces)
Control	Control Ports	One RS-485 DyNet serial port Two RS-232 serial ports
	RS-485 Port Connections	SHLD, GND, D-, D+, +12 V All available on screw terminals 1 x 2.5 mm² max conductor size. Also available on RJ12 socket
	RS-232 Port Connections	Two Female DB9 connections
	RS-232 Port Modes	DTE, DCE; selected by jumpers
	RS232 Data Formats	Baudrate: 600 - 250 k Max packet length: 254 bytes Data bits: 7 / 8 Stop bits: 1 / 2 Parity: odd/even/none Flow control: none / RTS-CTS
	User Controls	Service Switch Diagnostic LED
	Internal Controls	Programmable Logic Controller
Physical	Dimensions (H x W x D)	94 mm x 211 mm x 75 mm (3.7" x 8.3" x 2.9")
	Packed Weight	0.86 kg
	Construction	Polycarbonate DIN-rail enclosure (12 unit)
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDNG232 (Philips 12NC - 913703081809)

Electrical Diagram



RS-232 Control Lines

Pin	Function	Implementation
1	DCD (data carrier detect)	Not conected
2	RD (received data)	Connected to UART
3	TD (transmitted data)	Connected to UART
4	DTR (data terminal ready)	Not conected
5	SG (signal ground)	Connected to Ground
6	DSR (data set ready)	Not connected
7	RTS (request to send)	Software controlled
8	CTS (clear to send)	Software controlled
9	RI (ring indicator)	Not connected

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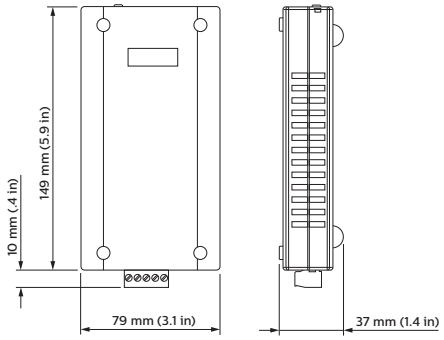
DMNG232 RS232 Network Gateway

Cost-effective serial port integration

The Philips Dynalite DMNG232 network gateway provides cost-effective serial port integration between a DyNet network and third-party systems.



- Seamless integration with third-party systems — Including AV systems, lighting desks, data projectors, HVAC, BMS and security systems.
- Internal controls — Including programmable logic controller capable of comprehensive conditional and sequential logic and arithmetic function processing.
- Utilize data format library or create your own — A library of data formats is available for systems integrators, or can be created using the onboard conditional logic engine to assemble and transmit user-defined data strings.
- Macro functions available — To simplify the control of multiple devices.
- Powered from the DyNet network — Requires no mains voltage supply.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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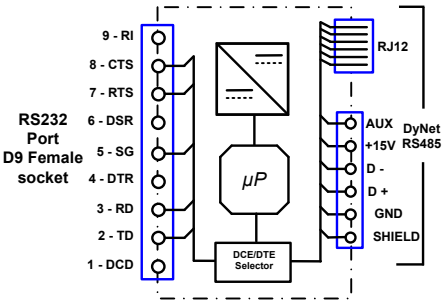
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	15 VDC supplied by the DyNet network @ 50 mA
Control	Control Ports	One RS-485 DyNet serial port One RS-232 serial port
	RS-485 Port Connections	SHLD, GND, D-, D+, +12 V All available on screw terminals 1 x 2.5 mm² max conductor size. Also available on RJ12 socket
	RS-232 Port Connections	Female DB9 connection
	RS-232 Port Modes	DTE, DCE; selected by jumpers
	RS232 Data Formats	Baudrate: 600 - 250 k Max packet length: 254 bytes Data bits: 7 / 8 Stop bits: 1 / 2 Parity: odd/even/none Flow control: none / RTS-CTS
	User Controls	Service Switch Diagnostic LED
	Internal Controls	Programmable Logic Controller
Physical	Dimensions (H x W x D)	37 mm x 79 mm x 149 mm (1.4" x 3.1" x 5.9")
	Packed Weight	0.15 kg
	Construction	ABS plastic
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordeing	Standard Product	DMNG232 (Philips 12NC - 913703080309)

Electrical Diagram



RS-232 Control Lines

Pin	Function	Implementation
1	DCD (data carrier detect)	Not conected
2	RD (received data)	Connected to UART
3	TD (transmitted data)	Connected to UART
4	DTR (data terminal ready)	Not conected
5	SG (signal ground)	Connected to Ground
6	DSR (data set ready)	Not connected
7	RTS (request to send)	Software controlled
8	CTS (clear to send)	Software controlled
9	RI (ring indicator)	Not connected

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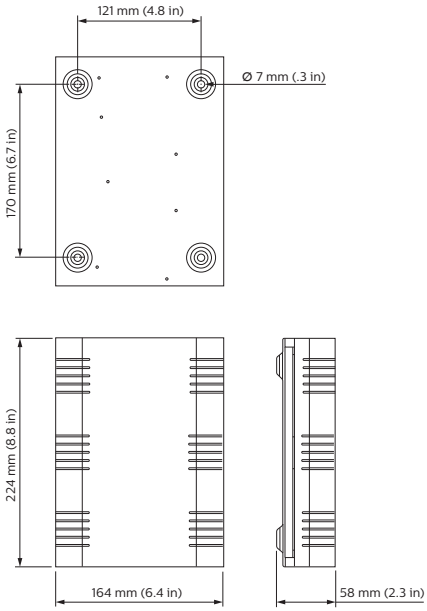
DNG232 RS232 Network Gateway

Cost-effective serial port integration

The Philips Dynalite DNG232 network gateway provides cost-effective serial port integration between a DyNet network and third-party systems.



- Seamless integration with third-party systems — Including AV systems, lighting desks, data projectors, HVAC, BMS and security systems.
- Internal controls — Including programmable logic controller capable of comprehensive conditional and sequential logic and arithmetic function processing.
- Utilize data format library or create your own — A library of data formats is available for systems integrators, or can be created using the onboard conditional logic engine to assemble and transmit user-defined data strings.
- Macro functions available — To simplify the control of multiple devices.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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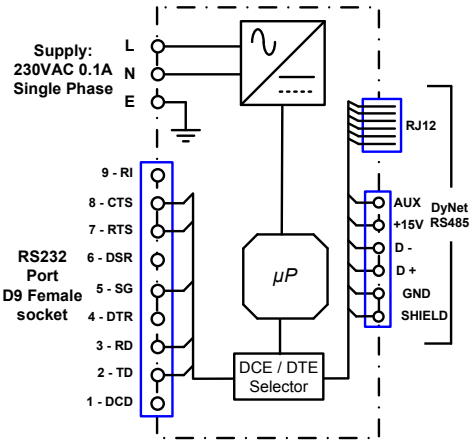
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	230 VAC ± 50 / 60 Hz Single Phase @ < 0.1 A
	DyNet DC Supply	12 VDC @ 90 mA (supply for approx. 6 user interfaces)
Control	Control Ports	One RS-485 DyNet serial port One RS-232 serial port
	RS-485 Port Connections	SHLD, GND, D-, D+, +12 V All available on screw terminals 1 x 2.5 mm² max conductor size. Also available on RJ12 socket
	RS-232 Port Connection	One female DB9 connection
	RS-232 Port Modes	DTE, DCE; selected by jumpers
	RS232 Data Formats	Baudrate: 600 - 250 k Max packet length: 254 bytes Data bits: 7 / 8 Stop bits: 1 / 2 Parity: odd/even/none Flow control: none / RTS-CTS
	User Controls	Service Switch Diagnostic LED
	Internal Controls	Programmable Logic Controller
Physical	Dimensions (H x W x D)	224 mm x 164 mm x 58 mm (8.8" x 6.4" x 2.3")
	Packed Weight	2.2 kg
	Construction	Steel wall mount case with epoxy finish
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DNG232 (Philips 12NC - 913703082109)

Electrical Diagram



RS-232 Control Lines

Pin	Function	Implementation
1	DCD (data carrier detect)	Not conected
2	RD (received data)	Connected to UART
3	TD (transmitted data)	Connected to UART
4	DTR (data terminal ready)	Not conected
5	SG (signal ground)	Connected to Ground
6	DSR (data set ready)	Not connected
7	RTS (request to send)	Software controlled
8	CTS (clear to send)	Software controlled
9	RI (ring indicator)	Not connected

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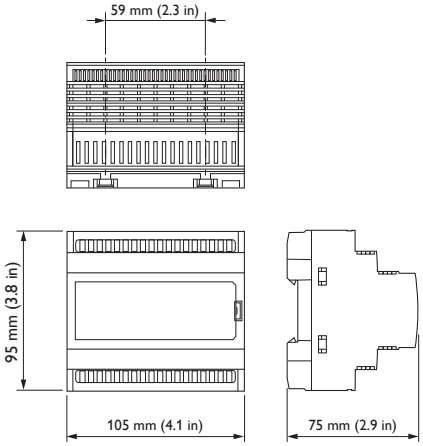
DDNG485 Network Gateway

Flexible network communications gateway for DyNet RS-485 networks

The Philips Dynalite DDNG485 is a flexible network communications bridge designed for RS-485 networks. The two opto-isolated RS-485 ports enable the DDNG485 to implement a trunk and spur topology on large project sites, with the bridge providing a high-speed backbone opto-coupled to many lower speed spurs.



- Electrical fault isolation — Faults can be isolated to individual network spurs.
- Route DyNet to third-party systems — Such as audio-visual and building automation systems, providing an integrated approach to total building control and energy management.
- DMX512 mode — Transmit or receive up to 64 channels of DMX512, with automatic DyNet conversion and task triggering. Provides temporary control of house lights from the DMX512 console in an auditorium scenario.
- Internal controls — Including programmable logic controller capable of assembly and transmission of user-defined data strings.
- Flexible mounting solution — DIN-rail mountable, designed to be installed into a distribution board or other electrical enclosure.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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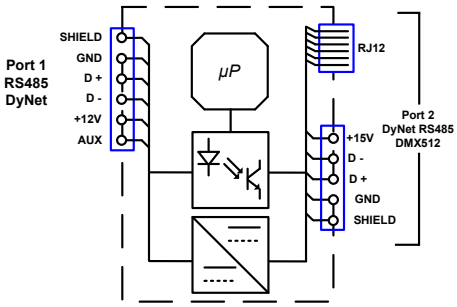
Specifications

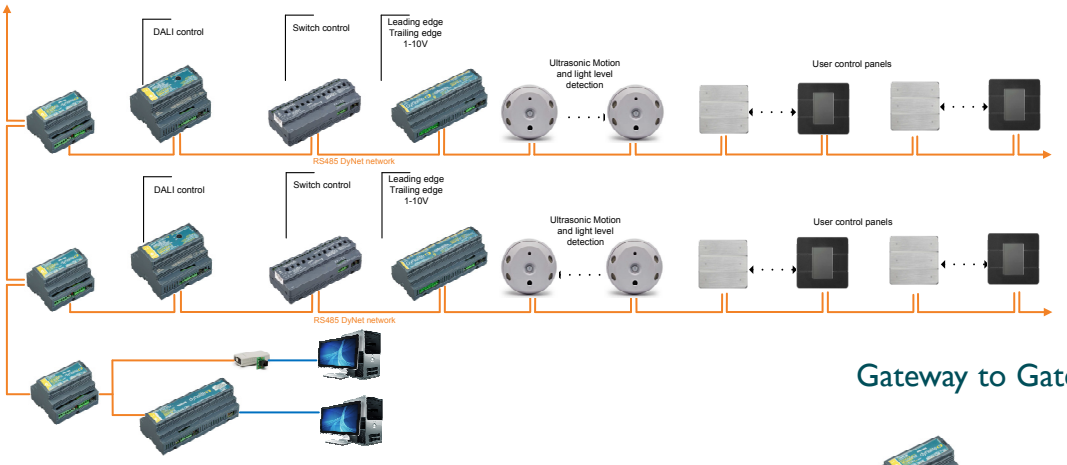
Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	12 VDC max, 375 mA from the DyNet network (port 1)
Control	Control Ports	Two RS-485 DyNet / DyNet II serial ports
	Serial Port Isolation	3.75 KV RMS optical isolation between ports
	User Controls	Service switch Diagnostic LED
	Internal Controls	Programmable Logic Controller - 64 tasks
	DMX512 Support	DMX512 Receive: 64 channels DMX512 Transmit: 64 channels
	Diagnostic Functions	Device Online/Offline status
Physical	Supply Terminals	Line, Neutral 1 x 4 mm² max conductor size Earth link bar provided
	Serial Port Terminals	Serial Port 1: SHLD, GND, D+, D-, +12 V 1 x 2.5 mm² max conductor size Serial Port 2: SHLD, GND, D+, D-, +12 V 1 x 2.5 mm² max conductor size 1 x RJ12 socket for plug in connection
	Dimensions (H x W x D)	95 mm x 105 mm x 75 mm (3.8" x 4.1" x 2.9")
	Packed Weight	0.25 kg
	Construction	Polycarbonate DIN-rail enclosure (6 unit)
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, RCM
Options & Ordering	Standard Product	DDNG485 (Philips 12NC - 913703081209)

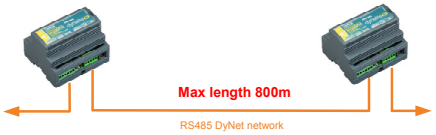
Electrical Diagram



Network Topology Example



Gateway to Gateway



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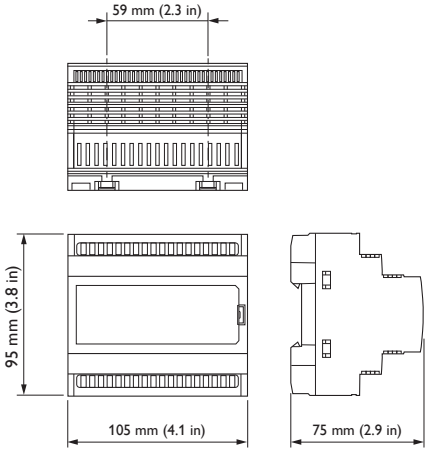
DDNI485 Passive Gateway

Cost-effective optical isolation

The Philips Dynalite DDNI485 is a passive network gateway designed to provide a cost-effective optical isolation solution.



- Electrical fault isolation — Two opto-isolated RS-485 ports enable the DDNI to implement network segmentation, electrically isolating each spur and containing network faults.
- Passive device — Does not require programming.
- Flexible mounting solution — DIN-rail mountable, designed to be installed into a distribution board or other electrical enclosure.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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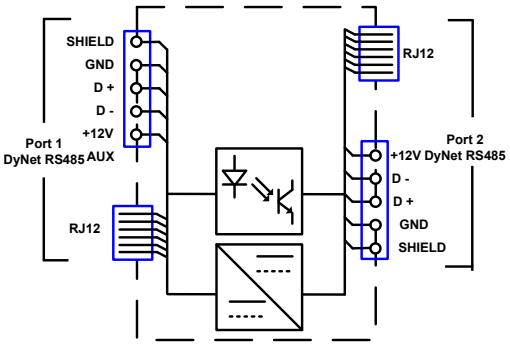
Specifications

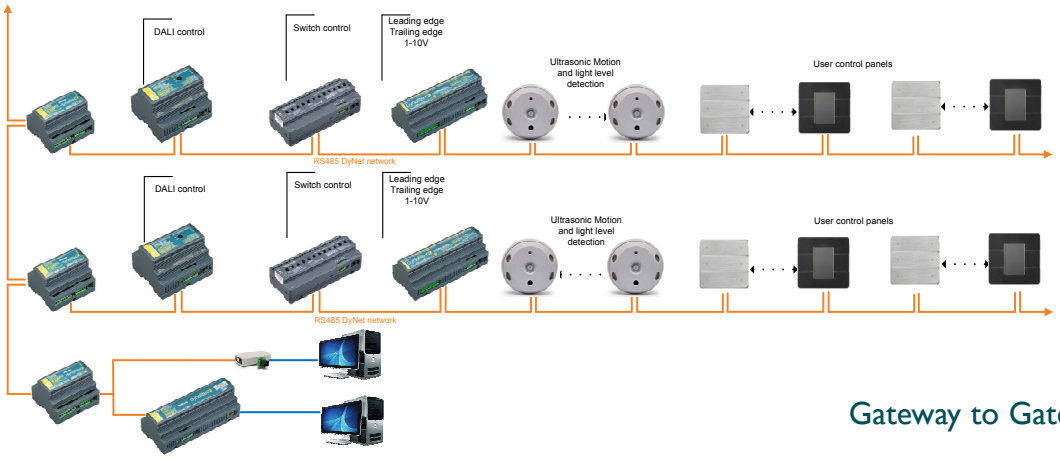
Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	12 V DC 30 mA from the DyNet network (port 1)
Control	Control Ports	Two RS-485 DyNet / DyNet II serial ports
	Serial Port Isolation	2.75 KV surge rated optical isolation between ports
Phyiscal	Serial Port Terminals	Serial Port 1: SHLD, GND, D+, D-, +12 V 1 x 2.5 mm² max conductor size Serial Port 2: SHLD, GND, D+, D-, +12 V 1 x 2.5 mm² max conductor size 1 x RJ12 socket for plug in connection
	Dimensions (H x W x D)	95 mm x 105 mm x 75 mm (3.8" x 4.1" x 2.9")
	Packed Weight	0.2 kg
	Construction	Polycarbonate DIN-rail enclosure (6 unit), IP20 rated
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDNI485 (Philips 12NC - 913703081309)

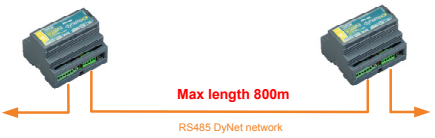
Electrical Diagram



Network Topology Example



Gateway to Gateway



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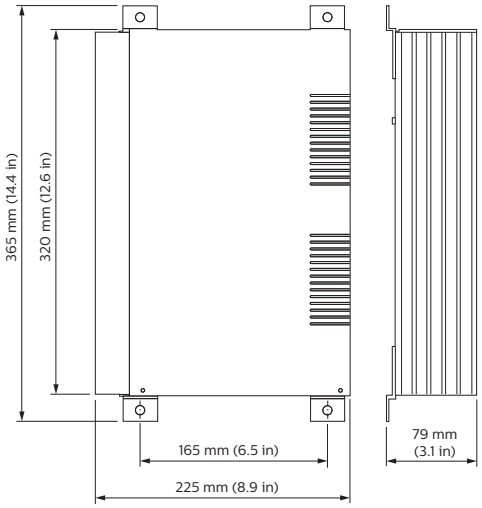
DNG485 RS-485 / DMX512 Gateway

Flexible network communications bridge

The Philips Dynalite DNG485 is a flexible network communications bridge designed for RS-485 networks. The two opto-isolated RS-485 ports enable the DNG485 to implement a trunk and spur topology on large project sites, with the bridge providing a high-speed backbone opto-coupled to many lower speed spurs.



- Electrical fault isolation — Faults can be isolated to individual network spurs.
- Increased network security — Definition of packet filtering rules for each direction provides augmented security and robustness.
- Route DyNet to third-party systems — Such as audio-visual and building automation systems, providing an integrated approach to total building control and energy management.
- DMX512 mode — Transmit or receive up to 64 channels of DMX512, with automatic DyNet conversion and task triggering.
- Internal controls — Including programmable logic controller capable of comprehensive conditional and sequential logic and arithmetic function processing, packet filtering and DyNet to DyNet II translation.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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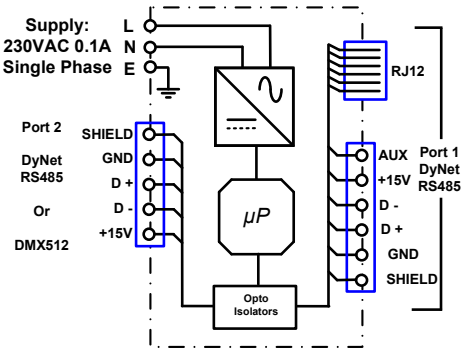
Specifications

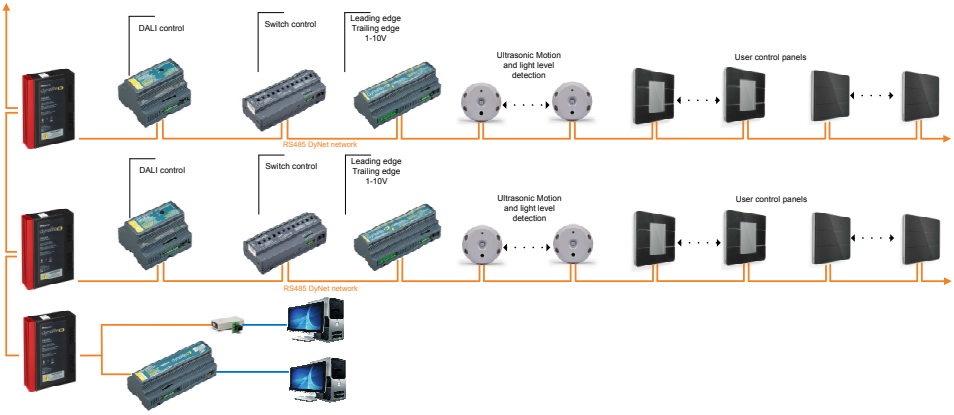
Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	230 VAC ±14% 50 / 60 Hz Single Phase @ 0.25 A
	DyNet DC Supply	Serial Port 1: 12 V @ 450 mA (supply for approx 20 user interfaces) Serial Port 2: 12 V @ 180 mA (supply for approx 9 user interfaces)
Control	Control Ports	Two RS-485 DyNet serial ports
	Serial Port Isolation	3.75 KV RMS optical isolation between ports
	User Controls	Service switch Diagnostic LED
	Internal Controls	Programmable Logic Controller Packet filtering DyNet to DyNet II translation
	DMX512 Support	DMX512 Receive: 64 channels DMX512 Transmit: 64 channels
	Diagnostic Functions	Device Online/Offline status
Physical	Supply Terminals	Line, Neutral 1 x 4 mm² max conductor size Earth link bar provided
	Serial Port Terminals	Serial Port 1: SHLD, GND, D+, D-, +12 V 1 x 2.5 mm² max conductor size Serial Port 2: SHLD, GND, D+, D-, +12 V 1 x 2.5 mm² max conductor size 1 x RJ12 socket for plug in connection
	Dimensions (H x W x D)	320 mm x 225 mm x 79 mm (12.6" x 8.9" x 3.1")
	Packed Weight	3.1 kg
	Construction	Alloy / Steel wall mount case with epoxy finish
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DNG485 (Philips 12NC - 913703082209)

Electrical Diagram



Network Topology Example



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DDNG-BACnet BACnet Network Gateway

High level BACnet network integration

The DDNG-BACnet gateway allows for high level integration between the Philips Dynalite system and any building management system (BMS) that uses the BACnet protocol.

- Direct control of lighting system — Permits direct control of the lighting system via the building's BMS network.
- Interrogation ability — Allows interrogation of any area within the network for feedback of current lighting status.
- A range of options — Provides solutions suitable for both small and large scale installations.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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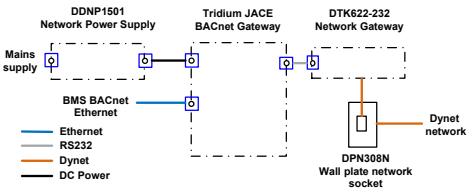
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	15 VDC @ 1 A from an external power supply (External Power Supply provided with the PACK version only)
Control	Control Ports	One RS-232 serial port One RS-485 serial port Two Ethernet BACnet ports
Physical	Serial Port Terminals	Port 1: RS-232 D9 connector male Port 2: Ethernet RJ45 socket. BACnet Ethernet Port 3: Ethernet RJ45 socket. Web server configuration
	Dimensions (H x W x D)	122 mm x 160 mm x 61 mm (4.82" x 6.31" x 2.44")
	Packed Weight	0.4 kg
	Construction	Polycarbonate DIN-rail enclosure (6 unit)
	Operating Conditions	Temperature: 0 to 60° C ambient Humdity: 0 to 90% non-condensing
	Storage & Transport	Storage temperature range: 0°-70°C Relative humidity range: 5% to 95%, non-condensing
Certification	Certification	CE, C-Tick, UL 916, FCC part 15 Class B

Item	Specification	Details
Options & Ordering	1000 address point interface	DDNG-BACnet-1000 (Philips 12NC - 913703001309)
	1000 address point interface & BACnet pack	DDNG-BACnet-1000-PACK (Philips 12NC - 913703003809)

Electrical Diagram



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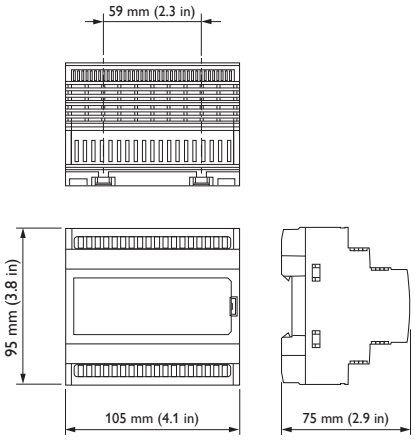
DDNG-KNX KNX Network Gateway

High level KNX integration

The DDNG-KNX allows for high level integration between the Philips Dynalite system and BMS using the KNX protocol.

- Directly trigger tasks — Use the building management system (BMS) to directly trigger tasks and time-based event functions.
- Status request — Interrogate the Philips Dynalite system to request current status information.
- User controls included — Including DyNet/KNX service switch and DyNet/KNX Diagnostic LED.



For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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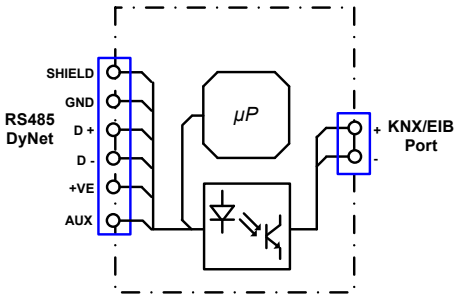
Item	Specification	Details
Electrical	Input Voltage	12 V DC @ 0.50 mA from the DyNet network, via Port 1
Control	Control Ports	One RS-485 DyNet/DyNet II serial port One KNX
	Serial Port Isolation	2.5 KV surge isolation between ports
	User Controls	Service switch - DyNet & KNX Diagnostic LED - DyNet & KNX
	Internal Controls	Programmable Logic Controller - 64 Tasks
	Diagnostic Functions	Device Online/Offline status
Physical	Serial Port Terminals	Port 1: DyNet SHLD, GND, D+, D-, +12 V, AUX 1 x 2.5 mm² max conductor size Serial Port 2: KNX KNX +, KNX - 1 x 2.5 mm² max conductor size plug
	Dimensions (H x W x D)	95 mm x 105 mm x 75 mm (3.8" x 4.1" x 2.9")
	Packed Weight	0.25 kg
	Construction	Polycarbonate DIN-rail case (6 unit)
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDNG-KNX (Philips 12NC - 913703080509)

Electrical Diagram



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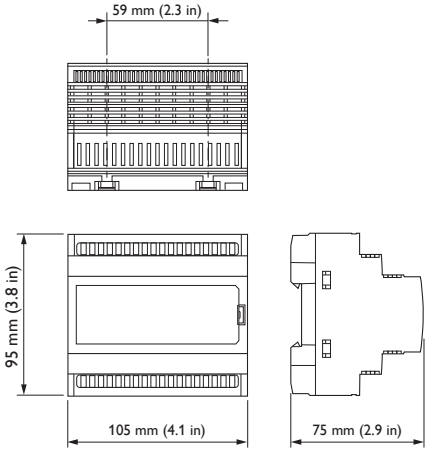
DDNI-LON LON Gateway

Single point LON interface

The Philips Dynalite DDNI-LON is designed to provide a LON single point interface to a Philips Dynalite control system. It is configured to operate on the LON network with Echelon Corporation's LonMaker.



- Based on Echelon Corporation's Neuron 3120 chip — Supports 63 SNVTs and will support preset control of 100 presets per area for 30 areas.
- Suitable for larger networks — Multiple DDNI-LON devices can be cascaded together to accommodate larger or more complex DyNet networks.
- User controls incorporated — Including DyNet Service Switch, DyNet Diagnostic LED, LON Service Switch and LON Diagnostic LED.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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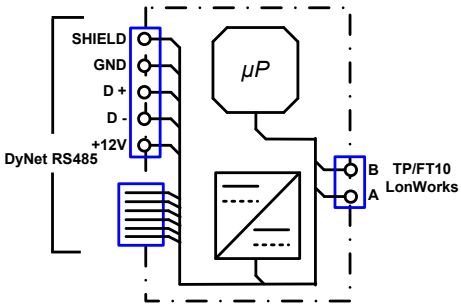
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	12 VDC @ 50 mA from the DyNet network
Control	Control Ports	One RS-485 DyNet serial port One TP/FTT 10 A twisted pair LonWorks port
	User Controls	DyNet Service Switch DyNet Diagnostic LED LON Service Switch LON Diagnostic LED
	Dimensions (H x W x D)	95 mm x 105 mm x 75 mm (3.8" x 4.1" x 2.9")
	Packed Weight	0.6 kg
	Construction	ABS DIN-rail enclosure (6 unit) Note: Chassis color may vary
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDNI-LON (Philips 12NC - 913703081409)

Electrical Diagram



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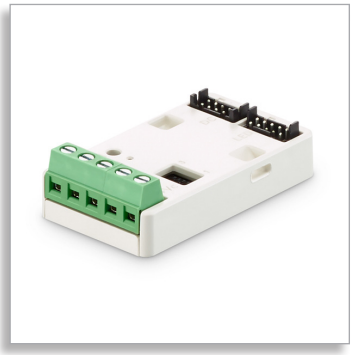
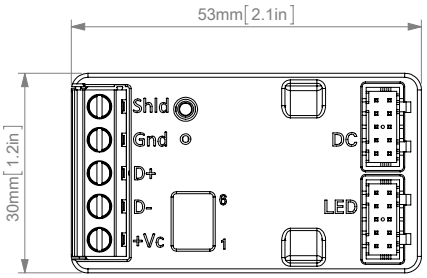
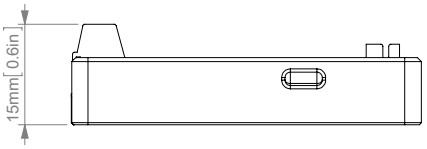


DLLI8I8O Dry Contact Interface

Eight-way dry contact interface

The DLLI8I8O is an eight-way dry contact interface with LED indicator outputs, that allows mechanical and electronic switches to communicate directly to the DyNet network.





- Compact size — allows installation in electrical wall boxes for easy integration with third-party user interfaces.
- Eight dry contact inputs — each dry contact trigger is individually programmable for a range of tasks.
- Eight indicator outputs — each output is individually programmable to drive an external LED indicator sharing a common cathode, communicating current system status or settings.
- Allows up to 20m cable runs — enables convenient connection to dry contact interfaces in multiple rooms.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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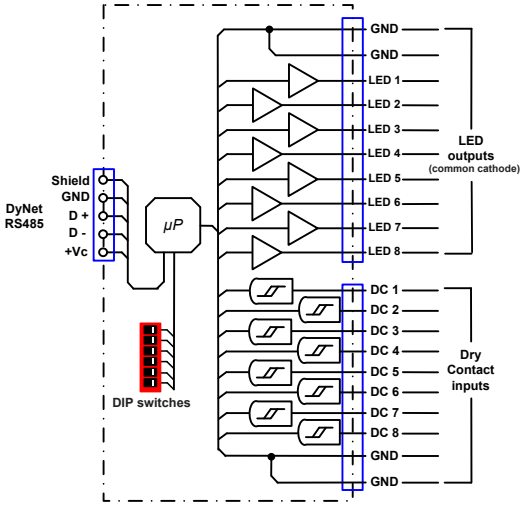
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	12-24 VDC @ 30 mA max
	LED Output Current	1.65 mA (typical) per LED channel
Control	Control Input/Output	One RS485 DyNet serial port
	Inputs	Eight dry contact inputs (open switch voltage: 12 V max., closed switch current: 0.4 mA max.) Network sign-on button
	Diagnostic Functions	Device Online / Offline status
Physical	Outputs	Eight LED indicator outputs
	Serial Port Terminal	SHIELD, GND, D+, D-, +V 1 x 1.5 mm² max conductor size
	Dimensions (H x W x D)	53 mm x 30 mm x 15 mm (2.1 " x 1.2" x 0.6")
	Packed Weight	50 g
	Construction	Plastic housing
	Operating Conditions	Temperature: 0 to 50° C ambient Humidity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	UL, CE, RCM, FCC, CSA, ICES-003
Options & Ordering	Standard Product	DLLI8I8O (Philips 12NC - 913703023009)

Electrical Diagram



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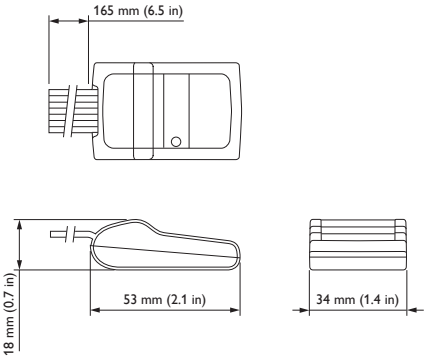
DPMI940-DALI Dry Contact Interface

Four-way dry contact DALI interface

The DPMI940-DALI is a four-channel input dry contact interface, designed to allow mechanical and electronic switches to interface directly with a DALI network and the Philips Dynalite system.



- Fully programmable — Each individual input is fully programmable by Envision software over the DALI network, allowing for multiple functions to be performed such as lighting scene select, room join or toggle lighting on/off.
- Powered from the DALI network — Eliminates the need for any additional network field wiring.
- Compact size — Inputs are presented on flyleads, making the device suitable for installation behind multi-gang switch grids.
- Simple dry contact interface — Can be used for low level integration to third-party systems such as security and air conditioning so that the lighting can be coordinated together with other services found within a project.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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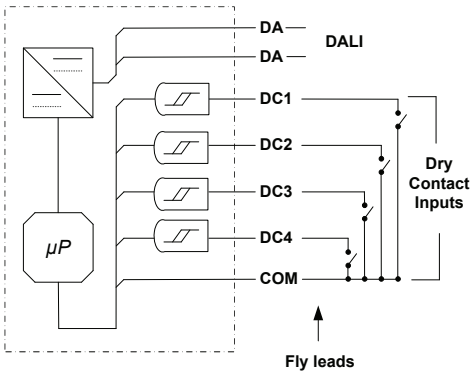
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	9.5 - 22.5 V @ 9 mA max supplied by the DALI network
Control	Control Input/Output	One DALI
	Inputs	Four Dry Contact inputs Max cable length <2 m
Physical	Dry Contact Flyleads	COM, SW1, SW2, SW3, SW4; flyleads 165 mm long with bootlace
	Dimensions (H x W x D)	Housing: 18 mm x 34 mm x 53 mm (0.7" x 1.4" x 2.1") Flyleads: 165 mm (6.5") long with bootlace
	Packed Weight	50 g
	Construction	ABS housing
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DPMI940-DALI (Philips 12NC - 913703080609)

Electrical Diagram



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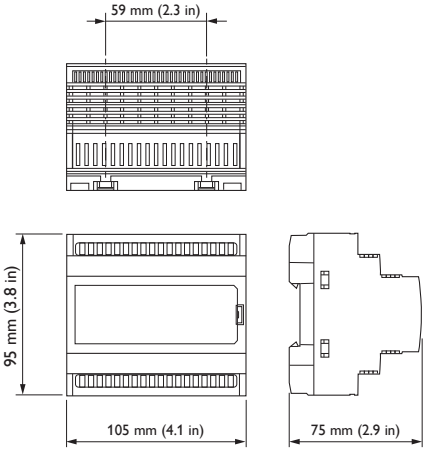
DDMIDC8 Low Level Input Integrator

Cost-effective input integration

The DDMIDC8 is designed to enable cost-effective input integration to the Philips Dynalite control system from third-party systems such as Security, HVAC and BMS.



- Eight digital inputs — Each can be individually configured as a dry contact or 0-24V AC/DC input.
- LED indicator on each input — Provides visual status indication.
- Optical isolation — All inputs isolated for high noise immunity.
- Four 0-5/0-10 V analogue inputs — Software selectable.
- Programmable Logic Controller — Processes comprehensive conditional and sequential logic and arithmetic functions.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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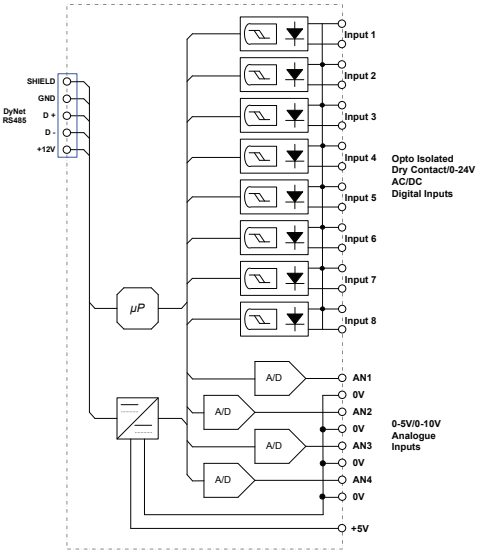
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	12 VDC supplied by the DyNet network 37 mA with all Dry Contacts open 68 mA with all Dry Contacts closed
Control	Digital Inputs	8 x opt-isolated inputs, each configurable to Dry Contact 0-24 V AC / DC (Safety Extra Low Voltage Only) Max cable length <50 m
	Digital Input Isolation	Optical isolation (2.5 kV surge rated)
	Analogue Inputs	4 x inputs, configurable to 0 - 5 V or 0 - 10 V (Safety Extra Low Voltage Only) Max cable length <50 m
	Analogue Input Impedance	20 K Ohm
	User Controls	LED status indicators for digital inputs
	Control Input/Output	One RS-485 DyNet serial port
	Internal Controls	Programmable Logic Controller
Physical	Digital Input Terminals	A, B for each input 1 x 2.5 mm² max conductor size
	Analogue Input Terminals	CH, GND for each input 1 x 2.5 mm² max conductor size
	Dimensions (H x W x D)	95 mm x 105 mm x 75 mm (3.8" x 4.1" x 2.9")
	Packed Weight	0.281 kg
	Construction	Polycarbonate DIN-rail enclosure (6 unit)
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDMIDC8 (Philips 12NC - 913703081109)

Electrical Diagram



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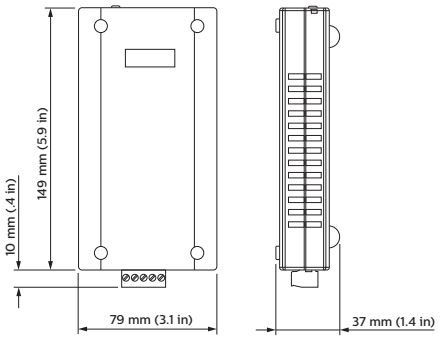
DIR-TX8 Infrared Transmitter

Cost-effective integration and control

The Philips Dynalite DIR-TX8 is designed to provide cost-effective integration and control of all types of infrared controllable devices, such as AV equipment.



- Easy set-up — User-friendly PC software is used to program the DIR-TX8 with common IR codes from the supplied library.
- Macro functionality — Multiple IR codes can be arranged into macros and played back at any time with a single DyNet command.
- Intelligent operation — The device includes an internal Programmable Logic Controller and supports all Philips Dynalite script commands.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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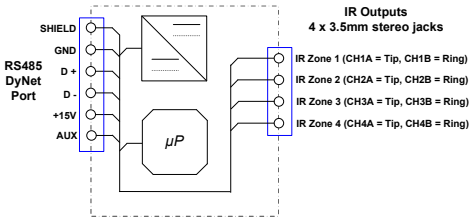
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	12 VDC @ 50 mA supplied by the DyNet network
Control	IR Transmit Outputs	8 x independent, individually controllable outputs Connector type is 4 x 3.5 mm stereo jacks which accept stereo and mono plugs
	Control Inputs	One RS-485 DyNet serial port One AUX programmable dry contact input
	Internal Controls	Programmable Logic Controller
	User Controls	Service Switch Diagnostic LED
Physical	Dimensions (H x W x D)	37 mm x 79 mm x 149 mm (1.4" x 3.1" x 5.9")
	Packed Weight	0.15 kg
	Construction	ABS housing
	Operating Conditions	Temperature: 0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product Optional Emitter	DIR-TX8 (Philips 12NC - 913703080009) DIR-TX-EM2 (Philips 12NC - 913703080109) - includes 2 separately controllable IR Emitter LEDs, 2 meter lead length, terminates in 3.5 mm stereo plug, adhesive mounting pads supplied

Electrical Diagram



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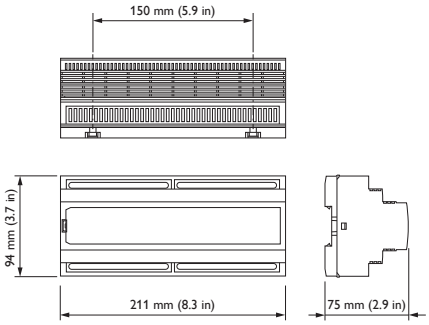
DDFCUC010 Fan Coil Unit Controller

Direct connection to air conditioning systems

The Philips Dynalite DDFCUC010 is a fan coil unit controller designed for direct connection to components commonly found in air conditioning systems.



- 0-10 V outputs — Provided for controlling hot and cold water valves.
- Relay outputs — Provided for driving fan motors.
- High capacitance relay — Provided for use with electrical heaters.
- Inputs for resistive temperature sensors — Allows the device to use data from a networked temperature sensor, such as an Antumbra user interface.
- Programmable auxiliary inputs — Provided for use with peripheral devices including smoke detectors, motion detectors, window open/close sensors, airflow detectors, drip trays, dirty air filters and hot water on cold valve.
- Networkable — Can be networked with other equipment including Philips Dynalite user interfaces, via an on-board RS-485 DyNet port.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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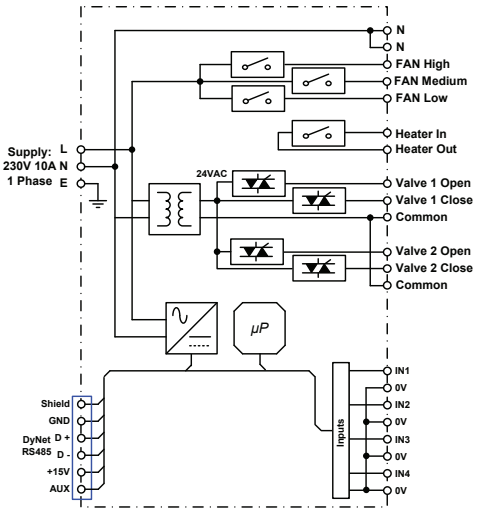
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	230 V ± 14% 50 / 60 Hz single phase @ 10 A
	DyNet DC Supply	120 mA
Control	Outputs	Two 0 - 10 V outputs for floating hold/cold water valve max 10 mA Two 24 VAC supply for valve actuator coils, 4 VA max One 230 VAC 10 A 3 way selectable relay outputs for high/ medium/low fan control One 230 VAC 16 A relay for electrical heater
	Temperature Sensor Input	20 K NTC (networked temperature sensors also supported)
	Dry Contact Inputs	Three programmable for devices including; window sensor, drip tray, dirty air filter, motion detector, hot water on cold valve, smoke detector Max cable length <20 m
	Control Inputs	One RS-48 DyNet serial port
	User Controls	Service Switch Diagnostic LED
Physical	Supply Terminals	Line, Neutral, Earth 1 x 4 mm² conductor size
	Output Terminals	Hot water valve: 24 VAC, 0-10V, GND, 1 x 5 mm² conductor size Cold water valve: 24 VAC, 0-10V, GND, 1 x 5 mm² conductor size Fan: Neutral, Low, Medium, High, 1 x 5 mm² conductor size
	Dimensions (H x W x D)	94 mm x 211 mm x 75 mm (3.7" x 8.3" x 2.9")
	Packed Weight	0.8 kg
	Construction	Polycarbonate DIN-rail enclosure (12 unit)
	Operating Conditions	Temperature: 0 to 40° C ambient Humdity: 0 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDFCUC010 (Philips 12NC - 913703081909)

Electrical Diagram



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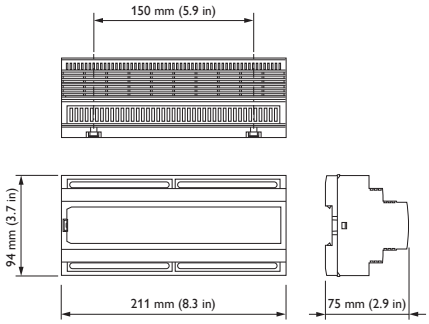
DDFCUC024 Fan Coil Unit Controller

Direct connection to air conditioning systems

The Philips Dynalite DDFCUC024 is a fan coil unit controller designed for direct connection to components commonly found in air conditioning systems. Triac outputs are provided for controlling hot and cold water valves, relay outputs are provided for driving fan motors and a high capacity relay output is available for electrical heaters.



- 0-24 V outputs — Provided for controlling hot and cold water valves.
- Relay outputs — Provided for driving fan motors.
- High capacitance relay — Provided for use with electrical heaters.
- Inputs for resistive temperature sensors — Allows the device to use data from a networked temperature sensor, such as an Antumbra user interface.
- Programmable auxiliary inputs — Provided for use with peripheral devices including smoke detectors, motion detectors, window open/close sensors, airflow detectors, drip trays, dirty air filters and hot water on cold valve.
- Networkable — Can be networked with other equipment including Philips Dynalite user interfaces, via an on-board RS-485 DyNet port.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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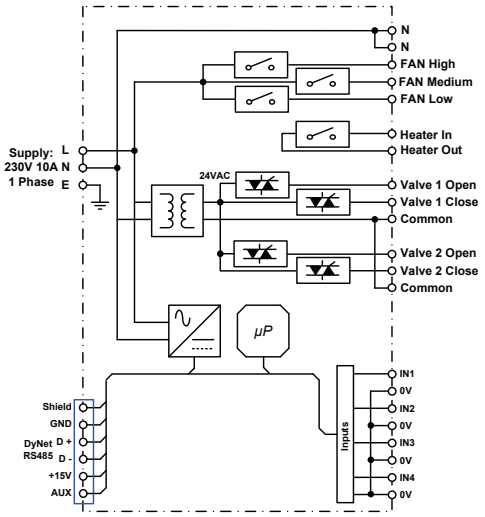
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	230 V ± 14% 50 / 60 Hz single phase @ 10 A
	DyNet DC Supply	12 V @ 120 mA
Control	Outputs	1 x dual triac 24 VAC output for open/close or floating hot water valve 1 x dual triac 24 VAC output for open/close or floating cold water valve (Combined load from hot and chilled water valve outputs must not exceed 4 VA max) 3 x 230 VAC relay outputs for high/med/low fan control
	Temperature Sensor Input	20 K NTC (networked temp sensors also supported)
	Dry Contact Inputs	Three programmable for devices including; window sensor, motion detector, airflow detector Max cable length <20 m
	Control Inputs	One RS-48 DyNet serial port
	User Controls	Service Switch Diagnostic LED
Physical	Supply Terminals	Line, Neutral, Earth 1 x 5 mm² conductor size
	Output Terminals	Hot water valve: common, open, close 1 x 5 mm² conductor size Cold water valve: common, open, close 1 x 5 mm² conductor size Fan: Neutral, Low, Medium, High, 1 x 5 mm² conductor size
	Dimensions (H x W x D)	94 mm x 211 mm x 75 mm (3.7" x 8.3" x 2.9")
	Packed Weight	0.8 kg
	Construction	Polycarbonate DIN-rail enclosure (12 unit)
	Operating Conditions	Temperature: 0 to 40° C ambient Humdity: 0 to 90% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDFCUC024 (Philips 12NC - 913703081009)

Electrical Diagram



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The Scarlet Hotel
Cornwall, UK

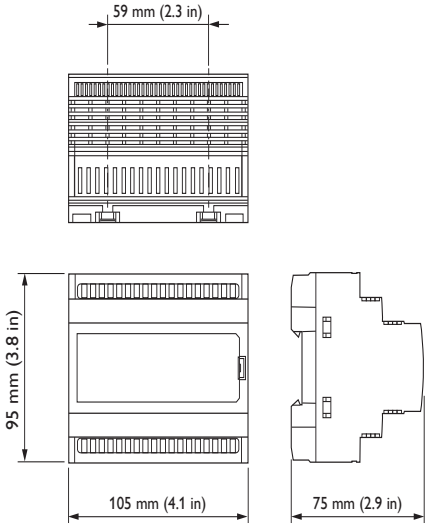
Network Devices and Commissioning

DDNP1501 Network Power Supply

Supplements DyNet network DC supply

The Philips Dynalite DDNP1501 is a 15 V DC 1.5 A regulated power supply designed to supplement the DyNet network DC supply.

- No manual selector setting requirement — The switchmode design allows the device to be used with a range of input voltages.
- Used when high supply devices are employed — The DyNet network is self-powered via built-in DC supplies integrated within all mains powered devices. Use of high supply devices, such as edge-lit touchscreens, can necessitate a requirement for additional power.
- Flexible mounting solution — A DIN-rail mountable device, with a circuit breaker profile designed to be installed into all types of distribution board enclosures, including those with cover apertures specifically designed for circuit breakers.



For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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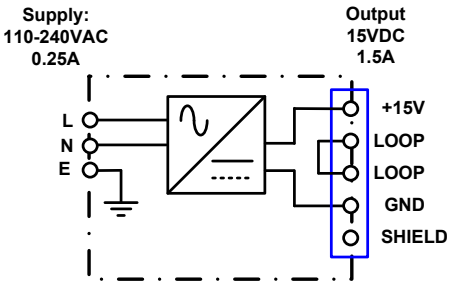
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Electrical	Input Voltage	110-240 VAC 50 / 60 Hz Single Phase @ 0.25 A
	Output	15 V DC @ 1.5 A (@ 230 V supply) 15 V DC @ 1.0 A (@ 110 V supply)
	Electrical Design	Switchmode
	Protection	Self resetting overload protection Short circuit proof Automatic thermal shutdown
Physical	Supply Terminals	Line, Neutral, Earth 1 x 2.5 mm² max conductor size
	Output Terminals	GND, GND, + 15 V, + 15 V 1 x 2.5 mm² max conductor size
	Dimensions (H x W x D)	95 mm x 105 mm x 75 mm (3.8" x 4.1" x 2.9")
	Packed Weight	0.2 kg
	Construction	Polycarbonate DIN-rail enclosure (6 unit)
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DDNP1501 (Philips 12NC - 913703090309)

Electrical Diagram



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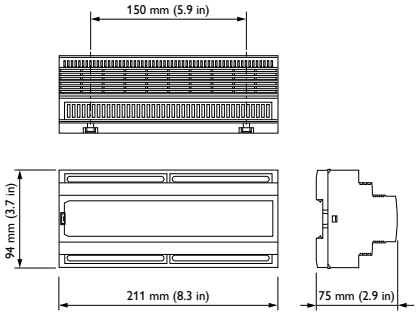
DDPB22RJ12 Network Junction Box

Providing installers with flexible networking options onsite

The Philips Dynalite DDPB22RJ12 facilitates termination of 22 DyNet flat cables in one location. Flat data cable is specifically designed for high reliability localized network wiring as found in residential applications.



- Acts as a junction box — Provides flexible networking options.
- Facilitates faster installation — The device takes advantage of the RJ12 connection system, allowing for a quick install and simple implementation of a star network topology.
- Complements DyNet flat cable — Cable is available in 200 m roll or pre-terminated leads of 3, 5 or 10 m.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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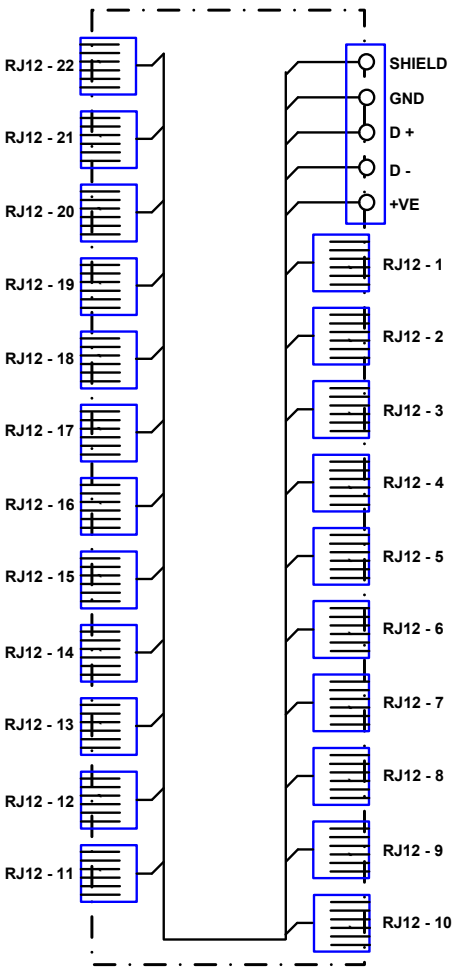
Specifications

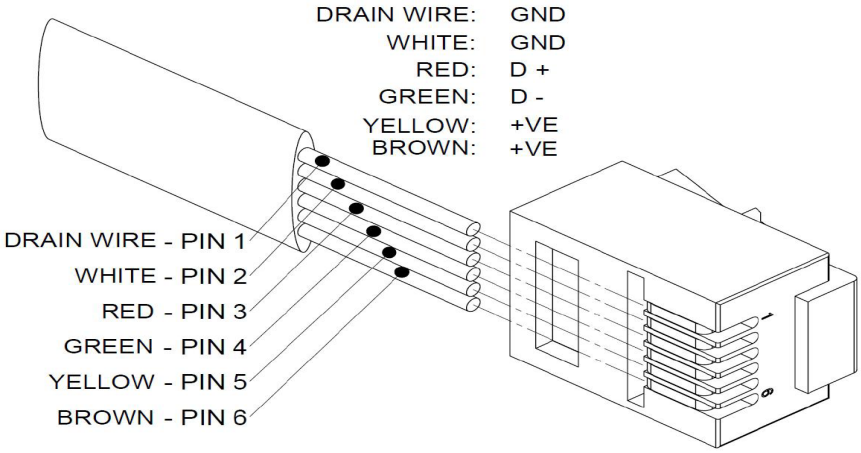
Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Controls	User Controls	Internal Diagnostic LED for network connection
Physical	Connectors	1 x 5 way screw terminal 22 x RJ12 sockets
	Dimensions (H x W x D)	94 mm x 211 mm x 75 mm (3.7" x 8.3" x 2.9")
	Packed Weight	0.94 kg
	Construction	Polycarbonate DIN-rail enclosure (12 unit)
	Operating Conditions	Temperature: -0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
12NC ordering codes	Standard Product	DDPB22RJ12 (Philips 12NC 913703097809)

Electrical Diagram



RJ12 6 Pole Wiring



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DyNet-SFLAT6-CABLE

Cable roll and cable kits for faster installation

Flat data cable is specifically designed for high reliability localized network wiring as found in residential applications. In addition to a conductor pair for data, conductors are provided to supply DC power to network powered peripherals.

- Overall shield for maximum data integrity — The data cable is flexible and all conductors are stranded.
- Fast termination — Designed for rapid crimp termination into RJ12 plugs for use with Philips Dynalite products supporting RJ12 sockets.
- Supply options — Available in 200 m rolls or in pre-terminated leads of 3, 5 and 10 m lengths.
- Utilize DDPB22RJ12 network junction box for faster installation — Facilitates termination of 22 DyNet flat cables in one location.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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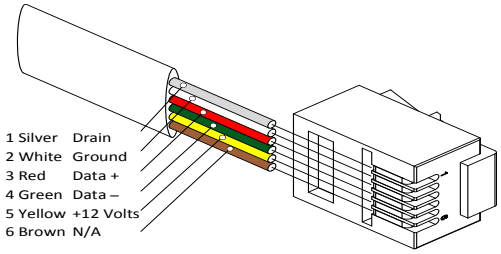
Specifications

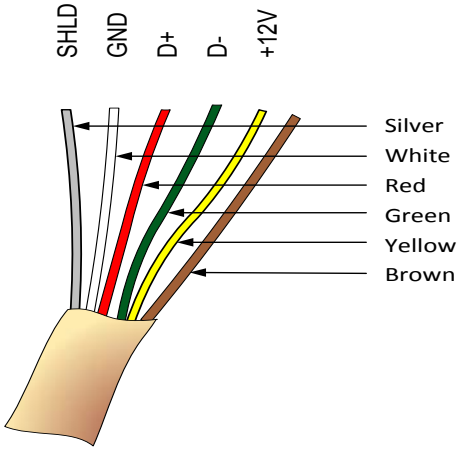
Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Specifications	Conductors	5 x 26 AWG 12/0.12 mm
	Shield	Drain: Copper foil wrapped 24 AWG 9/0.12 mm Shield: Aluminium / polyester tape
	Conductor Colors	Shield: Silver 1: White 2: Red 3: Green 4: Yellow 5: Black
	Mechanical Characteristics	Outer jacket construction: PVC Cross section dimensions: 2.65 mm x 6.95 mm Outer jacket color: Orange
	Electrical Properties	Conductor DC loop resistance: Max 240 Ω / km Drain DC resistance: Max 40 Ω / km
Physical	Operating Conditions	Installation: 0 to 50° C ambient Operation: -20 to 50° C ambient
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
	Packaging	DYNET-SFLAT6-CABLE - Roll length: 200 m. Weight: 8 kg
12NC ordering codes	Flat network cable codes	200 m roll: DYNET-SFLAT6-CABLE (913703095009) 10 m lead: DYNET-SFLAT6-CABLE-10M (9137030411 09) 05 m lead: DYNET-SFLAT6-CABLE-5M (913703041209) 03 m lead: DYNET-SLFAT6-CABLE-3M (913703041309)

RJ12 6 Pole Wiring



Network Wiring



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DyNet-STP-CABLE-LSZH

100MHz 100Ω STP 4 pair CAT5E

DyNet data cable is specifically designed for high reliability RS-485 network wiring. In addition to a twisted pair for RS-485 data, conductors are provided to supply DC power to network powered peripherals.

- Overall shield for maximum data integrity — The data cable is flexible and all conductors are stranded.
- Fast termination — Designed for robust termination into pressure-plate style terminals.
- Extra thick outer jacket — Mains rated for use in distribution boards.
- Supplied in 305 meter roll.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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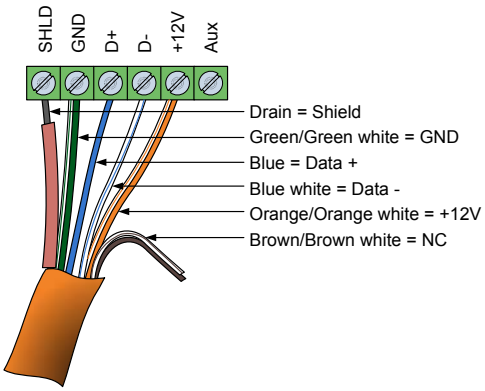
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Specifications	Conductors	4 twisted pairs and shield Construction: Stranded Bare Copper 7 x Ø 0.2 mm (24 AWG) Insulation: Polyethylene HDPE Ø 1.00 ± 0.02 mm
	Pair Identification	PAIR 1: blue/white-blue PAIR 2: orange/white-orange PAIR 3: green/white-green PAIR 4: brown/white-brown
	Shielding	Aluminium/Mylar tape, 100% coverage Draw Wire: Tinned Copper Ø 7 X 0.2 mm (24 AWG)
	Mechanical Characteristics	Outer jacket construction: LSZH Thickness 0.54 ± 0.05 mm Ø 6.2 ± 0.30 mm Outer jacket color: Orange Maximum cable bending radius installed: 8 times outer cable diameter Maximum tensile load - Installation: 100 N Maximum tensile load - Installed: no stretch
	Electrical Properties	Characteristic Impedance: 100 ± 5Ω @ 100 MHz Conductor DC loop resistance: Max 190 Ω / km DC resistance imbalance: Max 2.5% Dielectric strength between pairs: 1 KV RMS / minute Dielectric strength conductors to screen: 2.5 KV RMS / min Capacitance: 56 p F/m Capacitance Imbalance: Max 3.3 p F/M Velocity of Propagation: < 620 nsec / 100 m @ 100 MHzΩ Outer jacket voltage rating: 600 V RMS
Physical	Operating Conditions	Installation: -20 to 70° C ambient Humidity: 0 to 90% non-condensing
	Storage & Transport	Temperature: -20 to 70° C ambient Humidity: 0 to 90% non-condensing
	Packaging	Cable Length: 305 meters Carton: H 425 mm x W 212 mm x D 425 mm (H 16.7" x W 8.3" x D 16.7") Weight: 15.0 kg
Certification	Standards Compliance	CE, RoHS, ACA Approval (N1756) TIA/EIA-568B.2 Category 5E ISO/IEC 11801
Options & Ordering	DyNet Data Cable	DYNET-STP-CABLE-LSZH (Philips 12NC 913703041409)

Network Wiring



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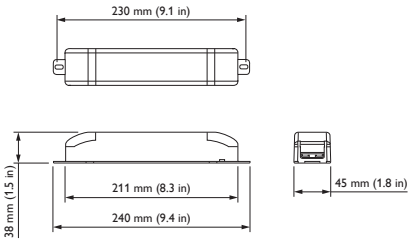
DMAL120F Active Load

Improve dimming performance and reduce lamp flicker

The Philips Dynalite DMAL120F active load device provides correct load conditions for leading edge dimmers, delivering improved dimming performance and reduced lamp flicker in LED and CFL light sources. It achieves this by connecting across the Line and Neutral wires at any point along a lighting circuit.



- Reduces capital outlay — Allows continued use of leading edge dimming methodology when lamps have been updated to more efficient LED and CFL technologies.
- Equally suitable for trailing edge dimming — Delivers a better dimming range on LED and CFL lightsources.
- Compact design — Enables the unit to be mounted directly within the same enclosure as the load controller, or in the field with LED & CFL lamps.
- Note — This device is not suitable for elimination of LED flicker resulting from mains supply instability.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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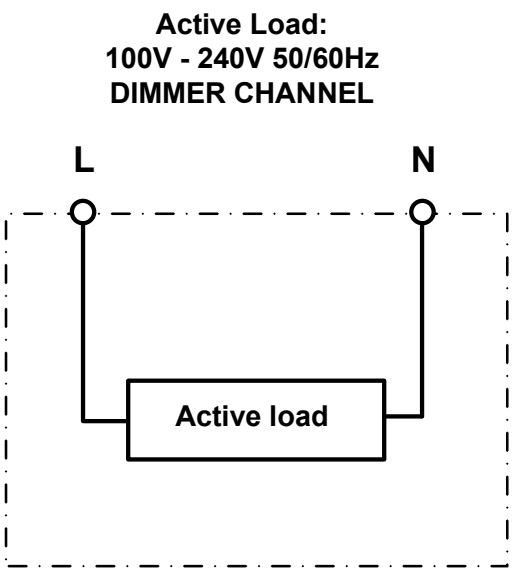
Item	Specification	Details
Electrical	Input Voltage	110-240 VAC 50 / 6 W max Leading or Trailing Edge
Physical	Connection	Line, Neutral 45 cm fly leads 2 x 1.5 mm² cable double insulated mains rated
	Dimensions (L x W x D)	240 mm x 45 mm x 38 mm (9.4" x 1.8" x 1.5")
	Packed Weight	0.16 kg
	Construction	ABS plastic
	Operating Conditions	Temperature: 0 to 60° C ambient Humdity: 0 to 90% non-condensing
	Storage & Transport	Temperature: 0 to 70° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DMAL120F (Philips 12NC - 913703061409)

Electrical Diagram



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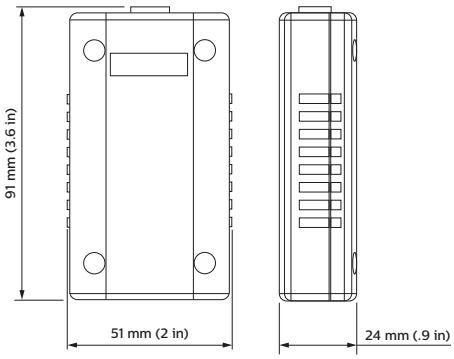
DTK622 Network Gateway

Passive network integration

The DTK622 is a network gateway that provides passive integration to a PC or RS232 system.



- Available in two formats — With either RS232 or USB connector.
- DTK622-232 provides full duplex integration to RS232 — Useful for linking the Philips Dynalite system with an AV or air conditioning system that supports RS232 communications.
- A DTK622-USB-J provides a useful interface between any PC and the Philips Dynalite system — Complete access to all network messages present on DyNet. To be used in conjunction with any of the Philips Dynalite software, this tool can be used to commission, diagnose/repair with EnvisionProject or used as a permanent gateway to the system for EnvisionManager head-end software.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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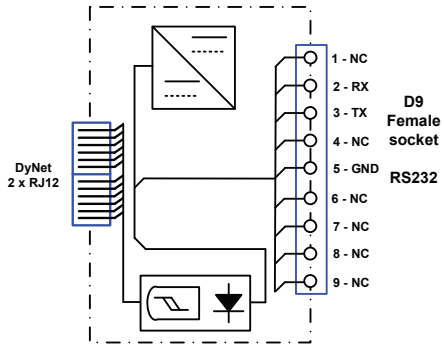
Specifications

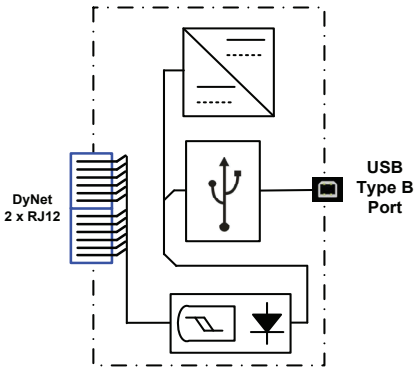
Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Physical	Connectors	**DTK622-232** 1 x D9 Female socket (RS232) 2 x RJ12 sockets (DyNet RS-485) **DTK622-USB-J** 1 x USB type B connector 2 x RJ12 sockets (DyNet RS-485)
	Dimensions (H x W x D)	24 mm x 51 mm x 91 mm (0.9" x 2.0" x 3.6")
	Packed Weight	0.94 kg
	Construction	ABS enclosure
	Operating Conditions	Temperature: 0 to 40° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	RS232 Version	DTK622-RS232 (Philips 12NC - 913703090109). Supplied with: One RS232 cable male to female connector, one RJ12 cable, one dingus
	USB Version	DTK622-USB-J (Philips 12NC - 913703090209). Supplied with: One USB cable (type A to type B), one RJ12 cable, one dingus

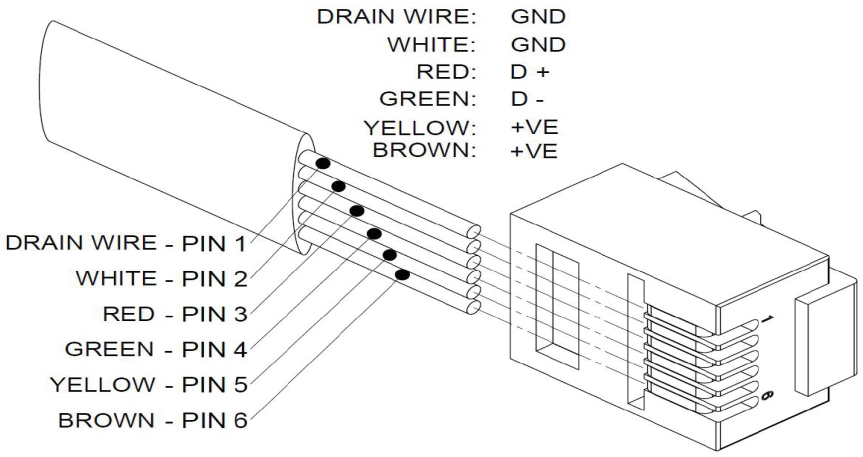
Electrical Diagram - DTK622-RS232



Electrical Diagram - DTK622-USB-J



RJ12 6 Pole Wiring



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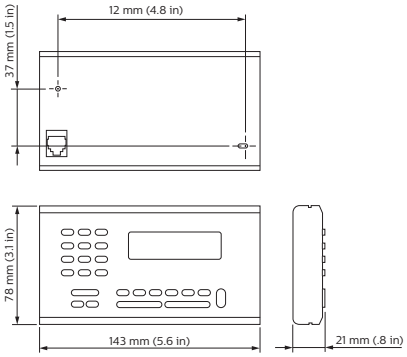
DPP601 Portable Programmer

Program system changes without the need for a PC

The Philips Dynalite DPP601 is a portable, hand-held programmer designed for making programming changes to a DyNet system without the use of a computer, from any point on the network.



- LCD Display — Guides the user step-by-step through each programming task.
- Automatic upload — Channel, area and preset scene names are auomatically uploaded from the network to assist in programming.
- Faster programming — The DPP601 can copy individual channel level information and preset scene values to reduce set-up time.
- Can be used in conjuction with standard control user interfaces — To access preset scenes not commonly used, or that require protection from accidental selection.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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Item	Specification	Details
	Input Voltage	12 VDC 50 mA from the DyNet network
	Control Inputs/Outputs	One RS-45 DyNet serial port via an RJ12 socket
	Network Connection Method	RJ11 < > RJ11 patchlead (5 m patchlead supplied)
	User Controls	1 x 110 x 33 pixel rear lit LCD display 1 x 12 button LCD transport keys 1 x 12 button numeric keypad
Physical	Clock	Battery back-up 64 tasks
	Memory	All data stored in 100 year life EEPROM
	Dimensions (H x W x D)	78 mm x 143 mm x 21 mm (3.1" x 5.6" x 0.8")
	Packed Weight	0.427 kg
	Construction	Powdercoat pressed metal body
	Operating Conditions	Temperature: -0 to 50° C ambient Humdity: 0 to 95% non-condensing
	Storage & Transport	Temperature: -25 to 60° C ambient Humidity: 0 to 90% non-condensing
Certification	Certification	CE, C-Tick
Options & Ordering	Standard Product	DPP601 (Philips 12NC - 913703090409)

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Rijksmuseum
Amsterdam, The Netherlands

Software and Apps

EnvisionManager System Software

System control, monitoring and management

EnvisionManager is a multi-user control system management and monitoring software tool. It provides users with full visibility of the lighting and energy management system status and performance, while enabling simple local or global system adjustments.

- Complete control — Initiate system changes, from a single lamp to the lighting state of an entire multi-story building, with a single mouse click.
- Simple scheduling — Intuitive tools enable the user to schedule and manage events such as 'office space to day mode' or 'car parks to after-hours security mode' with ease.
- Easy integration — Integration tools allow the user to manage more than just lighting. HVAC, motorized window shades and other systems are accessible through EnvisionManager.
- Manage routine maintenance — Full support of maintenance functions means that routine tasks can be undertaken without the involvement of a system specialist. Faults are automatically flagged for attention, ensuring that the facility continues to function and operational downtime is minimized.
- Strike the balance — Alternate energy management schemes can be initiated automatically or manually, as required. This allows Facility Managers to balance energy efficiency with the needs of the occupants and can be initiated on either a tenancy or building-wide basis.
- Identify energy-saving initiatives based on current use — EnvisionDashboard presents live data as simple visual displays. It mines raw data for analysis, to both establish a benchmark for future improvements and pinpoint exactly where energy is being used.
- Tailored control of individual light fittings — The optional EnvisionSwitch client resides in the task bar of a user's computer and allows task lighting to be tailored to the user's individual preferences. Linking back to the lighting control system ensures lights are not left on unnecessarily.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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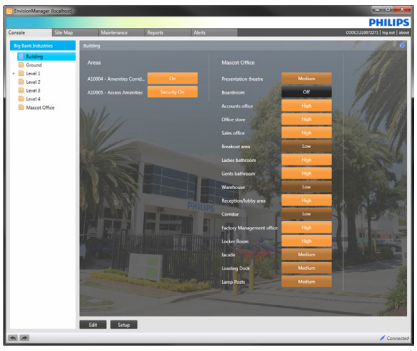
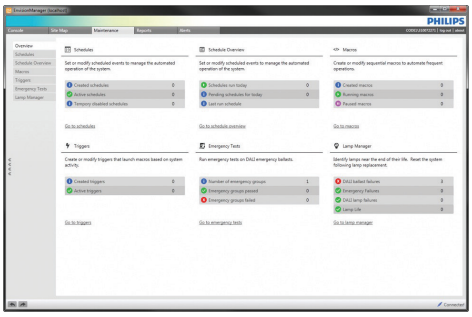
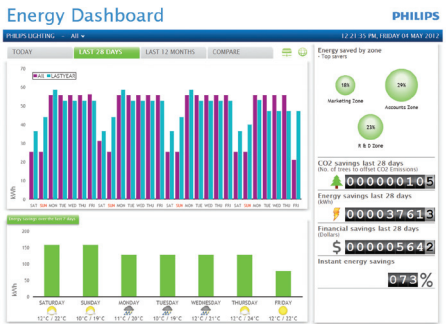
Item	Specification	Details
Interface	LAN Interface	Ethernet - TCP/IP
	DyNet Interface	One serial interface, via USB or RS-232 port
Hardware	Server Hardware Requirements*	Hardware Platform: PC Operating System: Windows 7 SP1/Windows 8/Windows 2008 R2 Server Processor: Intel Xeon @ 3.33 GHz (Xeon 3000 series better with 4 cores) Hard Disk: 300 GB (10 GB min requirement for application) System Memory: 12 GB Serial Ports: One free RS-232 or USB port Network: Ethernet network card 1 x Philips Dynalite PC Node adaptor We recommend powering the PC from an uninterruptable power supply (UPS) *Note: Minimum requirements will vary depending on the size of the site and the number of simultaneously connected clients.
	Client Machine Minimum Requirements for EnvisionManager	Hardware Platform: PC Operating System: Windows 7 SP1 and Windows 8 Processor: I Inter Core i5 / i7 @ 2.30 GHz Hard Disk: 10 GB min requirement for application System Memory: 4 GB Network: Ethernet network card
	Client Machine Minimum Requirements for EnvisionSwitch	Hardware Platform: PC Operating System: Windows 7 SP1
Options	Optional Client	EnvisionDashboard EnvisionSwitch
	Optional BMS Interfaces	OPC Interface
Security	Client Security	Integrates with and uses Windows Domain Security Groups and Users. Rights configurable on a User and Group basis.
Options & Ordering	Standard Product	ENVISIONMANAGER (Philips 12 NC - SW913703089909) Installer download from Philips Dynalite Distributor site on 30 day trial licence.

Interface







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EnvisionProject Commissioning Software

Fast and efficient lighting control system set-up

Designed with the system installer and integrator in mind, EnvisionProject is the latest rapid commissioning platform from Philips Dynalite. This user-friendly and intuitive application sets a new benchmark for fast and efficient lighting control system set-up and commissioning.

- New and improved set-up templates — Provides a simple and intuitive interface for access to advanced system functionality, allowing flexibility to modify, customize or create specific tasks if required.
- Faster commissioning times — Includes a series of common device settings based on typical lighting control scenarios. Tailor to your project, save and replicate across other sites as required.
- Virtual panel — Control any area of the system directly, run sequences and test final operations.
- Complex functionality made simple — Manage logical grouping of lamps and other system hardware elements using simple graphical representations.
- Maintenance made easy — Print out project floor plans with fixture details, including DALI addresses, to facilitate maintenance planning.
- Live data details — The status of each lamp is visually represented using icons, which change color to reflect current lighting levels.
- Monitor the whole system — Inbuilt network monitor details and logs all Philips Dynalite network traffic, as well as DALI network traffic.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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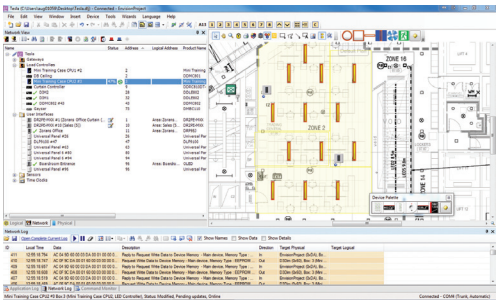
Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Software	Operating System	Windows 2000 Windows XP Windows Vista Windows 7 Windows 8.1
	Microsoft.NET	Version 4.0 or above (earlier versions may be compatible)
Hardware	Computer	PC or Mac with Windows emulator
	Processor	Intel (or compatible) 1 Ghz +
	RAM	1 Gb +
	HDD (Hard Disk Drive)	5 Gb +
	Monitor / Display	Minimum resolution 1024 x 768 pixels
	Note	These requirements apply to commissioning small projects. Larger projects may require improved hardware specification.

Interface



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EnvisionTouch Self-configuring mobile app

Intuitive and effortless control

EnvisionTouch provides intelligent system control via an iOS or Android hand-held device. Suited to both residential and commercial control applications, multiple integrated systems can be easily controlled with single preset scenarios such as 'Welcome Home' or 'After Hours'.

- Self-configuring application — Standardized templates and functionality reduce commissioning and installation time.
- Effortless control — Users can view current system status and make adjustments to lighting, HVAC, blinds and other equipment connected to the Philips Dynalite control network.
- Control individual lighting channels — Adjust standard light sources via sliders, with an option to control warm-white / cool-white fixtures and RGB color settings.
- Single-click control — Recall predefined user preferences for lighting, blinds, heating and entertainment systems
- Available for iOS 7.0+ and Android 2.1+ — iPhone, iPad, iPad Mini, iPod Touch and a range of Android phones and tablet devices.
- Simple Ethernet connection — Requires a Philips Dynalite EnvisionGatweway or 100BT bridge and a WiFi router to connect to the Philips Dynalite system

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

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Item	Specification	Details
Compatibility	Compatible Devices	iPhone, iPad, iPad Mini, iPod Touch - requires iOS 7.0 or later Android devices - 2.1 or later
Download Information	File Size	iOS - 2.1 Mb Android - 11 Mb
Options & Ordering	Standard Product	Available free of charge from iTunes and GooglePlay

Interface

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DynamicTouch Customizable mobile app

Intuitive and effortless control

DynamicTouch provides intelligent system control, via an iOS hand-held device. Suited to both residential and commercial control applications, multiple integrated systems can be easily controlled with single preset scenarios such as 'Welcome Home' or 'After Hours'. It is fully customizable, providing the user with the ability to fine-tune both the system and the appearance of the interface itself.

- Fully customizable — The page layout and graphical design of this app can be customized by the installer to meet the exact requirements of the end-user. It is the ideal choice in applications such as boardrooms, where high levels of control are required for multiple systems through a single app.
- Effortless control — Users can view current system status and make adjustments to lighting, HVAC, blinds and other equipment connected to the Philips Dynalite control network.
- Control individual lighting channels — Adjust standard light sources via sliders, with an option to control warm-white / cool-white fixtures and RGB color settings.
- Single-click control — Recall predefined user preferences including lighting, blinds, heating and entertainment systems
- Available for Apple iOS 5.0+ devices only — iPhone, iPad, iPad Mini and iPod Touch.
- Simple Ethernet connection — Requires a Philips Dynalite EnvisionGateway and a WiFi router to connect to the Philips Dynalite system.

For detailed product information, please refer to the product information pages at www.philips.com/dynalite and follow the links.

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Specifications

Due to continuous improvements and innovations, specifications may change without notice.

Item	Specification	Details
Compatibility	Compatible Devices	iPhone, iPad, iPad Mini, iPod Touch - requires iOS 5.0 or later
Download Information	File Size	iOS - 2.1 Mb
Options & Ordering	Standard Product	Available free of charge from iTunes

Interface

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3. Application Notes

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Application notes

Shopping Center

Until recent times, shopping centers typically utilized lighting controls that comprised mains switching, contactors and time control from a dedicated clock. While such a system will provide basic lighting controls, it does not allow for active management of the lighting. With switching only, there is no inherent flexibility to achieve different lighting effects, and the system is difficult and costly to modify once installed. By comparison, a Dynalite lighting control solution is based on an Ethernet or proprietary backbone for site-wide communications – all on a single LAN, if required. This simplifies maintenance, enables BMS integration and delivers a real-time ability to manage and monitor all system components and power usage.

- Modbus gateways for power metering
- DALI emergency monitoring
- Real-time management and scheduling, with ultimate flexibility in light source control and remote access
- Highly reliable topology with distributed intelligence and no single point of failure
- The ability to control any light source
- Dedicated lighting management software provides greater support for maintenance activities

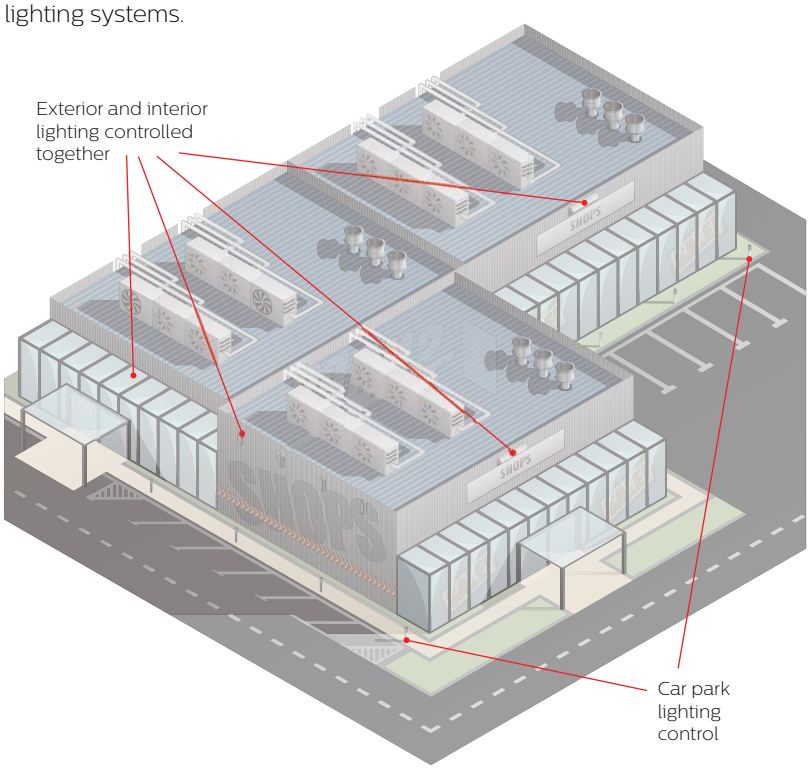
Typical layout

The Dynalite solution offers extremely flexible infrastructure design options to meet the needs of a wide variety of shopping center and mall applications. It comprises a broad selection of load management and user interfaces in order to tailor the lighting effects to the precise requirements of each installation, all supervized by Dynalite's sophisticated EnvisionManager software. Moreover, the system has been designed to easily accommodate expansion options to meet the evolving needs as a shopping center develops over time.

The Dynalite lighting control solution can encompass wireless capabilities that enable onsite teams to tune the lighting scenes from a laptop, or tablet/smartphone to support green building requirements and to adjust the ambience from a laptop or tablet/smartphone in real time to achieve the perfect retail experience.

The EnvisionManager edge

A key component of Dynalite's lighting control portfolio for the shopping-center market is EnvisionManager. Not only does this groundbreaking software solution guide the design of the entire system, but it also incorporates all the tools a shopping center facilities manager could want for management, monitoring, maintenance, testing and reporting of the lighting systems.



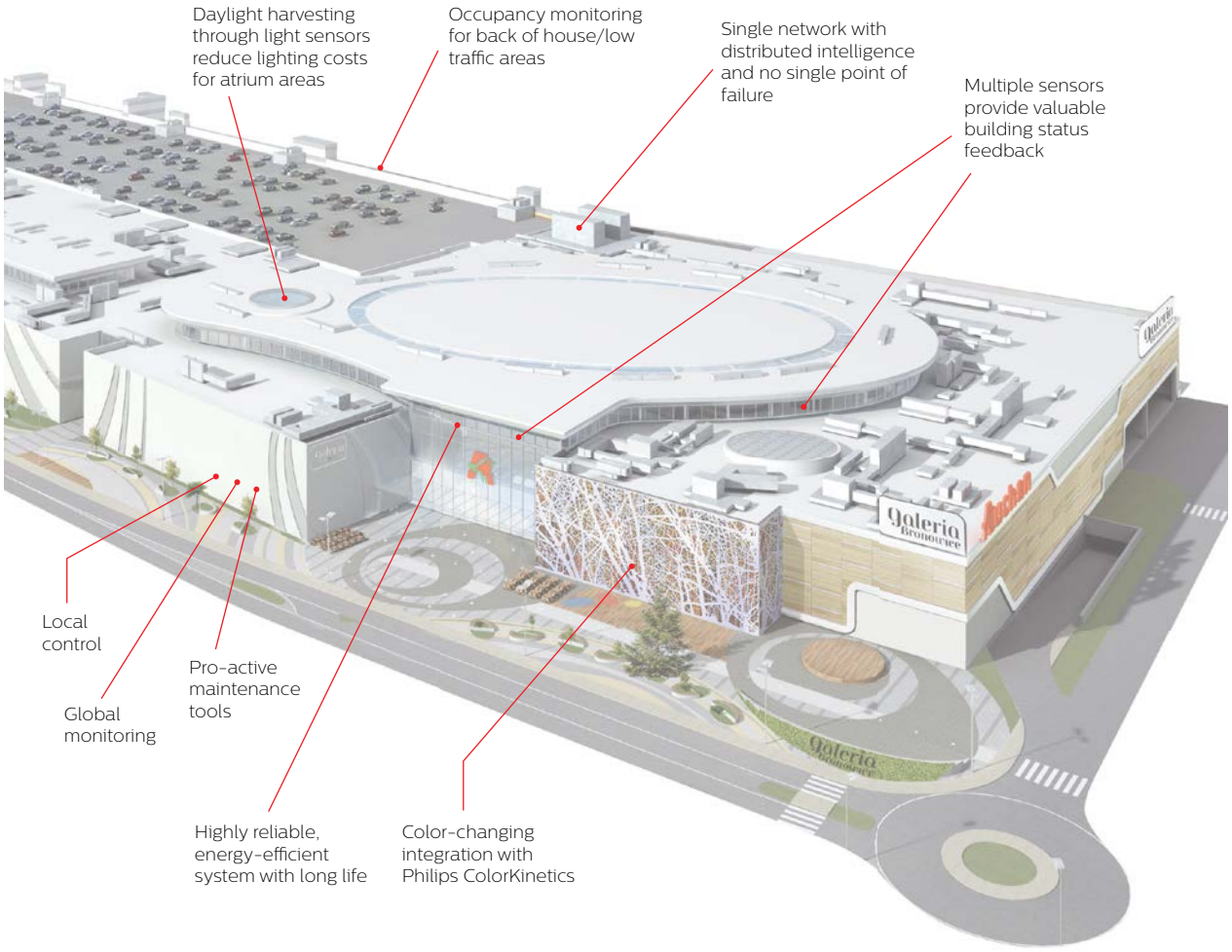
Supporting DALI protocols, EnvisionManager can complete mandatory DALI emergency lighting testing, visualize energy usage via Dashboard and monitor system component health, to streamline ballast replacement and manage relamping schedules.

System outline

Each component within the Dynalite lighting control system is independent, operating on a peer-to-peer level. This topology enables the system to be expanded at any time without disruption to existing operations.

The solution makes extensive use of gateways to facilitate integration with third-party products and systems. For example, metering can be achieved through a Modbus gateway, while OPC/BACnet interfaces connect the lighting network to a BMS. Ethernet gateways enable the use of a LAN backbone or DyNet gateways can be used to support a proprietary backbone if required.

This approach allows the Dynalite system to be designed around best-of-breed components to enhance operational efficiency and practicality, while removing functional limitations and compromises that can arise from one vendor providing all services.



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Application notes

Hospital

Historically, hospitals have utilized simple lighting control systems, comprising standalone room control and ward switching/dimming through conventional wall switches. However, separate-room infrastructures such as this cannot offer the modern benefits of scheduled control, energy management and maintenance feedback. By comparison, a Dynalite control platform presents a future-proof, flexible, scalable and energy-efficient dimming solution, capable of real-time system status updates and fault reporting. As well as allowing light scheduling, Dynalite delivers greater ability for patients to control their immediate environment.

- Backward-compatible customizable solution, comprising multifunction sensors, clocks, software, remote monitoring and active alarms
- Hugely scalable platform with efficient wiring topology that supports integration with third-party systems
- Customizable to support all fixture types, with a wide range of user-interface options
- Delivers optimized energy-management efficiencies
- Encompasses state-of-the-art reporting and maintenance planning
- Offers enhanced comfort for staff and patients alike

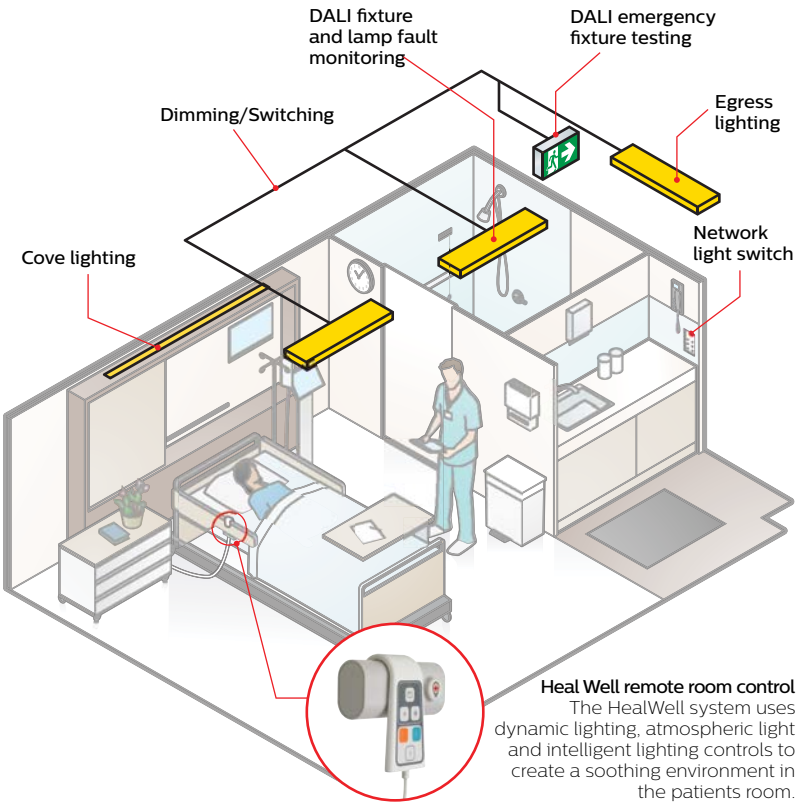
Typical layout

A typical Dynalite hospital lighting solution offers tailored occupancy control, with different lighting level presets any time of day. The system is set up to optimize background lighting levels automatically, while enabling staff and patients to override default settings for specific tasks or to enhance the ambience.

The Dynalite portfolio includes the HealWell lighting solution, which has been demonstrated – through trials and research – to improve the sense of wellbeing for both patient and staff. Patients are able to fall asleep faster and sleep for longer, with measurable elevations in their mood, as measured by 'Hospital Anxiety and Depression Scale' (HADS) depression scores.

Key components

The user interface is one of the key components of the Dynalite hospital system. Given that patients represent a transient user base, the system's user interfaces have been purposefully designed to be simple enough for new users – including those in a confused condition – to operate intuitively.



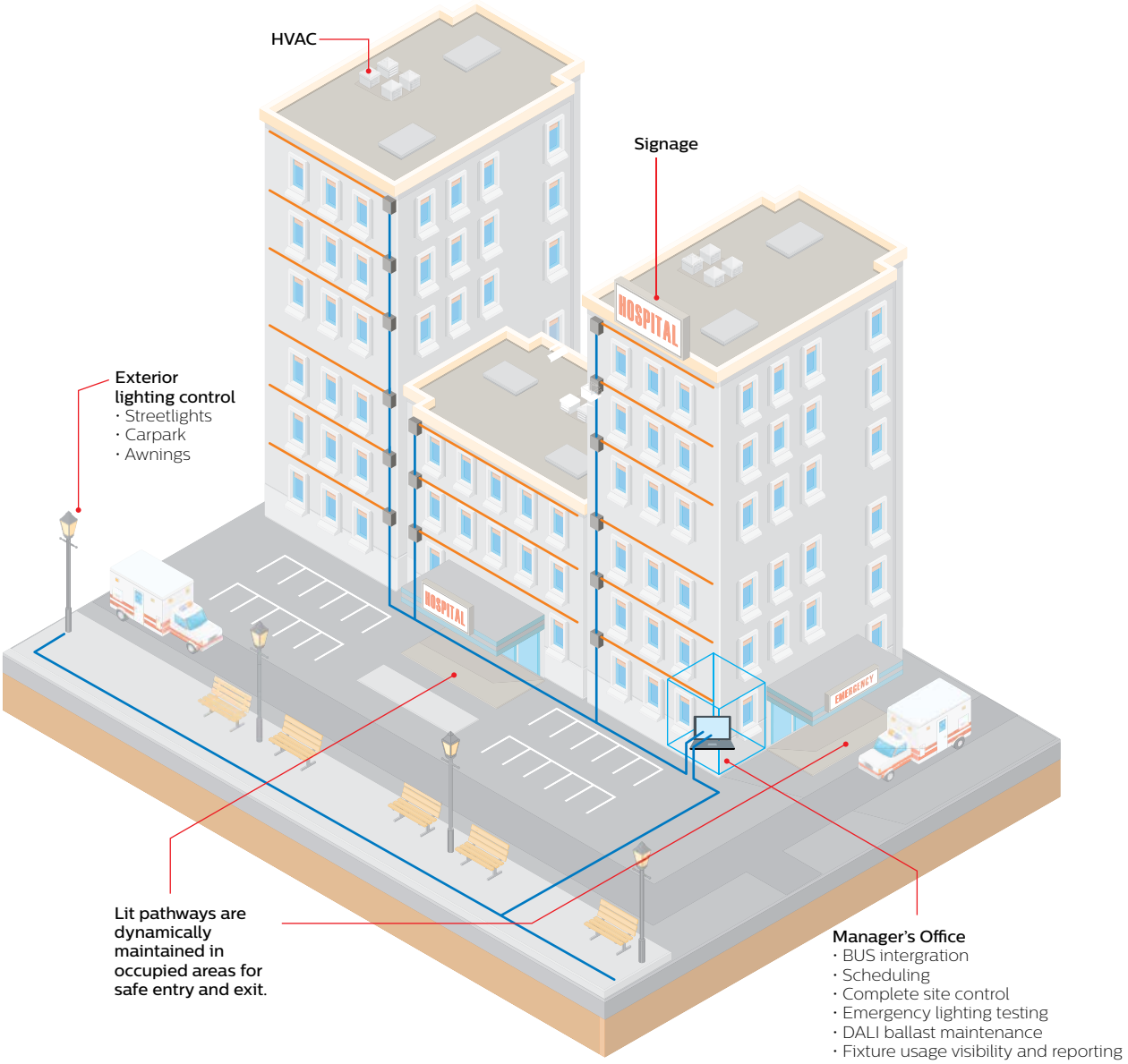
Heal Well remote room control
The HealWell system uses dynamic lighting, atmospheric light and intelligent lighting controls to create a soothing environment in the patients room.

As well as providing an easy-to-operate user interface, Dynalite offers the flexibility for use in both new and retrofit applications. The system architecture allows the installer to add new sections without disrupting any elements of the existing lighting control infrastructure. This ability facilitates the organic growth of the lighting system over time without any detrimental effects to the day-to-day running of the hospital.

System outline

Dynalite's Ethernet backbone incorporates the latest technologies to support a future-proof system. The multicast nature of the topology further ensures the highest possible level of operational performance and reliability, along with the flexibility to enhance both operation and future upgrades. The Dynalite solution features layers of control to promote usability, while its BACnet/Modbus/OPC capability supports seamless integration with Building Management Systems (BMS).

Multifunction sensors facilitate the switching off or dimming down of lights in unoccupied areas and maintain lit pathways, while clocks manage scheduled lighting events. EnvisionManager software provides a central overview of system performance and also highlights outstanding or imminent maintenance issues. The distributed intelligence supports reliability, while the broad range of products within the range ensures that the Dynalite system can be configured to meet the precise needs of each unique application.



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Application notes

Residential

Residential lighting control has traditionally comprised conventional mains switching and rotary pot dimmers on individual switched circuits, perhaps with additional mechanical timers. A design such as this has limited functionality, as it relies on either the manual operation of each circuit or on the static schedules from the timers. By comparison, a Dynalite lighting system is able to create different moods across the home at the simple press of a button. It has been designed for intuitive operation and is able to greatly improve safety, convenience, comfort and energy efficiency within the home.

- Provides a physical backbone for a large range of integration possibilities such as AV, security, blinds, awnings, heating and air conditioning, creating a complete environment for the home user
- Dimmed lighting and preset scenes effortlessly create different moods and reduce energy consumption
- Integrates with security to provide automatic emergency lighting
- Modular controllers deliver maximum design flexibility
- System is customizable to the exact needs of each living space
- Sensors and timeclocks automatically adjust lighting for occupant behavior and seasonal or time/date based preferences

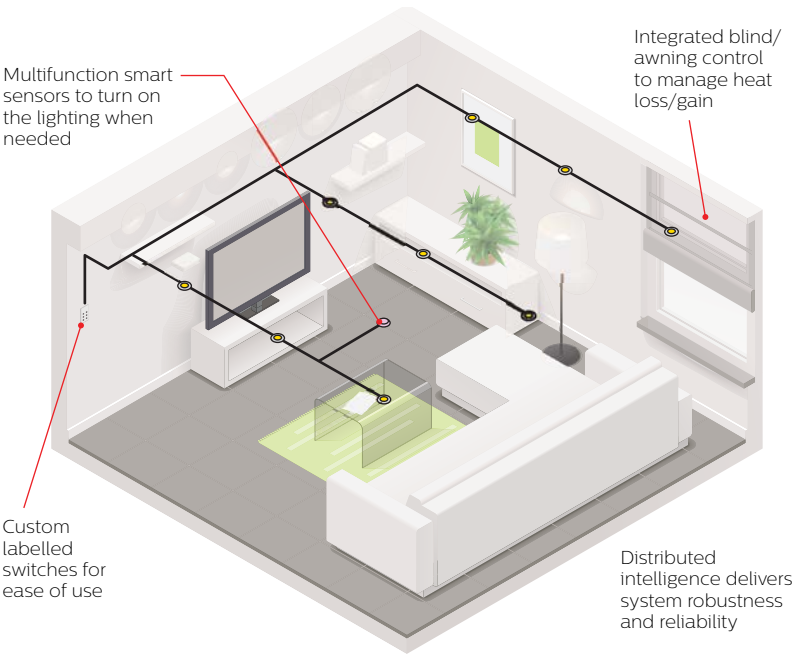
Typical layout

The Dynalite system includes control options for every type of lighting load, and dedicated hardware enables seamless integration with a wide range of third-party services. Moreover, the large selection of wall-switch finishes ensure that Dynalite's user interfaces are able to match the design intent of the home, with custom switch labelling for easy operation.

The Dynalite solution is able to achieve a number of sophisticated outcomes, such as a wake-up call that can be configured to a customer's specifications – including elements like the selection of lighting presets, the opening of blinds and the turning on of the television. Similarly, the system can be programmed for a slow fade-up of luminaires at sunset to seamlessly transition from daylight to the preferred evening lighting mood. Dynalite also gives the homeowner the option of remote access for monitoring and control, as well as sophisticated away-from-home occupancy mimicking.

Future-proof features

A typical Dynalite home system includes modular dimmers, modular wall switches, custom touchscreens and dedicated apps. Each device can easily be configured with the same software and independently replaced to accommodate control upgrades over time to suit subsequent functionality changes. This delivers the homeowner with an unprecedented ability to adapt the look and feel of the control solution over time to meet their evolving needs.



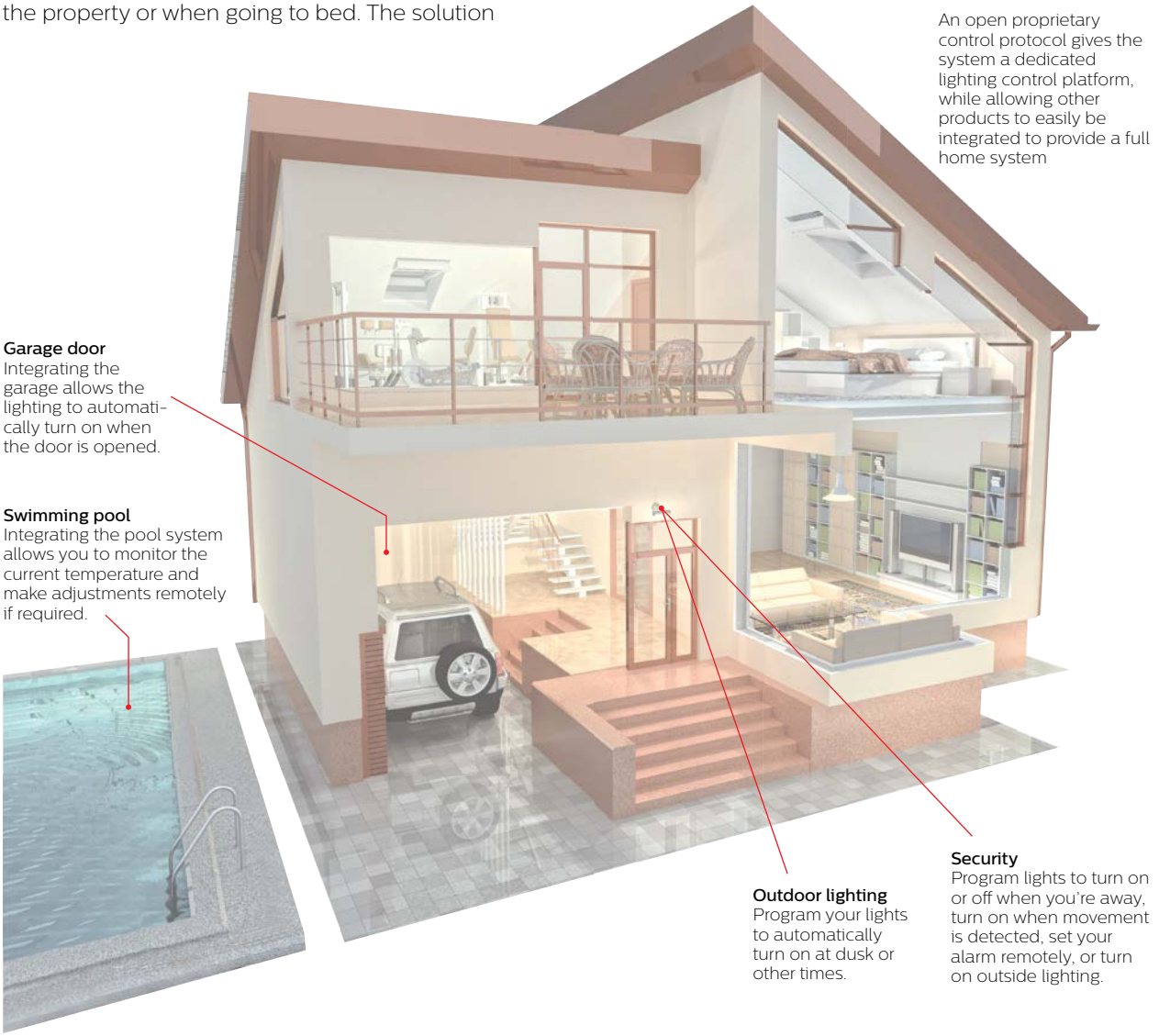
Each controller has its own control modules matched to the load, to suit the vast majority of all lighting technologies. The Dynalite topology makes efficient use of both hardware and space in the distribution board, which minimizes the expense of installation and delivers more cost-competitive serviceability.

System outline

All elements of the Dynalite system – the controllers, the sensors and the user interfaces – are independently intelligent and interconnected via a single network. This ensures a virtually instantaneous response to all network control messages.

All home systems can be controlled from a single location, delivering added convenience when leaving the property or when going to bed. The solution includes dry-contact integration to third-party systems to update the home/away status, while sensors in hallways and garages provide automatic pathway lighting at night. Smart occupancy sensors can be enabled/disabled via a system timeclock or through light-level sensors, for flexible operation.

The Dynalite control solution has been designed for all elements – including a wide array of integration options – to seamlessly work together. Home comfort, convenience and energy efficiency have never been easier to achieve through a single control solution.



An open proprietary control protocol gives the system a dedicated lighting control platform, while allowing other products to easily be integrated to provide a full home system

Garage door
Integrating the garage allows the lighting to automatically turn on when the door is opened.

Swimming pool
Integrating the pool system allows you to monitor the current temperature and make adjustments remotely if required.

Outdoor lighting
Program your lights to automatically turn on at dusk or other times.

Security
Program lights to turn on or off when you're away, turn on when movement is detected, set your alarm remotely, or turn on outside lighting.

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Application notes

Stadia and Sporting Arenas

Historically, the lighting control solutions provided for stadia and sporting arenas have comprised clusters of standalone networks for the hospitality areas and large contactor switching to manage the field lighting. The principal drawbacks to these simple solutions is that there is no centralized management, or flexibility to meet different uses and no embedded maintenance tools to streamline operations. By contrast, a Dynalite lighting control system is able to offer solutions that optimize control, maintenance and efficiency, as well as being versatile enough to achieve a virtually limitless number of lighting scenes for a wide range of venue events.

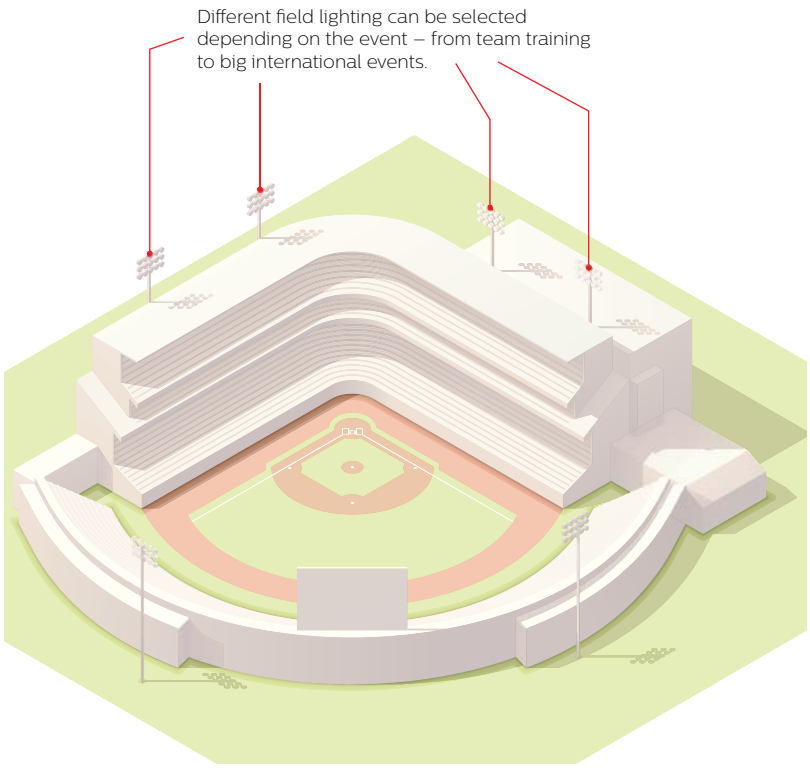
- Accommodates Digital Addressable Lighting Interface (DALI) control for all field and hospitality areas
- Works seamlessly with Philips LED state-of-the-art ArenaVision stadium lighting
- Flexible lighting levels for practice matches, night games and TV broadcast events
- Password-protected system with a range of reporting tools for optimized performance and maintenance
- Manages start-up routines to avoid peak in-rush currents and nuisance tripping
- Expandable and able to control any combination of lighting loads to meet evolving lighting needs over time

Typical layout

A typical Dynalite stadium lighting control system comprises a combination of DALI and relay controllers on an Ethernet backbone, with network bridges providing connectivity to lighting sub-networks and integrated third-party systems. The control network is managed by Dynalite's powerful EnvisionManager software.

EnvisionManager provides the stadium Facility Manager with a full graphical image of the system to enhance control, optimize maintenance and automatically complete scheduled activities — such as emergency lighting testing. The topology facilitates integration of third-party systems and ensures that the entire system operates at peak efficiency.

The Dynalite solution offers operational and maintenance cost savings, while providing an intuitive, informative and convenient interface to control and manage a stadium's lighting system.



DALI delivers

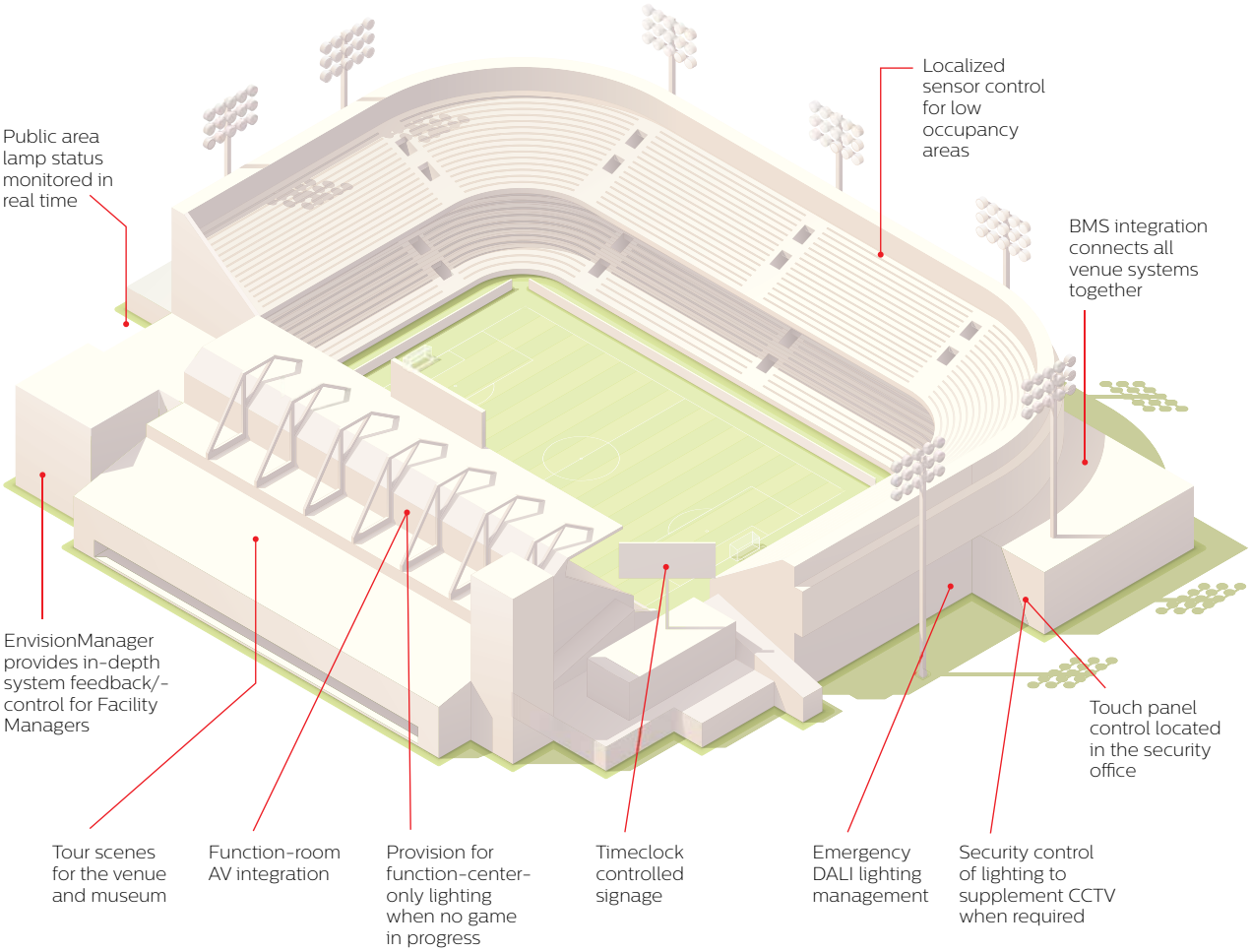
One of the key elements to the Dynalite stadium lighting control offering is DALI control. The individual addressability of every luminaire on the system means that the user has the ultimate flexibility to change group scenes and fine-tune luminaire levels to meet every conceivable venue lighting requirement.

Moreover, the DALI protocol provides real-time information on the status of all devices on the system. This allows the Dynalite solution to deliver enhanced system reporting while optimizing all maintenance requirements.

System outline

In effect, the Dynalite DALI solution ties multiple distribution boards together to operate as a single unified system, with one interface able to achieve seamless control for infinite devices. Typically, Cat6 or fibre-optic cabling is used to create an Ethernet backbone that links the risers and distribution boards. This approach reduces overall system cabling requirements and allows localized control, while maintaining building-wide system supervision.

Each device within the lighting control system can run multiple tasks and each controller can control a variety of loads. Dynalite has the hardware, the software, the expertise and versatility to deliver a tailored lighting control for a diverse range of events within the same venue, as well as the flexibility to adapt to changing requirements over time.



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Application notes

Casino

Until recently, the requirements for casino lighting were mainly achieved through tailored lamp selection to satisfy requirements for minimum lighting levels and reliable operation. Typically operated as standalone systems, each area within the casino was commonly provided with hard-wired redundancy, with back-up power supplied from diesel generators.

These legacy systems lack central control, the ability to graphically view the network, set schedules, programs presets, produce lighting themes or integrate with third-party systems. A Dynalite solution encompasses all these modern requirements and much more. Compatible with the latest LED luminaires, a Dynalite lighting control system can achieve stunning aesthetic lighting designs, as well as ensuring optimized illumination for CCTV and gaming applications.

- Allows local and global control with full graphical display of system
- Preset scene control for different usage types
- Enables color-changing LED control with programmable themes
- Supports schedules/maintenance activities
- Delivers unmatched reliability through distributed intelligence
- Offers virtually unlimited scalability
- Seamless integration with HVAC, AV, security and theatrical lighting systems

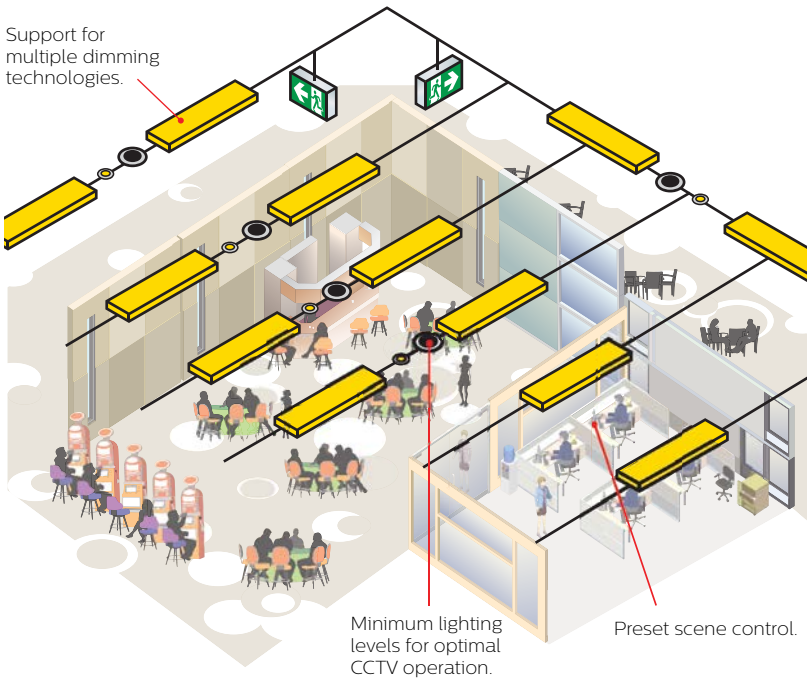
The Dynalite differentiator

A Dynalite casino lighting control system overcomes the problems associated with legacy lighting control solutions for this market. It offers a reliable and flexible platform that delivers unprecedented levels of control, monitoring and management. An important element of this is the EnvisionManager head-end software, which provides a graphical display of the system, scheduled control, system alerts and SMS/email notifications.

System control is facilitated by the software configuration of environments, which allows programmed themes, light shows and moods to be easily created and replicated. Meanwhile, the inclusion of alerts and lamp-life monitoring for mission-critical applications enhances operational visibility to ensure a rapid response to maintenance issues and emergencies.

Robust reliability

A key feature of the Dynalite system is the reliability achieved through distributed intelligence – effectively delivering inherent hardware/wiring redundancy. Added to this, the integral fault detection/isolation means there is no central point of failure. Flexibility is assured through the intrinsically scalable nature of the Dynalite platform, easily accommodating changing requirements over time without the need for costly rewiring.



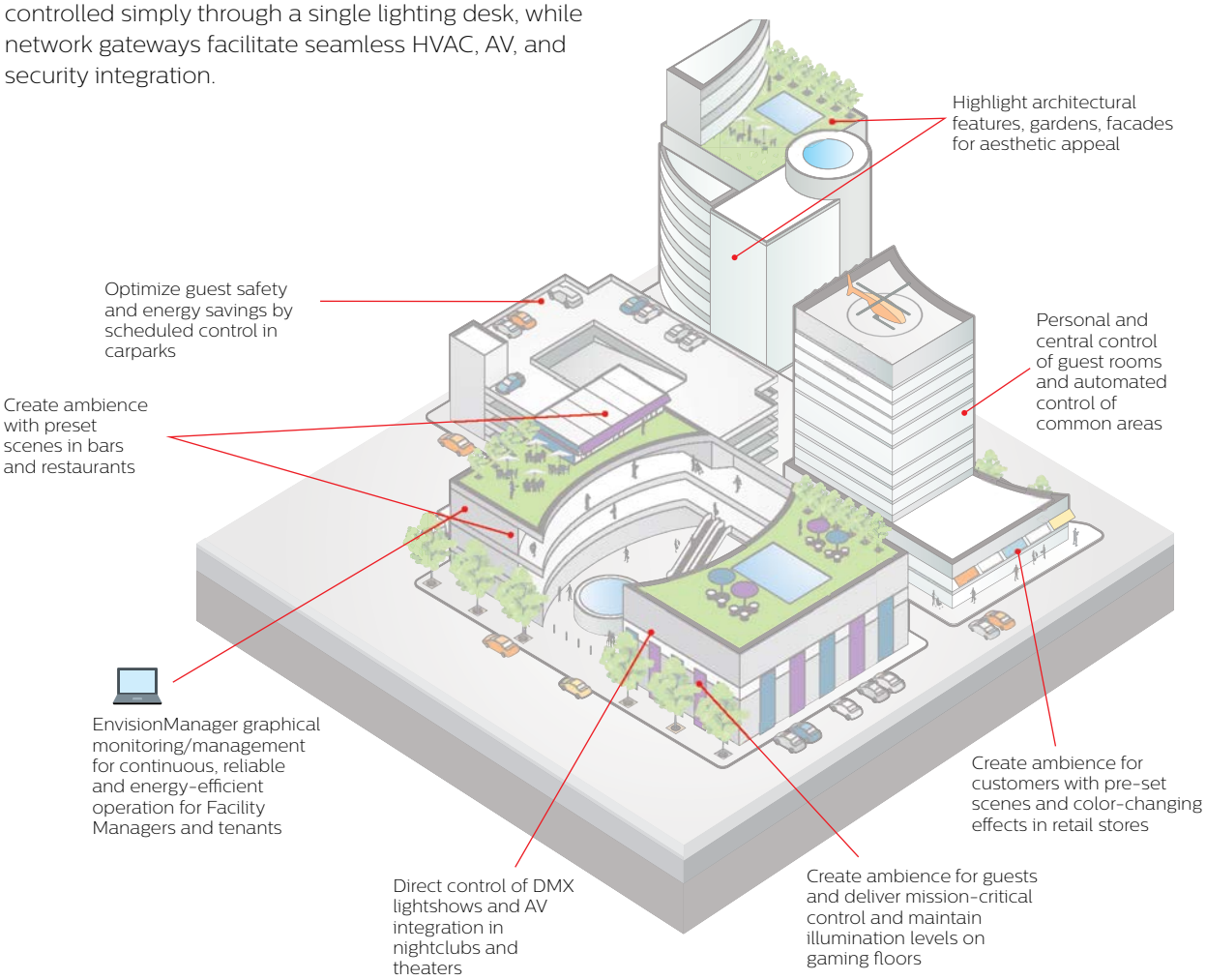
A Dynalite lighting control system is designed for 24/7 reliable operations. In an industry where downtime can result in consequential damage costs of thousands of dollars per minute, the importance of dependability cannot be overstated.

System outline

The Dynalite platform comprises a trunk and spur topology, with network bridges/gateways to sub-networks and third-party systems. This arrangement allows all devices to communicate with each other over a common network, maximizing flexibility without compromising system integrity. For example, DMX gateways enable all house and show lighting to be controlled simply through a single lighting desk, while network gateways facilitate seamless HVAC, AV, and security integration.

The Dynalite portfolio includes load controllers that cater for all possible lighting loads, configurable to achieve automatic load shedding on standby power and staggered start-up to even out in-rush currents and false tripping. Moreover, phase rotation of alternate fittings spreads the load to ensure not all the lights will go off in the event of a power failure.

The modular philosophy of the Dynalite solution entails the use of common building blocks. As well as supporting system stability and integrity, this approach also promotes scalability, allowing the lighting control network to grow to meet developing business demands over time.



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Application notes

Hotels

Until recently, lighting controls have largely been sold to high-end hotels as customized solutions, while the price-point for mid-range hotels has generally been too high to allow for a reasonable investment return. Interestingly, commissioning can account for as much as 60 per cent of the total project cost, partly because until now controls have not been designed purposely for hotel applications. Each individual space – every guest room and each public area – has needed to be programmed separately.

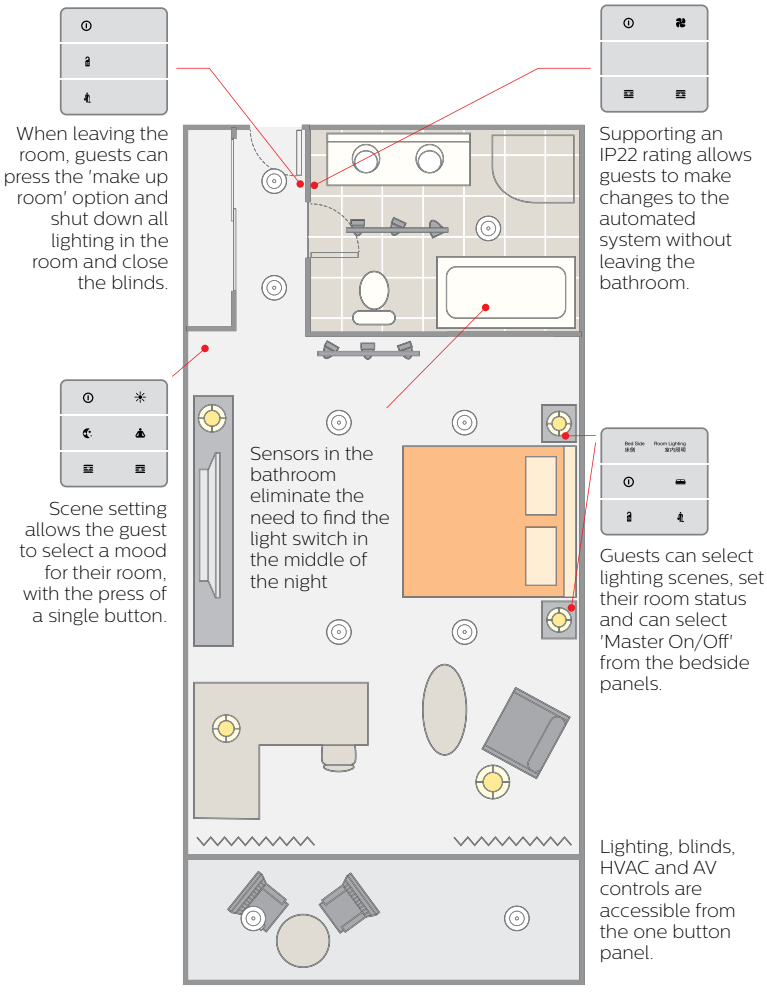
A modern hotel control solution from Dynalite simplifies commissioning with out-of-the-box functionality, and its ability to perform actions on multiple systems from a single button press.

- The Philips portfolio includes all necessary devices – luminaires, load controllers, user interfaces and sensors – to ensure perfect interoperability
- Out-of-the-box functionality reduces commissioning time and costs
- Occupancy detection automatically switches off lighting, power outlets, air conditioning and closes blinds after a suitable delay when rooms are vacated
- Easy implementation of time-dependent responses, such as varying the effect of a button press at different times of the day
- Attractive intuitive interfaces with universal language support

Typical layout

A modern Dynalite hotel control system is designed to meet the varying and unique challenges of the hospitality sector. As the same network architecture is used for all areas of the hotel, the Dynalite solution simplifies planning, installation and operation.

From the guests' perspective, Dynalite delivers a sublime experience in which the system anticipates their needs. Each guest room is monitored and controlled through the BMS to ensure changes in room status receive a timely response. For instance, pressing the 'make up my room' button and vacating the room will turn off the lights, set the heating/cooling to an economy setting, close the blinds and turn off general power outlets.



For further user convenience, presence detection or single button presses can trigger multiple functions, while color-changing LED control can create the perfect ambience to perfectly match the guests' moods or event themes.

Out-of-the-box operation

Dynalite's groundbreaking Guest Room Management System – GRMS and GRMSPLUS – lie at the heart of each system. These are dedicated, purpose-built controllers, offered at a cost-competitive price point for this price-sensitive market. They have been developed to streamline operations and save energy, while delivering an enhanced guest experience.

Complementing these controllers, Dynalite's truly innovative Antumbra user interfaces, Hotel Room System Actuator and universal sensors similarly provide pre-commissioned out-of-the-box functionality. Together, these elements combine to create a scalable, purpose-built solution which integrates seamlessly with other building systems.

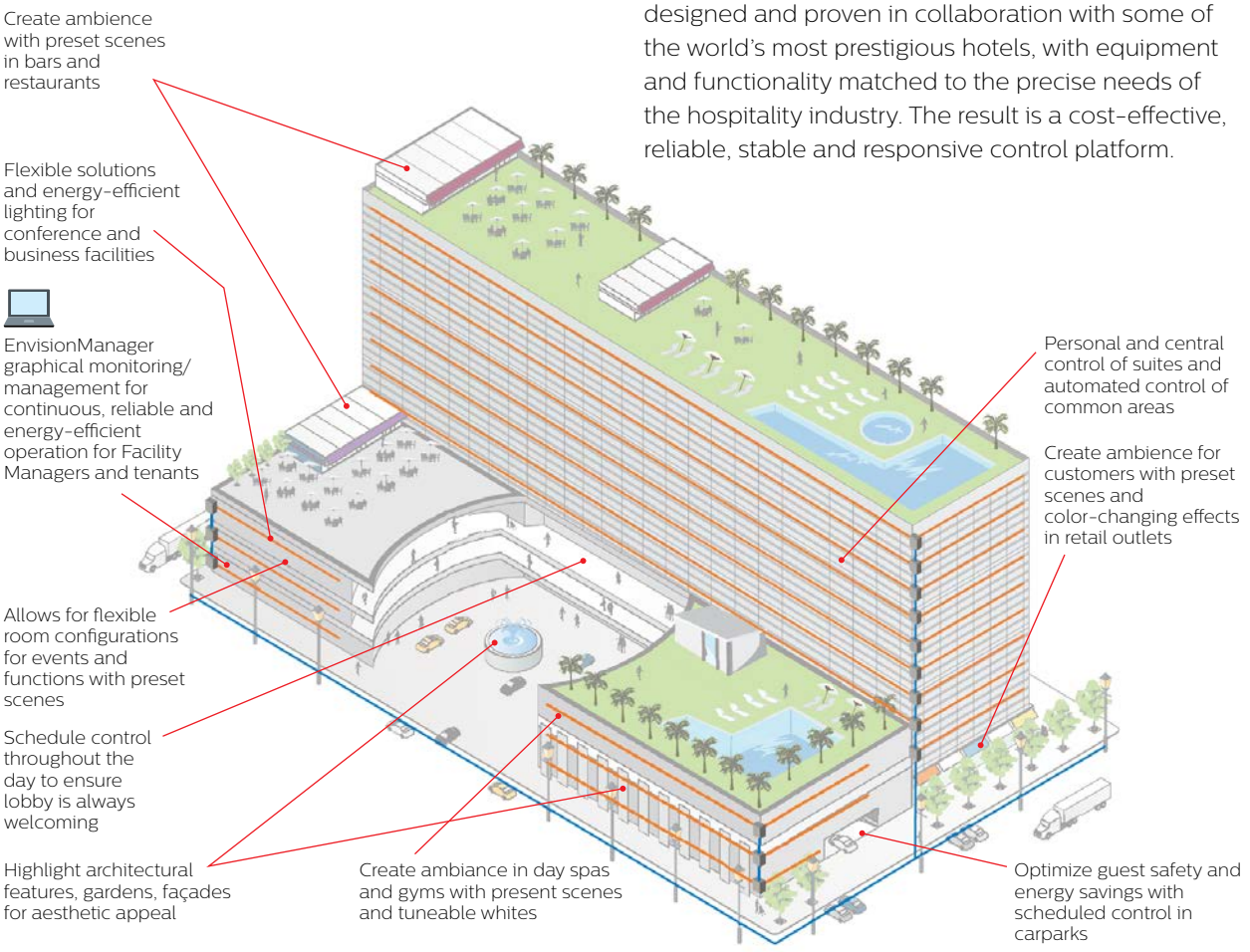
System outline

In effect, each room is a DyNet sub-network, minimizing the ability for system faults to spread through the network.

In addition to the automation within the guest rooms, the Dynalite solution can also be configured to achieve a number of important outcomes in the public areas of the hotel. From automatically adjusting the lobby lighting throughout the day to create the perfect welcoming ambience, to implementing safety settings in the event of an emergency, Dynalite ensures the lighting is optimized for every eventuality.

Furthermore, preset lighting moods enrich architectural effects throughout the public areas, while offering a selection of pre-programmed mood lighting for function rooms. Function room flexibility is further enhanced through a 'room-join' feature, which automatically adapts the control system when room partitions are moved.

Dynalite's hotel control solutions have been designed and proven in collaboration with some of the world's most prestigious hotels, with equipment and functionality matched to the precise needs of the hospitality industry. The result is a cost-effective, reliable, stable and responsive control platform.



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Application notes

University

Until recently, lighting control systems for universities have usually been based on mechanical timeclocks and switched lighting. Typically for this type of application, manual controls are provided for each separate building, with no means of achieving central control or automated behaviour.

Unsurprisingly, these legacy lighting infrastructures have a number of inherent drawbacks. They are unable to cater to all the unique lighting requirements in different areas, such as lecture theaters, staff facilities, sporting arenas, libraries, laboratories and general areas.

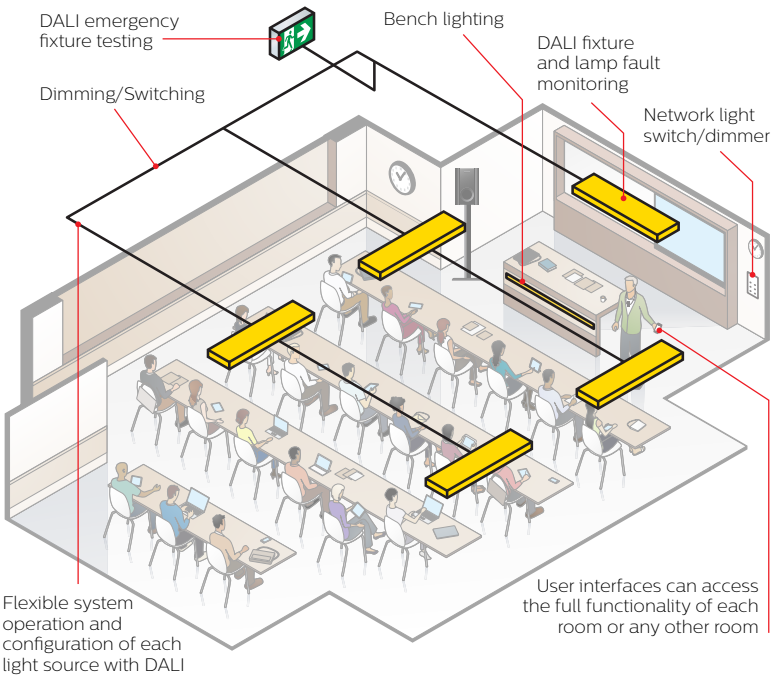
- Portfolio of user interfaces – including hardware button panels and software control
- Simple cost-effective installation
- Centralized system operation/ configuration through a graphical interface
- Ability to easily and inexpensively adapt the system to the usage of each space
- Reliability through distributed system intelligence
- Flexibility for system expansion without affecting existing operation
- Robust easy to clean button panels
- Automatic as-built system documentation

Typical layout

A typical Dynalite solution for a university application makes use of the extensive range of smart devices from its portfolio. These include configurable protocol load controllers, multifunction sensors — with photoelectric, passive infrared and ultrasonic capabilities — and intelligent user interfaces, all of which can be programmed to deliver lighting effects tailored to the exact requirements of the space. Digital Addressable Lighting Interface (DALI) technology offers unprecedented levels of monitoring and control in a university setting, and Dynalite has a proven ability to control DALI systems over many universes.

As an example of what can be achieved through the selection of a Dynalite solution, lecturers are able to control auditorium lighting and AV systems along with bench lighting and microphones that respond to the question status — facilitating question and answer interaction between the lecturer and students. The Dynalite system also includes dynamic observation lighting for automated library storage and retrieval systems and preset scenes for instantly changing the illumination of any space.

The purpose of these clever solutions is to streamline the learning process and enable a high degree of student/teacher interaction. The quality of lighting control delivered by Dynalite enhances ambiance and safety by facilitating the coordination of services, including: task lighting; egress pathways; maintaining illumination levels and emergency lighting.



Intelligent Interfaces

Dynalite's legendary EnvisionManager head-end software is a key element of the system, enabling the facility manager to take global control via the intuitive graphical lighting management interface. The lighting control system also includes button panels and touchscreens with simplified operation for students, many of whom will not have English as their first language, while allowing lecturers to use mobile apps to precisely control their lecture theater environment.

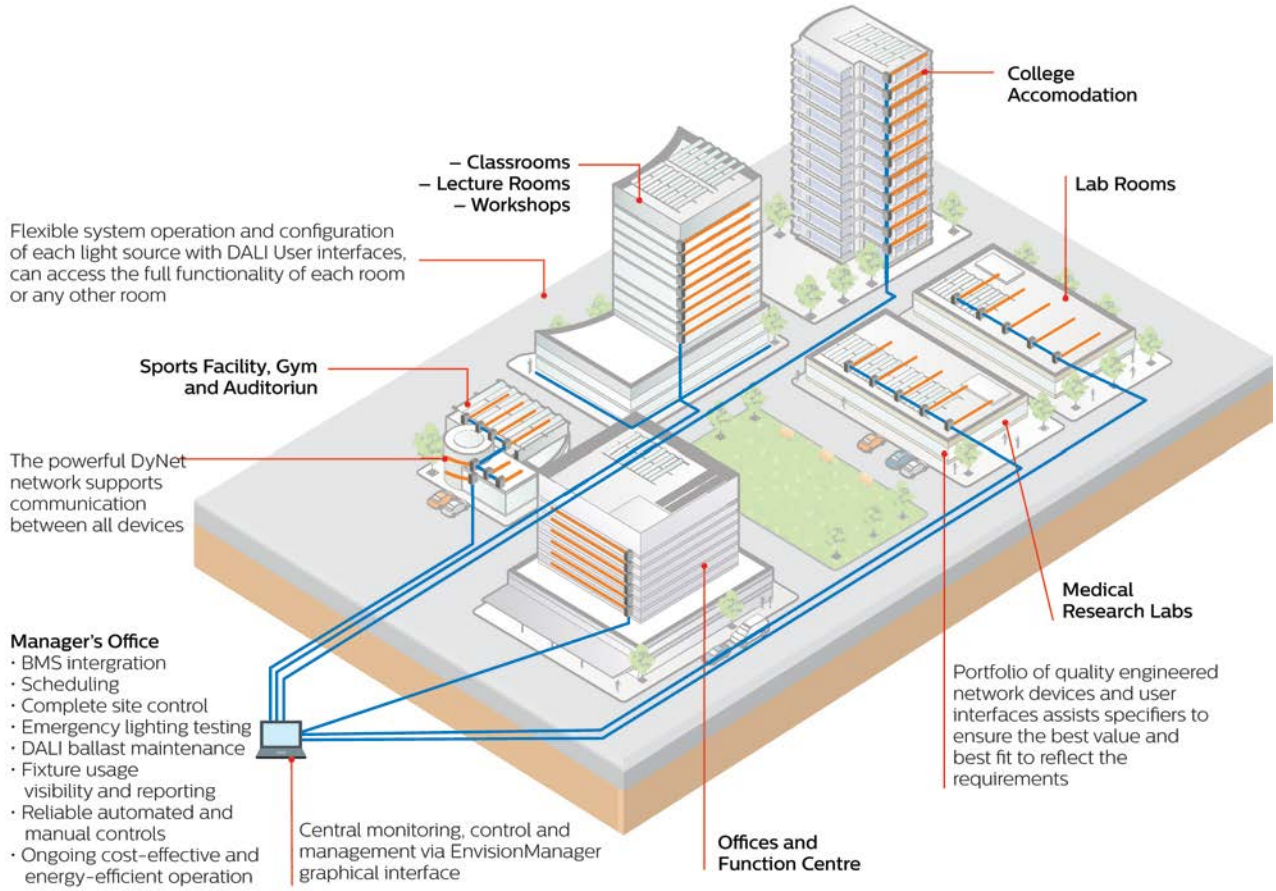
Each user interface can be programmed to seamlessly control multiple systems, such as HVAC, blinds, theatrical lighting and AV, with automated behaviour resuming after a designated time has elapsed since the last manual override. Similarly, corridor hold-on functionality allows sensors to maintain illuminated egress pathways along corridors and lift lobbies to building exits to provide safety for after-hours occupants.

System outline

The Dynalite system provides seamless multi-universe control across all DALI devices within the system. Components are selected to meet or exceed the design requirements, to comply with building codes and to support energy-management strategies.

DALI lighting and MultiMaster devices radically reduce the wiring required — thereby minimizing installation costs — and actively promoting the flexibility to reconfigure spaces. Moreover, DALI facilitates communication and monitoring of the lighting status. Integration to the BMS enables multiple systems to work together synergistically to optimize usability, comfort and energy efficiency throughout the building.

User interfaces are designed to easily access the full service functionality of rooms in a way that is fast, reliable and intuitive



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Application notes

Office

Lighting control design for office applications has traditionally comprised a base-build for house lighting, with customized tenancy fit-outs to tailor lighting effects for tenanted areas. Most lighting circuits are switched, with limited local dimming and timer control. The result of these limitations is that the balance between energy efficiency and occupant comfort is not ideal for tenants or facility managers.

For today's market, the three key requirements for office lighting are occupant comfort, energy efficiency and the flexibility to accommodate operational changes—criteria easily met by Dynalite's portfolio of solutions.

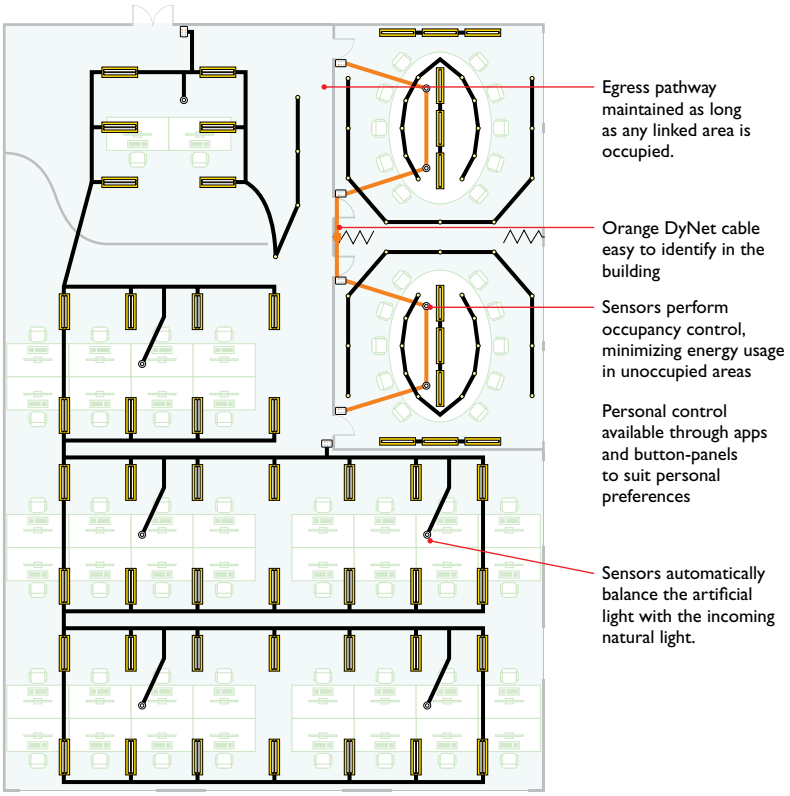
- Daylight harvesting with corridor row offset
- Occupancy detection with programmable behaviors
- Localized Selection of User Interfaces (UIs)
- Timeclock-scheduled control for after-hours functions
- Building Management System (BMS) integration
- EnvisionManager for central control, site mapping, monitoring, scheduled functions, reports, and alerts

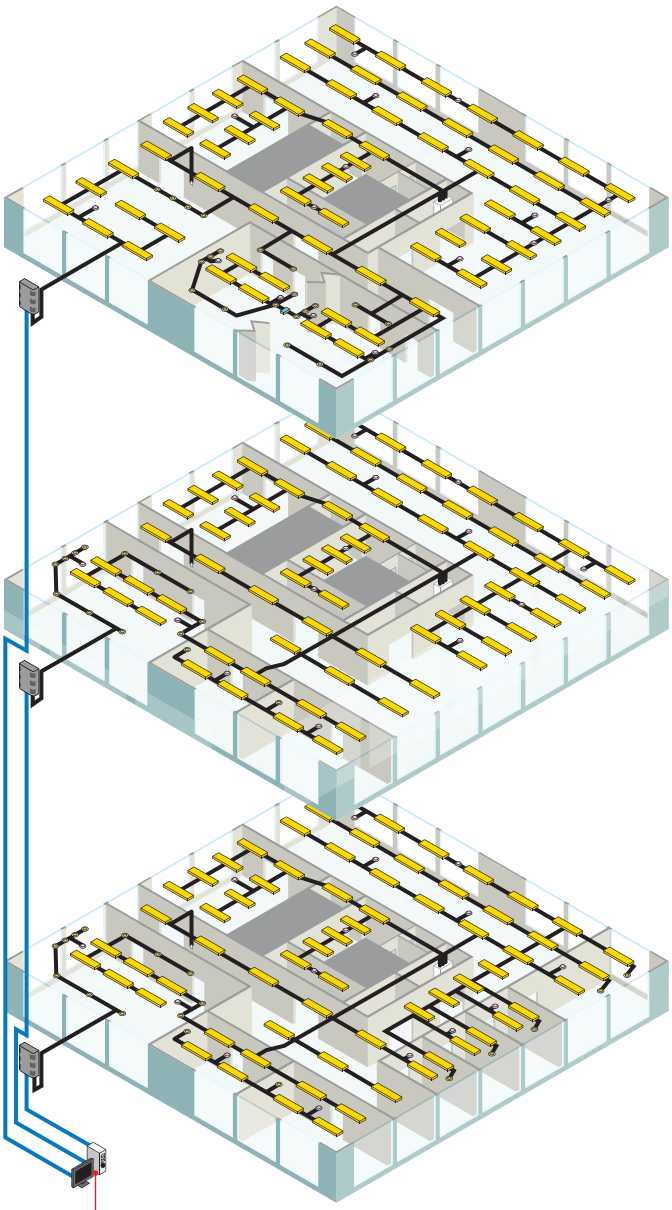
Typical layout

A typical Dynalite office control solution utilizes a combination of ceiling- or wall-mounted sensors, including photoelectric, passive infrared and ultrasonic options that simultaneously provide light-level and presence detection.These are typically employed in conjunction with timeclock functionality and manual user interfaces to enhance responsiveness without compromising user preferences. Sensors automatically adjust lighting in balance with natural light levels, as well as dimming down or turning off lights in unoccupied areas.

The system timeclock initiates different effects depending on the time of day, sunrise/sunset times, date or season. The automated behavior afforded through the combination of sensors and timeclock, can be extended to any integrated system within the building.

After-hours functionality demonstrates a good example where safety is enhanced. Sensors detect where people are working within the building and provide lighting for that area, as well as illuminating a pathway to the exit. Once the last occupant has left the building, all lighting is automatically changed to 'unoccupied mode' without the occupants needing to remember to turn lights off.





Scalable modular solution

Lighting flexibility that is simple to reconfigure or customize

Embedded DALI controllers control all DALI functions including pre-commissioning, enumeration, configurable dimming curves, online status, lamp life monitoring, ballast replacement, emergency testing and reporting

Inbuilt functionality accommodates switching, dimming, task tuning, daylight harvesting and corridor hold-on

Time-control scheduling, for time-of-day, sunrise/sunset or date-specific events

Specialized control features, including load shedding, status monitoring, failure alerts, lamp run-time reporting and emergency ballast testing

Dynalite simplifies the intelligent automated operation of all spaces within the office environment. The integrated dimming, curtain/blind and HVAC control capability provides a synergistic benefit for the thermal management of the building.

DALI delivers

A key component of the Dynalite office portfolio is the company's Digital Addressable Lighting Interface (DALI) solution. This can seamlessly operate different DALI universes as a single system, offering accurate dimming to all connected luminaires and providing status feedback to the control system. Dynalite's DALI MultiMaster solution further simplifies installation by removing the need for separate control wiring to user interfaces.

A Dynalite DALI solution significantly reduces the inconvenience and costs of maintenance, offering ultimate flexibility through software management and control. As each luminaire is individually addressable, it is possible to reconfigure lighting using a graphical user interface, without the need to physically rewire areas to meet changing requirements.

Moreover, the EnvisionManager software provides unprecedented levels of monitoring, reporting, scheduling and alerts to enhance everyday operations. EnvisionManager allows for different levels of access/views available to the facility manager and to tenants. High-level integration with the BMS further facilitates the monitoring of all integrated systems throughout the building.

System outline

In practice, any combination of DyNet and DALI devices can co-exist on a system, catering for a broad spectrum of lighting effects in any part of the building. Sensors control automatic behavior, although this can be overridden from EnvisionManager or manually by wall-mounted switch panels or through timeclock schedules. Automatic behavior can then resume when occupants leave the area or at a set time.

The many elements that make up a Dynalite control system, work in harmony to ensure health and safety regulations and building code requirements are met, along with a high environmental rating. The result is a solution that keeps its occupants safe and comfortable, optimizing the environment for productivity while minimizing energy expenditure, and retaining the flexibility to adapt to evolving needs over time.

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4. Technical Overview

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Controls

Technology Overview

This publication is an overview of traditional lighting control technologies that represent the majority of globally installed indoor systems.

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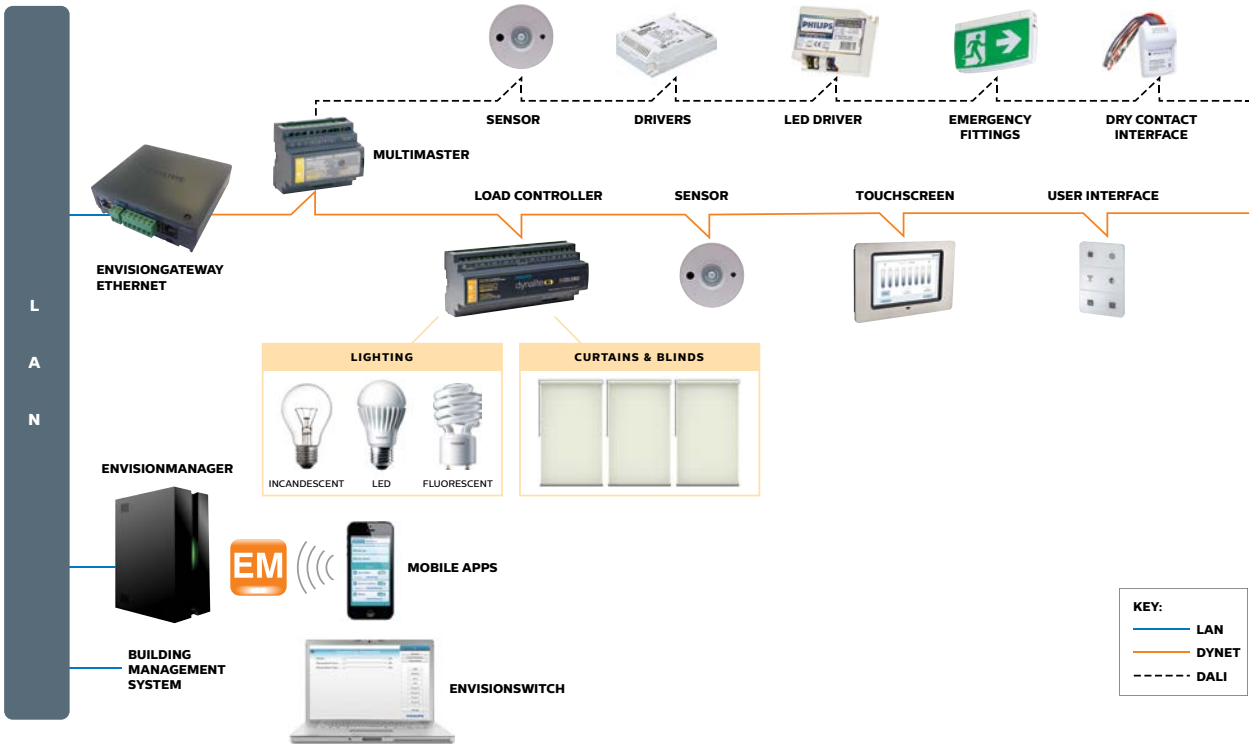
Control Principles

System Structure

The Philips Dynalite system is a scalable control platform that connects a range of intelligent devices to form a complete control solution. Commands and status information are passed to all devices over an RS485 or Ethernet network using the event-based DyNet protocol. Philips Dynalite control devices include an integrated microprocessor and internal non-volatile memory. This allows each device to store its own configuration data, handle processing requirements for its assigned features and functions, and remember some of its previous states. All device configurations are programmed through the EnvisionSuite series of commissioning, monitoring and control software.



The system's distributed architecture offers excellent reliability and usability and provides flexible control of lighting and other building automation systems.

The range of Philips Dynalite control products includes user interfaces (UIs), integration devices and load controllers. The UI range includes:

- Control keypads
- LCD touchscreens
- timeclocks
- sensors
- mobile apps
- desktop software

Integration devices allow third-party systems to interact with the Philips Dynalite system over a wide range of protocols. This allows the systems to work together to perform tasks, so that end users don't need to interact with each individual system.

Philips Dynalite has developed an extensive range of controllers to work with many different types of loads. There are a variety of input/output types, combinations and load ratings. Load controllers listen constantly to network messages from DyNet and only respond to command messages that relate to the controller's specific addressing configuration. Control associations are established between user interfaces, integration devices and load controllers using straightforward addressing and command techniques within the DyNet protocol.

Device Addressing

Physical

Physical addressing is used primarily during the testing and commissioning stage to configure DyNet devices. It is also used for physical, location-specific parameters such as circuit breaker trip signalling. DyNet uses the device type, box number and physical channel numbers to identify each lighting circuit.

Logical

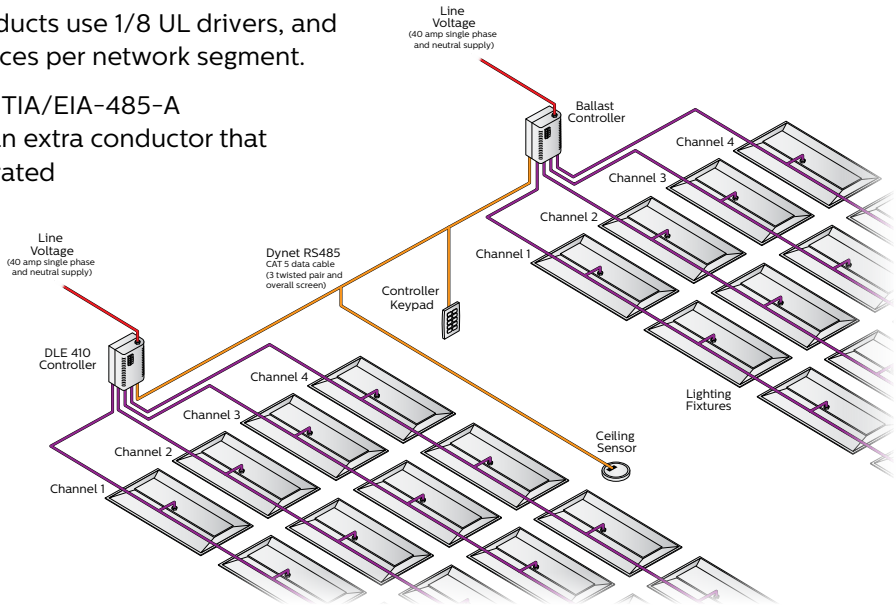
Logical addressing is used in day-to-day operation of the lighting system. Lighting circuits and control panels are configured to areas independent of the physical device they are connected to. DyNet uses the area number, logical channel number and join value to identify lighting points.

Physical Network

DyNet uses industry-standard RS485 data transmission, as detailed in the TIA/EIA-485-A specification, with some variations. For more information on the TIA/EIA-485-A specification, refer to http://www.tiaonline.org/.

The TIA/EIA-485-A specification defines a unit load (UL) and declares that an RS485 driver must be able to drive 32 ULs. This means that an RS485 network supports 32 nodes when each node bears a unit load on the line. Philips Dynalite products use 1/8 UL drivers, and support approximately 160 devices per network segment.

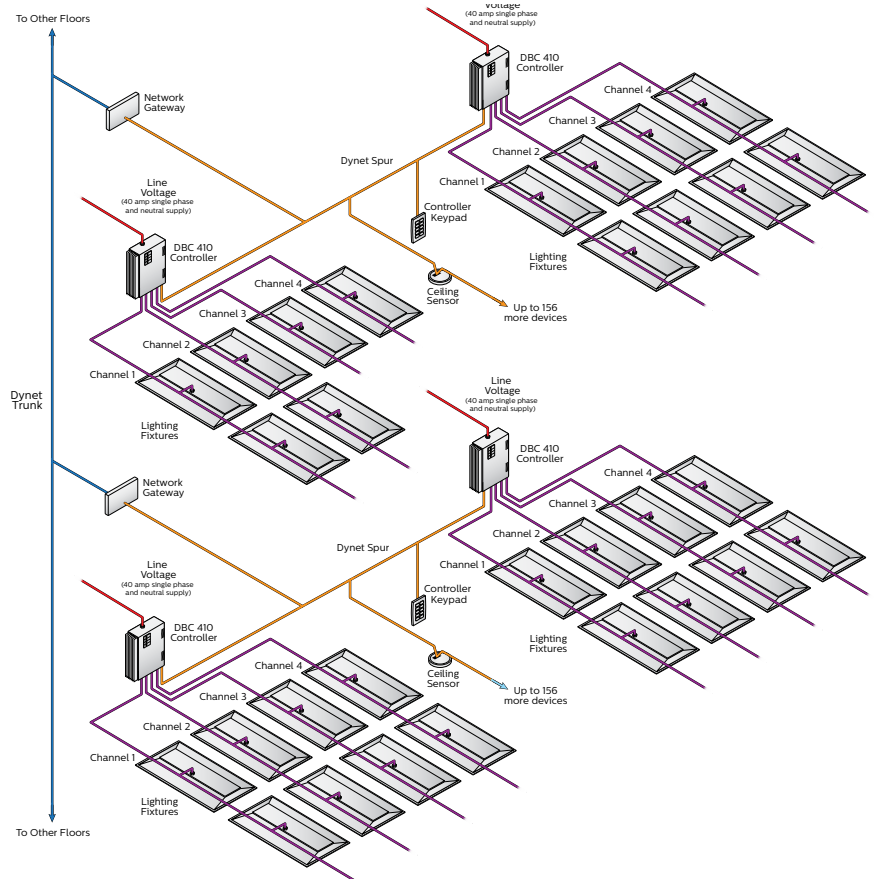
An important variation from the TIA/EIA-485-A specification is the addition of an extra conductor that carries a DC supply that is generated by an integral power supply contained within all mains-powered gateways and load control devices. This is used to power network devices that are not connected to mains power, such as motion detectors, wall-mounted control user interfaces and timeclocks.



Note that the conductors carrying the DC supply have both wires in the pair paralleled. This minimizes voltage drop on long cable runs. A terminal strip is provided on devices for data cable termination. Devices have an RJ12 connector as an additional connection for commissioning. Some DIN-rail load controllers support two RJ12 connectors for faster termination between load controllers within the distribution board.

Sites that require more than 160 devices, such as multi-story buildings, have a network segment for each floor called a spur. Multiple spurs are joined together via a central trunk, which is often installed in a riser to link all floors together. Alternatively, the spurs can be connected via Ethernet using the building's existing IT infrastructure.

Each spur can run off the trunk as an independent sub-network that does not require any additional network communication. With each of these sub-networks connected together by bridges on the trunk, the entire system can work together seamlessly using site-wide network messages. Typically the trunk is connected to head-end software or a building management system (BMS) so there is full access to all the components on the network.



DyNet Protocol Properties

	DyNet 1 (Spur)	DyNet 2 (Trunk)
Packet length:	8 bytes	12 to 1024 bytes
Integrity checking:	8 bit Fletcher checksum	16 bit Fletcher checksum
Baud rate:	9600 (default) to 115200 baud (device dependent)	9600 to 115200 baud
Data word format:	8 bit data, 1 start bit, 1 stop bit, no parity (8N1)	8 bit data, 1 start bit, 1 stop bit, no parity (8N1)
Message tracking:	Source and destination network addresses embedded in each packet	Source and destination network addresses embedded in each packet
Logical areas:	255	65534, 0 = all areas
Logical channels per area	255	65534, 0 = all channels
Logical presets per area:	255	65519 editable, 16 predefined
Fade times per message:	0 to 21.45 hours in 20 ms steps	0 to 21.45 hours in 20 ms steps
Logical channels per device:	255	65534, 0 = all channels
Physical device types:	255	255
Physical box numbers per device type:	255	65535

Programmable Logic Control

All Philips Dynalite devices incorporate programmable arithmetic and sequential/conditional logic control. You can use EnvisionProject to create scripted tasks within any device. Tasks can be triggered from within a device or from another device on the network.

Tasks are often used in applications where a single input or UI action needs to control multiple areas or multiple functions. An example would be a ‘Welcome’ function on an entrance/lobby control UI. When activated, the task issues a sequence of area preset commands to illuminate the entrance and an access path through the building.

Default Behavior

Philips Dynalite devices are pre-programmed for out-of-the-box operation. Philips Dynalite load controllers (dimmers) are set to provide full output to the load as the default, regardless of if the network is connected.

When the network is connected, a button press on any UI controls all the dimmers by default.

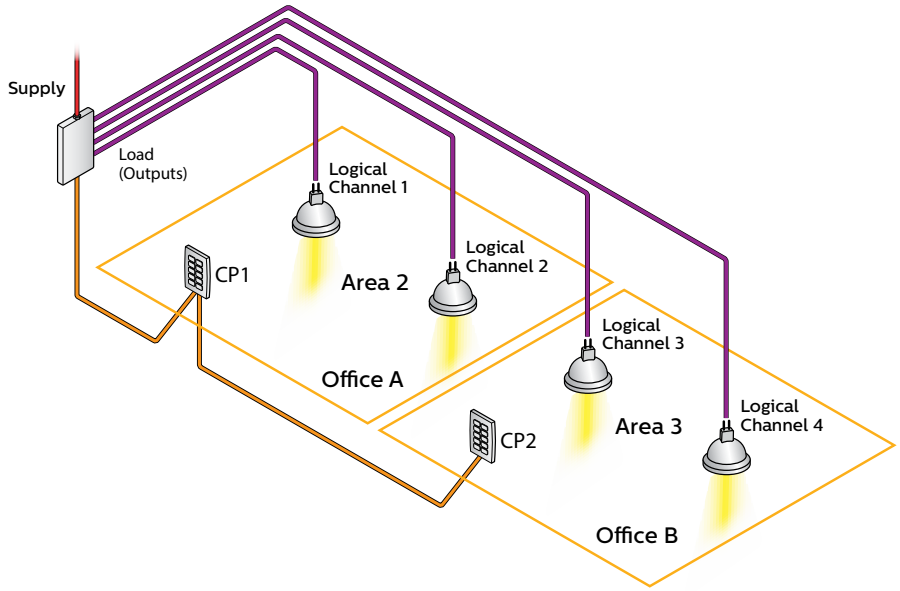
The following preset scenes are factory-programmed into every control keypad:

Button	Preset	Light level	Button	Preset	Light level
1	Preset 1	100% (On)	5	Preset 5	80%
2	Preset 2	70%	6	Preset 6	60%
3	Preset 3	40%	7	Preset 7	50%
4	Preset 4	0% (Off)	8	Preset 8	20%

Associating lighting groups to controllers

Load controller output channels and control keypad buttons are generally assigned to logical areas, enabling channels to be grouped and controlled together regardless of their physical connections or location. This allows one-touch control of groups of lights over the DyNet network, such as switching or dimming all perimeter downlights in a room at once from a single button press.

In the example below, a dimmer controller handles lighting circuits in two rooms, with input from a control UI in each room. The lighting circuits and UI in Office A are assigned to Area 2 while the circuits and UI in Office B are assigned to Area 3. (Area 1 is reserved for installation/diagnostic use.) This allows independent control of multiple rooms connected to the same controller.



Grouping multiple individual control channels into different areas is essential in installations involving a large number of areas and channels. This saves time and work compared to systems in which every device must be addressed and configured separately.

Associating user interfaces with controllers

Every network device on the DyNet network can listen to any network message. If a user interface receives a network message that is related to any of the logical areas to which its buttons are assigned, it automatically updates the button indicators with the new lighting scene. This network architecture makes the DyNet system very efficient, as a single network message can change the lighting levels across multiple load controllers and update the indicator status of multiple user interfaces.

Once connected to the network and discovered in EP, a UI can be associated to any logical area, and the button assignment uses that area's default presets. This logical association is completely independent of the UI's physical location.

In addition to this default behavior, other commands can be assigned in EP to any or all of a control panel's individual button functions, ranging from simple preset messages controlling other logical areas on the network to complex scripted sequences and conditional operations.

Flexible Control Options

Join/Area Link

The Philips Dynalite system allows the logical linking and separation of areas for flexible automated control in applications where partitions or removable walls are used, such as hotel ballrooms or adjoined office meeting rooms. When the partition is closed, each room is controlled by its own UI. When the partition is opened, the Dynalite system logically links the two physical areas, and UIs in both rooms jointly control the entire combined space. The transition between joined and unjoined can be triggered automatically by a dry contact reed switch in the removable wall.

Preset Scenes

Preset scenes instantly recall multiple channel levels. This is also known as scene setting. A practical example of preset use would be a hotel function room that uses predetermined lighting scenes for breakfast, lunch and dinner. These scenes can be saved and then recalled at the touch of a button and/or automatically from a network timeclock. A long fade time between scenes can also be set, ensuring a smooth, comfortable transition from one scene to the next with no disruption to occupants' comfort.

The Philips Dynalite system can be controlled in several different ways, depending on the application requirements. Area Preset and Channel Level network messages can change the output of the load controller.

Area Preset network messages affect all channels that are assigned to the respective logical area, allowing for much simpler commissioning. Preset control is ideally suited to any application where a large number of channels are to be controlled at once.

Some systems require multiple network messages to affect multiple channels in an area. This can produce an undesirable 'wave' effect and increase network traffic. Philips Dynalite uses preset scenes to affect multiple load channels in one area with a single network message, which prevents this.

Channel Control

If required, channel-level commands can also be used to affect specific channels or subsections within an area. This method is typically used where individual channels must be set manually, such as in a home or small office.

The Philips Dynalite system is capable of controlling any dimmable light source, including 3-channel RGB fixtures displaying custom colors and 2-channel fixtures displaying warm white/cool white illumination.

User Interfaces (UIs)

Manual Operation

Philips Dynalite user interfaces are available in a range of styles and finishes to match any project budget or décor requirements. The range includes wall-mounted keypads, touchscreens, universal sensors, timeclocks, temperature sensors and iOS/Android apps. All user interfaces are available in European and North American formats.

Wall Keypads

Antumbra

The AntumbraButton, AntumbraTouch and AntumbraDisplay keypads feature proximity detection, light and temperature sensing, and a high degree of configurability via EnvisionProject to provide a superior level of flexibility and convenience. Subtle button LEDs, custom labeling and a halo-effect backlight enhance elegance, comfort and usability. The AntumbraDisplay includes a central screen with multiple 'pages' of dynamic text and icons. Antumbra UIs also incorporate temperature and proximity sensors.

Revolution Series

The Revolution series keypads are available in a range of standard plate finishes or custom finishes, including glass and metal. Each button can be custom-engraved with text or icons to describe its function, and the engraving is back-lit to highlight the label. An optional integrated OLED display allows fully editable text and icons to indicate the current function or system status to the user.

Classic Series

The contemporary style of the stainless steel Classic series keypads is perfectly suited to any industrial or commercial environment. These keypads are available in a wide range of standard options that include network sockets, key switches and fade sliders. Each plate and switch cap can be custom engraved. A choice of button configurations is available throughout the range.

Standard Series

The simple yet elegant Standard series keypads offer a range of plastic and metal finishes. They include LED status indicators and full integration with the DyNet network. Each plate and switch cap can be custom engraved.

Touchscreens

Touchscreens offer a greater degree of control and customization. Each touchscreen can display up to 255 pages of controls and status indicators in full color, including information from third-party devices and systems connected to the DyNet network. Controls can be overlaid on selected backgrounds, such as floor plans, and the screen fascia can be matched to the Revolution range or customized to site requirements.

Apps

The DynamicTouch (iOS) and EnvisionTouch (iOS and Android) apps connect to DyNet over Wi-Fi. They are ideal for intelligent homes and commercial control applications. Intuitive and customizable controls work seamlessly with third-party devices connected to the DyNet network.

Automated Operation

These interfaces automatically react to the environment to trigger changes in the system.

Sensors

Philips Dynalite multifunction sensors combine motion detection – passive infrared and/or ultrasonic – with light level regulation and infrared (IR) reception. The system uses temperature sensors to report on and control third-party HVAC systems.

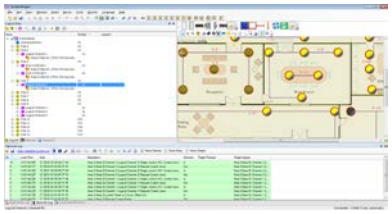
Timeclocks

A network timeclock triggers tasks and events based on the time of the day; day of the week, month, or year; or astronomical events, such as sunrise or sunset. This ensures optimal energy efficiency, user comfort and operating conditions. Timeclocks can be programmed with a variety of tasks, ranging from after-hours HVAC control to fine-tuning of sensor functionality.

Management Software (EnvisionSuite)

EnvisionProject

EnvisionProject (EP) is the programming and commissioning software package used to access to the full capabilities of the Philips Dynalite installation. It is intended for use only by users who are trained in its operation. Settings for a project are made using icon-driven menus, wizards, pre-programmed templates and adjustable settings. These can be tailored for each project, saved and replicated across other sites as needed.



EnvisionManager

EnvisionManager (EM) handles control, monitoring and maintenance of Philips Dynalite systems for facility managers. It is able to integrate seamlessly with building management systems to support the needs of a fully integrated building.

The commissioning process in EP creates a configuration file that becomes the basis for EM. This enables the commissioning engineer to focus on setting up the tailored interface to best match end-users' needs.

EM can identify luminaires approaching the end of their lamp life or that have already failed, as well as failed drivers and other faults on the system. This means that facilities management can replace DALI ballasts using EM without needing additional tools or training.

The alerts overview provides notifications and a summary of current alerts on the system with details on the state of each item. This helps building/facilities managers prioritize and address maintenance activities, both planned and unplanned.

Load Controllers

Load controllers drive the circuits that control the color of, switch, and dim lighting channels. They receive instructions from the DyNet network and adjust their controlled outputs as required. Load controllers contain all the internal components – power supply, communication ports, output drivers and microprocessor – needed to operate the connected lighting groups for which they are responsible. All channel naming information, channel addressing, logical area addressing and channel scene lighting levels are stored within the load controller. This distributed intelligence architecture ensures that there is no single point of failure and that each load controller is directly responsible for all its required functionality.

Philips Dynalite supports a range of load controllers – in DIN-rail and wall box configurations – to cater for a variety of lighting group sizes, source types and control scenarios. All load controllers communicate over DyNet.

This section contains more information about each controller type.

Relay Controllers

Relay controllers are used wherever simple on/off switching is required. Relays can switch a variety of loads, ranging from individual low-voltage lighting fixtures to warehouse/arena lighting and other load types.

Philips Dynalite relay controllers have been designed to cope with the high inrush current demands of lighting loads. Philips Dynalite also offers relay controllers that are capable of powering bi-directional motors, such as those used for blinds and curtains, and include low-voltage and dry contact interfaces for connecting to third-party devices and systems.

Phase Cut Controllers (Leading/Trailing Edge Dimming)

The Philips Dynalite range includes controllers for both leading edge (LE) and trailing-edge (TE) dimming. To ensure optimal performance, the correct control type must be properly matched to the lamp.

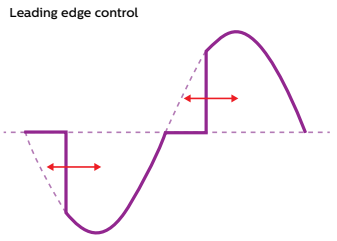
All Philips Dynalite phase cut dimmers use a range of features to reduce LED lamp flickering. Philips Dynalite prevents instability through the use of the most advanced supply parameter detection techniques, compensation algorithms and output driving electronics tuned for the modern demands of LED lighting.

Phase-cut dimming is the modification of the mains supply in order to regulate the power supplied to the lamps. This is achieved by ‘chopping out’ a varying section of each power cycle depending on the required dimming level. This method requires real-time measurement and detection of the mains supply. In order to do this, the dimmer unit must be able to accurately determine the 0 V crossover point without being affected by line noise. This is because the 0 V crossover point is what the dimmer bases its calculations on when driving the output channel.

To accommodate different lamps on the market, two types of phase-cut dimming controllers are available: leading edge and trailing edge.

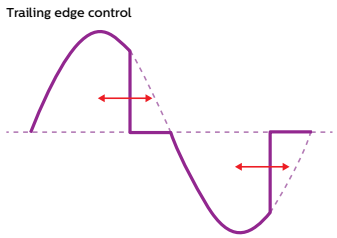
Leading Edge

For leading-edge (forward phase) dimming, the supply is stopped from the 0 V crossover point until the power remaining in the phase is correct for the desired dimming level. At this point, the dimmer switches the supply back on and allows it to flow.



Trailing Edge

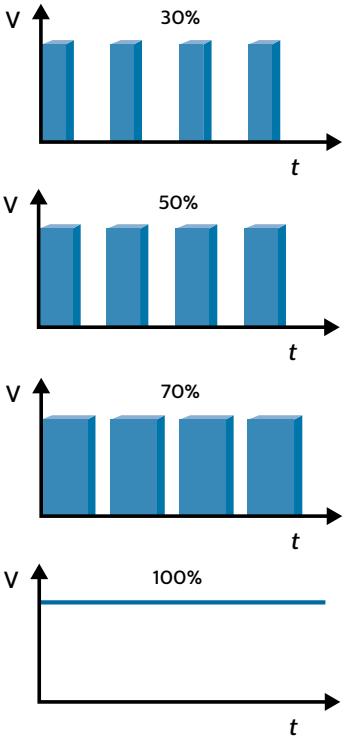
For trailing-edge (reverse phase) dimming, the supply flows through from the 0 V crossover point until the correct power is reached for the desired dimming level. At this point, the dimmer switches off the supply.



Note: Trailing edge controllers can be used on mains-voltage filament lamps and on most other electronic drivers, but not on iron core drivers. Philips Dynalite trailing-edge dimmers can detect when they are connected to highly inductive load and are designed to revert to switching mode to protect the dimmer circuit.

Pulse Width Modulation (PWM) Controllers

PWM is a dimming solution for directly driving LED fixtures and is especially suited to control of warm white/cool white and RGB color-changing applications. Philips Dynalite makes a range of controllers specifically for driving LED fixtures. All Philips Dynalite controllers are also DMX512 compatible and capable of driving sophisticated lighting displays.



Signal Controllers

Signal controllers use analog or digital signaling to control lighting drivers, which then switch or dim their lighting loads accordingly. Philips Dynalite controllers cater for a variety of signaling protocols, offering sophisticated and scalable control solutions.

Analog, 1-10 V

For 1-10 V lighting control systems, the load controller transmits a low voltage linear direct current (DC) signal. 1 V equates to 1-5% (minimal) lighting output; 10 V equates to 100% output.

All fittings on the same lighting group respond to the dimming instruction at the same time.

There is no error checking in this method. As any voltage induced on the control line is considered a correct signal by the fittings, the lamp cannot turn off completely using the control line alone. A relay can be controlled in parallel with the control signal to turn off the fittings completely.

The primary disadvantage of 1-10 V dimming is that you must separately isolate supply to each switched zone. Therefore, controllers range from 5 to 20 A per channel in both single and 3-phase supply. A dedicated power sub-circuit and a control pair connect to each zone of lighting. The controllers also provide the necessary mains switching relays as required in 1-10 V applications. De-rating must take into account inrush and operational current. For more information, refer to the installation guides for the fitting and the controller.

Another disadvantage of 1-10 V dimming is that the voltage drop on the control cable can affect the intensity of the lights.

The single pair data cable that controls 1-10 V drivers is also polarized. Accidental reversal of these cables to any single driver greatly reduces the dimming range of all connected drivers in the chain. If the chain is interrupted at any point, the fault-free side of the chain returns to full light output. There is no information fed back to the controller with this type of driver.

Digital Serial Interface (DSI)

For DSI, the load controller transmits a digital signal to the lamps. All fittings within one lighting group respond to the dimming instruction at the same time. As the signal is based on the Manchester code, which includes a discrete 'off' message, the lamps can be switched off through the control signal alone.

While this control protocol has been largely superseded by DALI, Philips Dynalite offers a variety of control solutions to support DSI lighting installations.

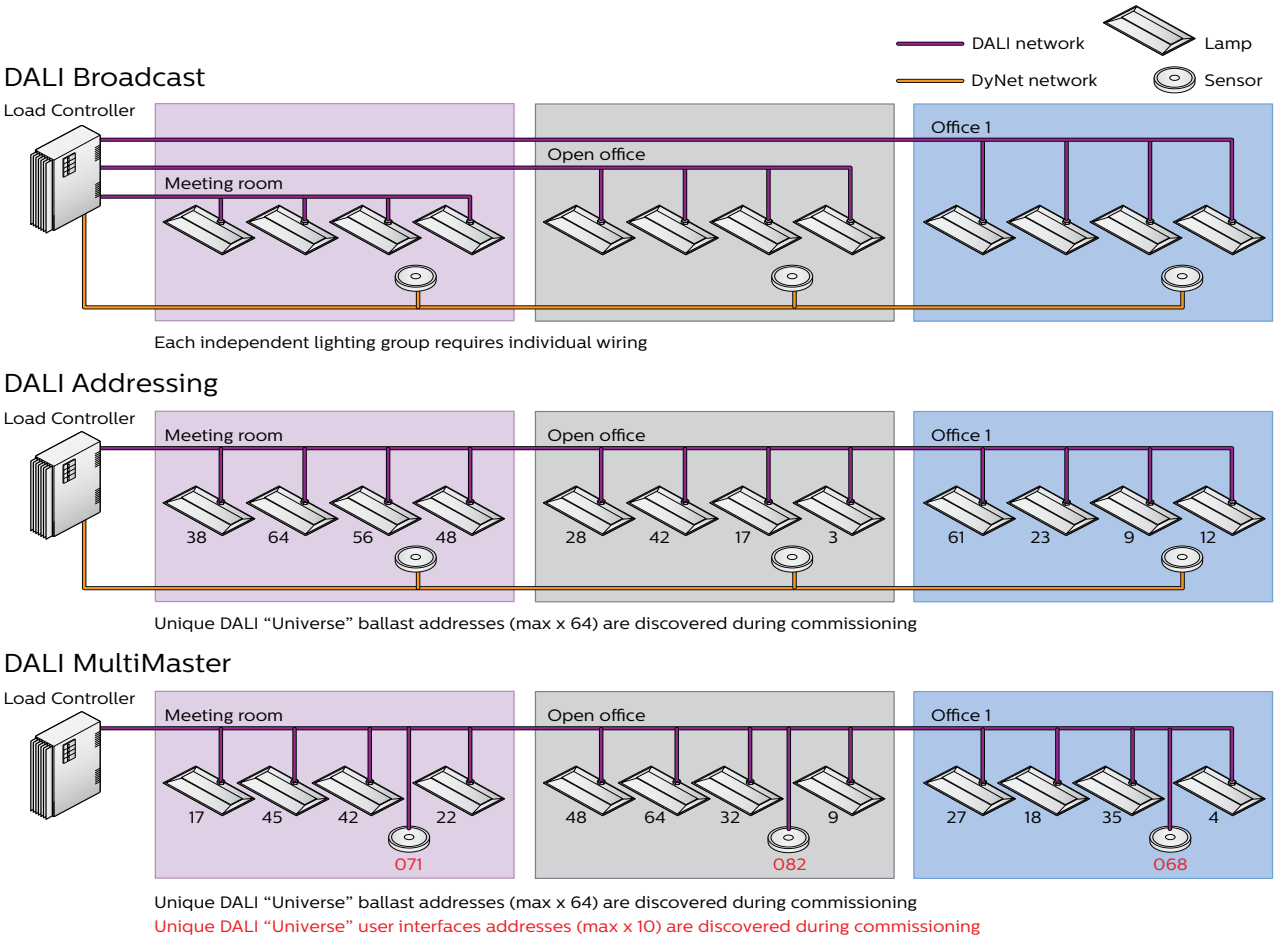
Digital Addressable Lighting Interface (DALI)

Building on the earlier DSI protocol, DALI extends the control system to each luminaire. Philips Dynalite offers a range of controllers capable of connecting DALI devices to the DyNet network, allowing full control of addressable lamps, addressable groups and broadcast groups, as well as relay-controlled power management (Green DALI) for increased energy savings.

All DALI capabilities can be accessed by our EnvisionProject commissioning software and EnvisionManager site management software, enabling detailed reporting, diagnostics and emergency lighting controls for DALI systems.

DALI distributes the control intelligence into each luminaire. This enables precise modular control when used in conjunction with appropriate Philips Dynalite systems. Each controller can communicate with a certain number of DALI 'universes,' or groups of up to 64 DALI lighting drivers. The input to these controllers is standard DyNet RS485, enabling seamless integration between the DALI devices downstream and a DyNet system upstream that could include intelligent wall-mounted control UIs, sensors and additional load controller types.

Philips Dynalite provides a MultiMaster controller that communicates to a single universe of DALI lighting drivers, sensors and UIs. This technology does not reduce the number of available DALI drivers with each additional sensor or wall mounted control UI on each bus, as it uses a different addressing method when communicating with UI devices. Refer to product data sheets for details.



DALI drivers are individually addressable, and Philips Dynalite DALI load controllers can send unique instructions about switching and luminance to each lamp, zone or universe from a single instruction. Some controllers are fully bi-directional, enabling critical status information from each luminaire to be reported to the DyNet network.

Circuit allocation and data wiring may be determined without reference to each other. The data cable is a non-polarized, two-core, mains-rated cable with a maximum network length of approximately 350 meters (1.5mm^2 cable).

During commissioning, up to 16 native DALI groups may be assigned. This information is stored in each DALI driver, as is the individual address, scene value and power on level. DyNet addressing can be used to create more groups, which are then mapped to specific DALI channels via the controller. Fade rates are very restricted in DALI, so they are managed by the more flexible DyNet system.

Philips Dynalite DALI load controllers can automate power supply management to the local universe by responding to the combined 'off' state of all drivers. When all lamps are dimmed to 0%, the device then electrically disconnects the active supply from the lighting group to eliminate standby power consumption by unused fixtures. This energy conservation measure can provide significant cost benefits in commercial installations where a large number of drivers are installed.

An inbuilt relay can control an external switching contactor for a multi-phase universe supply. Allow for a de-rating of at least 10%.

Load Compatibility

Load compatibility is critical when specifying lighting and corresponding control systems. This chapter deals with each of the common lamp types, associated control gear and control methods where appropriate.

Mains Voltage Incandescent Lamps (including tungsten and tungsten-halogen)

All mains voltage incandescent lamps can be dimmed using Philips Dynalite leading and trailing edge load controllers.

Use the following equation to calculate the connected load:

$$\frac{individual\ lamp\ wattage\ \times lamps\ in\ group}{supply\ voltage} = running\ current\ of\ the\ group$$

This indicates the required size of the dimming output channel miniature circuit breakers (MCBs). A 10-20% margin is suggested to avoid any possibility of 'nuisance tripping' of the breakers (especially in high-temperature areas). As these are primarily resistive loads, power factor remains at unity.

When specifying the current ratings of the lighting controllers, note the inrush current of cold filament lamps. This is usually in the region of 14 to 17 times the running current, but for a split second.

Philips Dynalite protected controllers are fitted with Type C MCBs. This means that in most cases it is possible to fully load the controller with no need to take account of de-rating. Philips Dynalite phase cut dimmer controllers are also fitted with a 'soft start' feature to protect lamps and reduce inrush currents.

Low Voltage Tungsten-Halogen, Halogen-Xenon, and Fluorescent Lamps

This category includes burner and reflector lamps, both dichroic and metal reflector types (MR11 & MR16). A wide variety of electronic driver types are commonly available. These should be selected carefully and matched to the appropriate controller type and capacity from the Philips Dynalite range. Common driver types include:

Electronic – Leading Edge Dimmable Drivers

These drivers are for low voltage lighting applications. If there are multiple drivers on a dimmed lighting group, this can initiate a substantial current spike when the circuit is switched on due to the cumulative effect of their input capacitors.

In general, leading edge (LE) driver losses are less than those of a traditional iron-core dimmer. See the "Best Practice for Dimming Low Voltage Drivers" section for additional precautions.

Electronic – Trailing Edge Dimmable Drivers

These drivers are intended for use only with trailing edge controllers. Their suitability is documented in literature provided with the driver, or they are labeled accordingly. This style of driver is typically smaller in size, making it more suitable for track-lighting applications or decorative low-voltage lamp fittings.

Electronic – Non-Dimmable Drivers

Non-dimmable drivers cannot be connected to a dimming controller unless the controller is configured for switched output only. Otherwise, damage to the driver may occur.

Electronic – DSI/DALI/1-10V Drivers

These drivers are operated in exactly the same manner as dimmable fluorescent electronic drivers. Refer to the Best Practice for Dimming Fluorescent Lighting section for more information.

Standard Iron Core, Wire-Wound

These drivers are wound onto an iron core. Toroidal drivers are popular for building into ELV downlights due to their physical shape. They are suitable for use with leading edge (LE) dimming controllers.

Best Practice for Dimming Low Voltage Drivers

Consider the following when dimming low-voltage drivers:

- Some drivers are not suitable for dimming. Please refer to the Philips Dynalite Driver Compatibility Guide under the “Technical Support” link on the Philips Dynalite website for further information.
- For effective phase control dimming, minimum loads may apply, depending on the driver type or load characteristic of the connected lighting fixtures. Lighting circuits comprising a single low voltage fitting of 20W or less may exhibit some instability for this reason. Please refer to controller data sheets or consult a Philips Dynalite representative for advice on minimum loads.

Four-wire drivers (DALI, DSI, and 1-10V) require a pair of cables for the control signal, in addition to the mains feed. You must observe local supply regulations when wiring mains and control cables, as the control terminals on the drivers or controllers are not rated as safety extra low voltage (SELV) and are not touch-safe. Never apply mains voltage to the control signal terminals or cables.

Best Practice for Dimming Fluorescent Lighting

There are many different fluorescent lamp types available. As a general rule, lamps with four pins are dimmable. Lamps with two pins and integral starters, with a domestic bayonet (BC) base, or with an Edison screw (ES) base are not dimmable. The dimming range of these lamps depends on the fluorescent driver connected to the lamp.

In new installations or when the lamps have been changed, the new lamps should be “burnt-in” by being switched on at 100% for at least 100 hours before any attempt is made to switch off or dim them. This improves the visual dimming performance and lamp life. Check with the lamp manufacturer for specific advice.

Because lamps of different types and wattages may have different dimming curves, do not mix fixtures with different lamp types on the same dimmer channel.

LED lighting

With the increasing rate of technological development on ultra-bright LED's, luminaires using these sources are becoming more common in architectural applications. There is now an extensive range of proprietary LED fixtures available in the market. Philips Dynalite LED controllers use the widely adopted pulse width modulation (PWM) technique to regulate the brightness of LED fixtures. This technique involves altering the on time duration of a clock or square wave supply to the fittings.

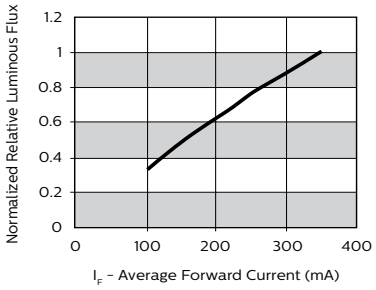
LED fittings generally incorporate a number of LEDs connected in a series-parallel circuit array. Make sure that you select the right kind of controller for your circuit type, particularly when you want to use dimming.

The following circuit design attributes are used to classify an LED fitting for controller selection:

- **Mode**: This relates to how LED current is controlled. Voltage mode fittings incorporate integral current limiting devices and are designed for direct connection to a nominal supply voltage. Alternatively, current mode fittings cannot limit current and therefore must be connected to a constant current supply.
- **Rated Input**: This includes nominal supply voltage and current.
- **Configuration**: This applies to multi-channel fittings (i.e. RGB) designed for color mixing applications, and designates whether the channels are internally connected as common anode or common cathode.

Philips Dynalite has developed dedicated LED controllers that cater to a wide range of fitting design types. Mains voltage LED fittings are also available.

The light output level or brightness of an LED is directly proportionate to the magnitude of forward current (IF).



LEDs are designed to deliver optimum performance at their rated current. Typical nominal current ratings for LEDs used in fittings range from 20mA to 350mA. Some ultra-bright LEDs have nominal current ratings up to 1A.

The current through an LED should never exceed the device's rating. Otherwise, permanent damage may result. For this reason, take care to correctly match and configure LED controllers and fixtures.

Some mains voltage fittings include an integral regulating power supply that can produce a control input signal such as 1-10V and DALI. Philips Dynalite driver controllers may be readily used for these types of fittings in the same way as an electronically dimmable fluorescent luminaire. Mains voltage LED fittings without a control input may also be connected to a relay controller when only simple on-off control is required.

Some mains powered LED fittings are compatible with leading or trailing edge dimming technologies. Ensure that the fittings are compatible before selecting a dimmer type. Some LED fittings have a reduced dimming range and may produce a "flicker" when dimmed.

Some Philips Dynalite phase cut dimmers employ editable dimming curves to compensate for LED logarithmic dimming nature. Also a range of features reduce LED lamp flickering. To promote dimming stability, Philips Dynalite uses the most advanced supply detection techniques, compensating algorithms and output driving electronics tuned for the modern demands of LED lighting. Embedded active loads can also be used to correctly drive the dimmer output to ensure continuous smooth operation. If a unit does not support internal active load technology, an external option is available.

LED Lamp Compatibility Tables

When dimmed, LED lamps may become susceptible to a temporary or permanent flickering. Selecting the right lighting controller for the LED lamp prevents flickering. Philips Dynalite performs regular testing of its dimming controllers with Philips LED lamps and publishes the results online.

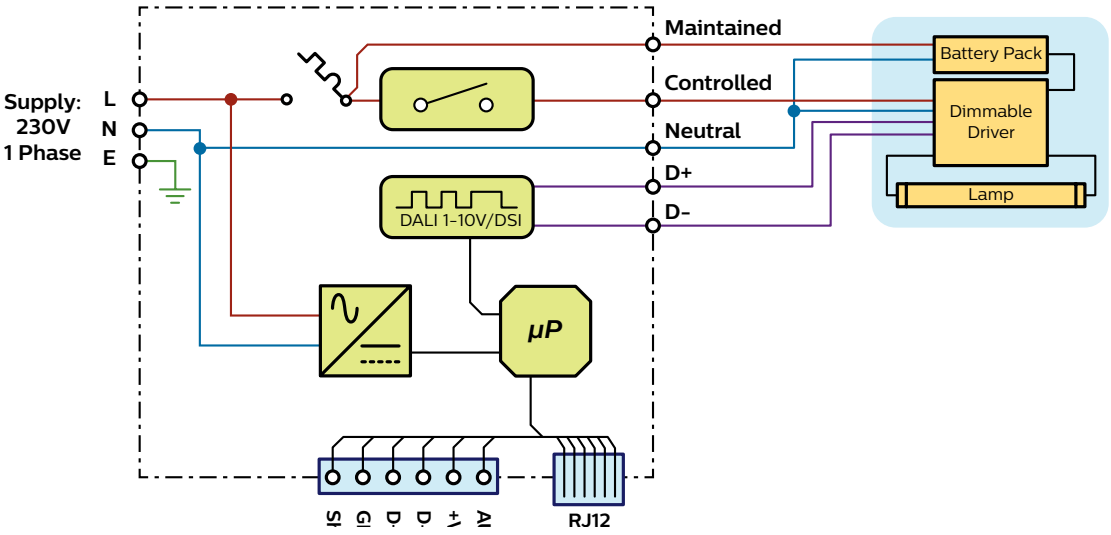
A PDF copy of the latest compatibility table is available at the link below, or by navigating to the “Technical Support / Compatibility Chart” section of the Philips Dynalite website.

http://philips.to/1gk3OqY

Emergency Lighting

Maintained Luminaires

An example of an exit or emergency luminaire is shown below. In this example, the lamps used for emergency lighting also operate under normal supply. The lamps used in these luminaires often have a dimmable driver, and can be controlled in the same way as a normal dimmable luminaire.



Maintained luminaires have two line inputs. The normal line input is connected to the controlled lighting output of the load controller. The maintained line input is connected to the load side of the load controller’s circuit breaker (also referred to as permanent power), which supplies power to charge the internal battery and to signal the lamp to turn on when the power is cut off. In this example, the maintained luminaire is also used for normal lighting. Its driver is dimmable, so signal control lines are shown.

DALI Emergency Reporting

DALI is the de facto industry standard for emergency lighting control and is fully catered for by the Philips Dynalite DALI controller range. The DALI emergency reporting feature in EnvisionManager and EnvisionProject allows users to schedule system tests and report the status of emergency drivers that are present on the DALI network. This feature puts the emergency drivers into a self-testing mode to confirm they operate correctly on battery power.

EnvisionManager allows users to:

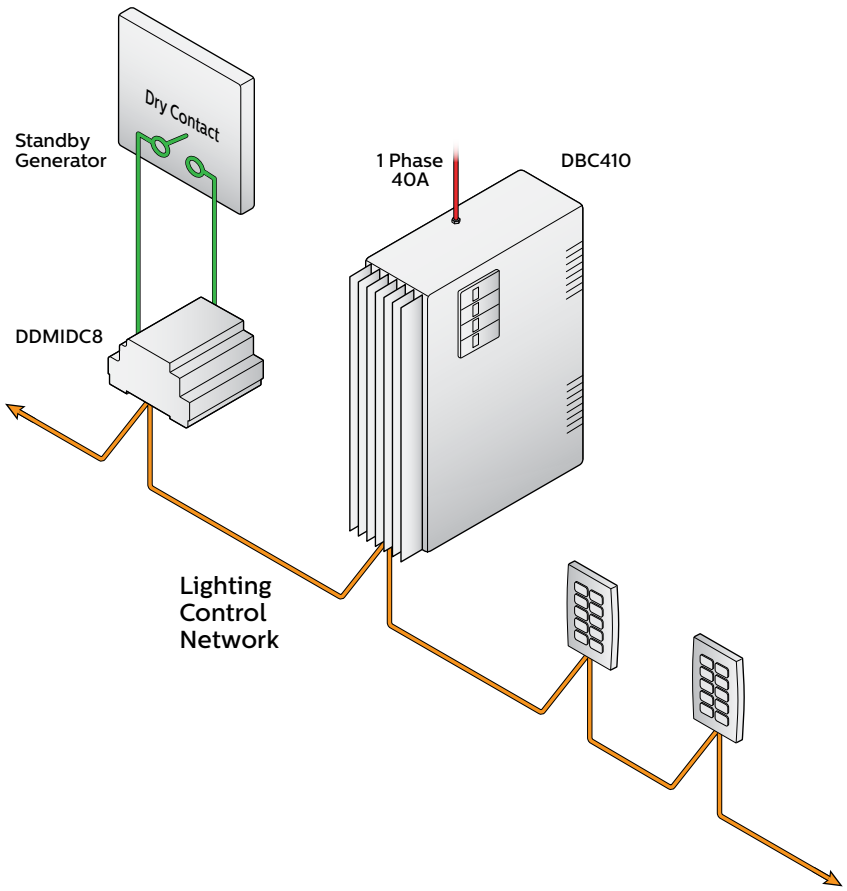
- Manage emergency fixtures
- Schedule or manually start emergency tests
- Generate emergency fixture test reports
- Query emergency test results.

Essential Supply Load Shedding

Some sites are equipped with a standby generator that starts automatically upon failure of the normal supply. After specified parameters are reached, all or part of the site is switched from the normal supply circuit to the generator output. This results in the site being re-energized 10 to 20 seconds after a normal supply failure. The standby generator is often coupled with an uninterruptible power supply (UPS), which ensures that the power doesn't drop out during the changeover period. In theory, the lighting system should operate as it would on normal supply, but in practice you may want to modify its behavior. Two common reasons for doing this are:

- The standby generator does not have the power capacity required to operate the entire site normally. In this case it is desirable to place the lighting system into a load shedding mode.
- The site should not be occupied while normal power is not available. In this case it is desirable to place the lighting system into an egress mode.

To change the operating mode, the lighting system must receive input to tell it that the generator is now online. This is typically carried out via a dry contact output that is activated when the generator is online (or sometimes via a relay that is activated when the normal supply fails), providing a dry contact signal to an input unit on the lighting control network, such as a DDMIDC8 Multifunction Input Interface. Once the dry contact signal is detected, the input interface then transmits a network message along DyNet to activate the required load shedding.



Load Shed Mode

The dry contact input interface can instruct all load controllers to use a set of load shed presets instead of the normal presets. In the example below, a room has two lighting channels and a control UI that recalls four presets:

UI	Normal Presets			Load Shed Presets		
HIGH	1	CH1= 100%	CH2 = 100%	5	CH1= 60%	CH2 = 20%
MED	2	CH1= 70%	CH2 = 70%	6	CH1= 60%	CH2 = 20%
LOW	3	CH1= 40%	CH2 = 40%	7	CH1= 40%	CH2 = 20%
OFF	4	CH1= 0%	CH2 = 0%	8	CH1= 0%	CH2 = 0%

During normal operation, presets 1-4 are recalled from the control UI. In load shed mode the input interface uses a DyNet feature called 'Preset Offset', which instructs the load controllers to recall presets 5-8. This function can target a single room, a group of rooms, or the whole site. If no lights should be on in particular rooms during load shed mode, then all load shed presets are set to 0%. This method has the advantage of minimal impact on the site, as lighting levels in particular rooms are not disturbed if they are already off or at low levels.

Egress Mode

Additional requirements of the project could include locking out user interface devices such as wall mounted UIs, touchscreens, motion detectors etc., to prevent occupants from interfering with the required action and selecting a pre-defined global egress lighting preset to illuminate egress paths and reduce lighting in workspaces. This alerts occupants that something is wrong.

When normal power is restored, the input interface restores normal control functionality by sending out a follow-up network message returning the lighting control system to normal operation.

Integration

Philips Dynalite control systems integrate with third-party systems and devices – such as HVAC, security, AV, blinds and building management systems – over a variety of protocols. This feature consolidates operations for the user and empowers site managers to easily coordinate lighting and integrated services across the entire site. The following list provides an overview of the most common third-party protocols and systems.

Dry Contact/Analog

Dry contact interfaces allow low-level integration between DyNet and third-party systems for simple relay-style switching to trigger a task, event or preset.

Analog signaling (using 0-5V or 1-10V) enables a greater level of control, with up to 100 discrete voltage steps triggering required presets, dimming levels or other commands.

Input

Dry contact input can come from a variety of sources, ranging from reed switches or dedicated button keypads to third-party sensors or fire/security alarms.

Dedicated dry contact input is most commonly handled by a dry contact gateway (DPMI940), available for DyNet or DALI, which provides four fly leads for connection to multiple switches or devices. Each input can be configured to trigger a different task, event or preset. The DyNet dry contact gateway can also power and monitor compatible third-party motion sensors. This option is primarily used where Philips Dynalite sensors are not suitable, such as in exposed outdoor areas.

Philips Dynalite also includes auxiliary dry contact inputs on many of its controllers and gateways. These inputs are generally more limited in use than the dedicated gateways and require a short cable length (<10 m) to operate effectively.

Analog input is catered for by the low level input integrator (DDMIDC8), which has eight digital inputs and four analog inputs. Each digital input is hardware-configurable to dry contact or 0-24 V AC/DC, while the analog inputs can accept either 0-5 V or 0-10 V. The analog input settings are configured through EnvisionProject.

Output

Philips Dynalite provides output to third-party dry contact interfaces via relay controllers, which have eight to twelve outputs per device. These outputs can be programmed in EnvisionProject to be triggered by events on the DyNet network, such as button presses, motion sensor activation, timed events, or automated tasks.

Analog output is handled by any of Philips Dynalite's 0-10V-compatible signal dimming controllers. Since the signal is the same regardless of the receiving device, these controllers can just as easily be connected to dimmable lamps or to third-party systems. The controllers are configured in EnvisionProject to send the appropriate voltage signal as part of a preset or in response to any event on the DyNet network.

When connecting DyNet controllers to third-party devices, ensure that safety isolation requirements are met.

Further Information

While the principles behind dry contact and analog signaling are simple, the range of potential applications is huge. Contact your local Philips Representative directly to discuss a tailored solution to your specific requirements.

RS485 - Blind Control (Somfy)

Purpose

The DyNet to Somfy Gateway is configured to allow communication between the Dynalite system and Somfy blind control systems over RS485.

Description

The Somfy to DyNet gateway can connect to multiple Somfy motors to control up to 64 addresses. The addressing limit is shared between motor addresses and group addresses, so it is best practice to use less than 64 motors per gateway.

Somfy controllers can have up to eight addressable groups (also called device group nodes), which can be addressed by a single DyNet message.

Up-down motor control for each blind is mapped to DyNet channel levels. Area presets can also control motors by mapping them to intermediate positions and using the following preset overrides:

- Full motor preset – motor to 100%
- Off preset – motor to 0%
- Stop motor preset – motor stop

On the Somfy side of the gateway, each address corresponds to one Somfy motor, either a single motor or a group address representing a number of motors. Depending on the attached interface, multiple motors can be assigned to each channel so they act in unison.

Physical connections

The gateway has two RS485 ports. Port 1 is used for DyNet communications and power, while port 2 is connected to the Somfy controller (Data+/- and GND only).

Further Reading

For more information, please refer to the DyNet to Somfy Commissioning Guide, available from Philips Dynalite.

RS485 - DMX512

Description

DMX512 (also called DMX or Digital Multiplex) is a digital communication standard commonly used to control stage lighting and effects such as dimmers, fog machines and RGB lights. The use of DMX has also expanded into non-theatrical interior and architectural lighting.

DMX employs unidirectional communication when connected to DyNet. Note that when connected to DyNet via a gateway, DMX messages take priority over DyNet messages. DyNet communications resume after the DMX transmission is complete. If a DMX source is connected directly to a load controller, that load controller ignores all DyNet traffic except for panic and unpanic messages.

Purpose

The Philips Dynalite system caters for DyNet-to-DMX and DMX-to-DyNet device control using the following devices, which can be configured for DMX using EnvisionProject. Each controller or gateway can be configured to either receive or transmit DMX data.

Device	Receive (RX)	Transmit (TX)
All load/relay controllers and signal dimmers	Yes	No
DDMC-GRMSPLUS Hotel Room Controller	Yes	Yes
DNG485 / DDNG485 Network Gateway	Yes	Yes

NOTE: DMX uses significantly more bandwidth than DyNet for dimming control. For this reason it is advised to connect DMX controllers directly to a Philips Dynalite load controller wherever possible, rather than using a gateway, to minimize the impact on the DyNet network.

The GRMSPLUS and DNG/DDNG485 can also translate and transmit messages from DyNet to DMX, bringing the full power of DyNet automation and control to any device that accepts DMX commands.

Physical connections

DMX equipment employs a five-pin XLR connector, the first three of which are connected to the Dynalite device:

1. Signal Common/Ground
2. Data 1- (Primary Data Link)
3. Data 1+ (Primary Data Link)

On the GRMSPLUS, the 3-wire DMX cable is terminated to GND (SGND), D+ and D-on the dedicated 3-pole DMX port.

On standard 5- or 6-pole DyNet terminals, such as that found on the DDNG485, the same principle applies as above, with the remaining poles left unterminated (Shield, V_{CC} and Aux). See the relevant datasheet for more information on specific device terminals.

NOTE: To ensure compliance with the DMX standard when DyNet is used to transmit DMX messages, connect the ground (GND) terminal directly to the DMX cable shield with a wire link.

RS232

RS232 is an older standard for wired serial data communication, used in devices such as audio-visual and medical equipment.

Philips Dynalite offers a range of RS232 gateways for different applications. These gateways are highly versatile and can be customized for use with any standard RS232 device for which codes are available. Custom ASCII strings are configured with tasks in EnvisionProject during commissioning.

Due to the wide variety of manufacturers and products that use RS232, we take a proactive role in ensuring smooth integration with our gateway devices. For specific requirements or more information, please contact a Philips representative.

LonWorks

Description

LonWorks (also referred to as LON – Local Operating Network) is a networking platform created by Echelon Corporation for controlling the BMS and automating functions within buildings, such as lighting.

The DDNI-LON is a gateway between DyNet and LonWorks. The DDNI-LON supports preset control for 100 presets per area across up to 30 areas. Multiple gateways can be used together to accommodate larger or more complex DyNet networks.

Physical connections

The DDNI-LON is DIN rail-mounted. It connects to the LON network via twisted pair and to the DyNet network either via Ethernet (using an EnvisionGateway device) or RS232 (using a DTK-622-RS232 gateway).

BACnet

Purpose

The Philips Dynalite DDNG-BACnet-1000 is a network gateway that allows communication between a building management system (BMS) using the BACnet protocol and DyNet. This gateway between the two systems allows high-level communication, thereby opening up a number of integration opportunities.

The BACnet gateway allows the BMS to trigger tasks and time-based events in the Philips Dynalite system and enables the Philips Dynalite system to report back current system status.

Physical connections

The BACnet gateway can be wall- or DIN-rail-mounted. It connects to the BMS via Ethernet and to the DyNet network either via Ethernet (using an EnvisionGateway device) or RS232 (using a DTK-622-RS232 gateway).

Data Points

A data point (also referred to as a 'control point' in BACnet literature) is any single metric controlled or reported on from DyNet.

Function	Point Type	Read/Write	Points
Preset control	Logical	R/W	1 point per area
Preset Active	Logical	R/W	1 point per Preset
Fade Control	Logical	R/W	1 point per Preset
Channel Level control	Logical	R/W	1 point per channel in an area
Absolute HVAC temperature control	Logical	R/W	2 points per area (setpoint and actual temperature)
Relative HVAC temperature control	Logical	R/W	2 points per area (setpoint up/down and setpoint accumulated nudge)
Sensor light control	Physical	R	1 point per sensor in an area
DALI Ballast Status	Physical	R	1 point per ballast in an area

The BACnet gateway supports up to 1000 BACnet-addressable data points. Installations with more than 1000 points can use multiple gateways. Philips Dynalite can also supply a licensed DyNet/JACE driver to enable communication between DyNet and third-party SoftJACE server platforms.

For DALI installations where each luminaire must be controlled separately, reserve four data points per DALI luminaire, allowing for a maximum of 250 DALI drivers per 1000-point gateway when using both channel level and ballast status functions.

For non-DALI lighting, only one data point is required per area for preset control and one data point per channel for channel-level control.

Further Reading

Further information on BACnet integration can be found in the BACnet Gateway Commissioning Guide, available from Philips Dynalite.

TCP/IP (EnvisionGateway)

Purpose

The Philips Dynalite EnvisionGateway is a DIN-rail mounted Ethernet gateway that enables the integration of the Dynalite system to IP-based systems.

Physical Connections

The EnvisionGateway connects to DyNet over RS485 via its RJ12 socket or terminal strip, and to Ethernet via an RJ45 socket.

Trunk and spur topology

In a typical application, such as a high-rise office building, each floor will have its own Philips Dynalite system operating independently, referred to as a spur. On each of these floors, the network uses DyNet RS485

for communication between devices. To coordinate the different floor systems, each of the spurs can be linked together via Ethernet using EnvisionGateways. A high speed Ethernet trunk is run between the floors of the building, allowing for site-wide commands to be sent from anywhere in the system.

The trunk and spur model also caters for applications where the distance between Philips Dynalite devices exceeds the RS485 network limit, such as interconnecting separate buildings or linking control centers in a tunnel. These distances can be overcome by running fiber-optic cables between the sites and connecting them via Ethernet gateways.

Control Interfaces

The EnvisionGateway features an inbuilt web server, providing remote control of a site via a configurable web interface or with the EnvisionTouch/ DynamicTouch apps. The remote control functionality can be used from external locations by making the gateway visible on the network. The system can be locally controlled using iOS and Android devices.

EnvisionSuite connectivity

While a PC running EnvisionProject and/or EnvisionManager can connect directly to DyNet via a USB gateway, using an Ethernet gateway enables access from anywhere on the local network, or even from a remote location via the internet or a VPN connection.

EnvisionManager can use distributed client software such as EnvisionSwitch, which provides occupants of an open plan office with control over their local environment using their PCs. It uses the existing LAN to communicate with the EnvisionManager server. When used for occupancy detection, it provides additional cost benefits by cutting the need for extra physical sensors or control UIs and reducing unnecessary lighting and HVAC operation.

Third-party integration

EnvisionGateway connect DyNet to a BMS that uses an Ethernet physical layer. However, specific implementations vary. If your BMS or protocol is not mentioned in this document, contact your local Philips representative for further information.

Further reading

Further information on the EnvisionGateway can be found in the EnvisionGateway Commissioning Guide, available from Philips Dynalite.

OPC (Open Productivity & Connectivity)

Description

OPC refers to a collection of standards maintained by the OPC Foundation for open connectivity of industrial automation devices and systems. OPC standards are used in a variety of applications, including real-time data access, alarm and event monitoring, and historical data access.

Philips Dynalite supports the OPC Data Access and OPC Alarms & Events datasets for connection between EnvisionManager and compatible building management systems or OPC clients on the same network. This connection is handled via an OPC proxy server, which can be selected in the EnvisionManager installer.

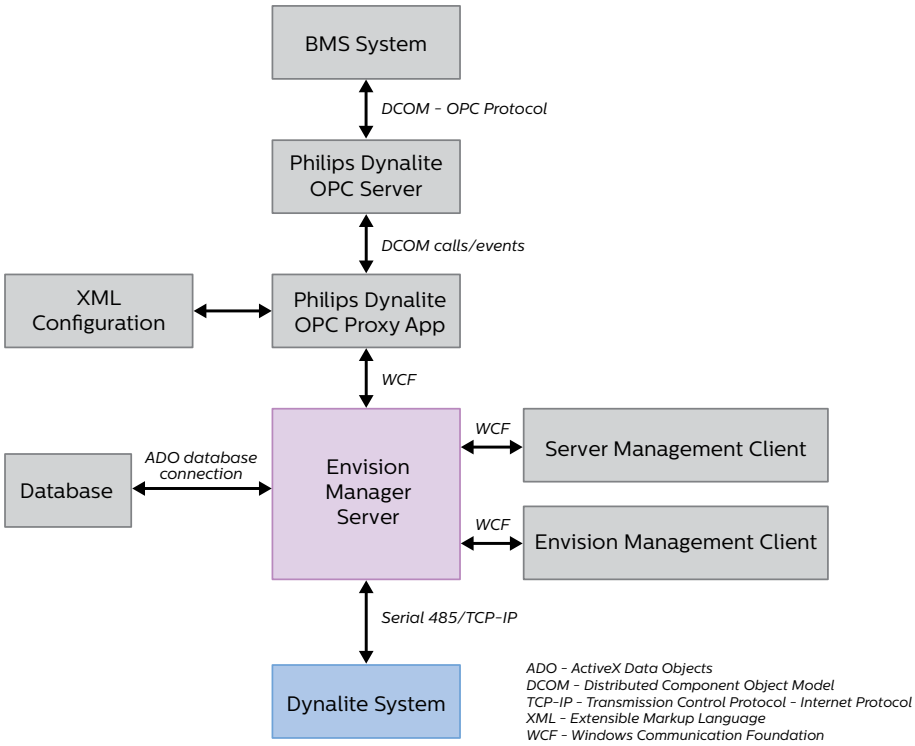
Purpose

The OPC proxy server allows a client to remotely change the preset for an area in EM, and to report on the following metrics:

- Current Preset
- Device Online/Offline
- Lux Level
- DALI Driver Status
- DALI Lamp Status
- Lamp Runtime
- Lamp Name
- Device Offline Alarm
- Driver Status Alarm
- Lamp Status Alarm

Communication model

The diagram below shows the interaction between the Dynalite system, EnvisionManager, the OPC server and proxy application, and the external BMS.



Limitations

Note that DALI MultiMaster user interface devices (sensors and dry contact switches) are not supported by the EnvisionManager OPC proxy server and are not visible to the OPC client or building management system (BMS).

Further Reading

More information on OPC integration can be found in the EnvisionManager OPC Proxy Server Commissioning Guide, available from Philips Dynalite.

Infrared

Infrared reception

Philips Dynalite sensors can be used to receive infrared (IR) signals. The DTK500 hand-held remote control can send IR codes that are received by the sensors and translated into DyNet messages. These DyNet messages can then recall a lighting scene or trigger a complex task. They can also be translated into other formats via network gateways to control third-party devices.

Infrared transmission

The DIR-TX8 IR transmitter is an 8-channel device commonly used to integrate equipment with an IR port, such as AV controllers and air conditioners, with the DyNet network. These IR transmissions can be triggered from any Philips Dynalite user interface, such as a control UI or a motion sensor. The inbuilt task engine enables multiple IR codes to be transmitted at once.

The IR transmitter uses up to four 2-channel IR emitter LEDs. Each LED is affixed to the IR window of a receiving device. Each emitter includes two IR LEDs, connected to a two-meter lead and terminated with a 3.5mm plug, which is plugged into the IR transmitter. Multiple channels allow the IR transmitter to send individual codes on each channel, which eliminates problems where different components share the same code. The IR transmitter can record and store macros that are executed in response to DyNet messages on the RS485 network.

More Information

You can load IR code data into a sensor using EnvisionProject. Most manufacturers' IR codes are freely available from Remote Central:

- **www.remotecentral.com/cgi-bin/codes/**

Alternatively, contact your local Philips Representative directly to discuss your specific requirements for IR integration.

KNX

Description

KNX is an open standard protocol for intelligent buildings, developed in Europe in the late 20th century. The KNX standard is supported by a large network of contractors, planners, integrators, and manufacturers around the world, and it caters for a variety of different device types. The Philips Dynalite system is compatible with KNX devices from Philips and third-party manufacturers, and devices from different manufacturers can be used in the same network.

Purpose

The DDNG-KNX gateway connects the Philips Dynalite system to a KNX system so that the systems can control each other. For example, a Dynalite system installed in a building can control multiple niche KNX applications or connect to a KNX-based building management system (BMS).

The gateway maps control commands and sensor data between the KNX and DyNet protocols and can be commissioned without the need for the KNX Association's ETS commissioning software.

Physical connections

The gateway connects to DyNet for power and data via its RS485 port, and to the KNX network over twisted pair via its KNX port.

The gateway also includes an auxiliary dry contact input switch that can be configured to perform a function on either the DyNet or KNX network.

Available datapoint types (DPTs)

The following DPTs can be mapped between the Dynalite and KNX systems:

- 1.004 (1) – Ramp
- 1.010 (1) – Start/Stop
- 2.004 (2) – Ramp Control
- 3.007 (4) – Control Dimming
- 5.001 (8) – Scaling
- 17.001 (8) – Scene Number
- 7.005 (2) – Time Period in second
- 9.001 (2) – Temperature
- 9.005 (2) – Speed
- 9.007 (2) – Humidity
- 9.021 (2) – Current
- 10.001 (2) – Time
- 19.001 (2) – Date and Time
- 1.003 (1) – Enable/Disable
- 1.007 (1) – Step
- 1.022 (1) – Scene AB
- 2.007 (2) – Step Control
- 3.008 (4) – Control Blinds
- 5.004 (8) – Percent
- 18.001 (8) – Scene Control
- 7.007 (2) – Time Period in hour
- 9.004 (2) – Light Level
- 9.006 (2) – Pressure
- 9.020 (2) – Voltage
- 9.024 (2) – Power
- 11.001 (2) – Date

Commissioning requirements

There are a few important points to consider before attempting Dynalite/KNX integration:

- All KNX devices (except for the DDNG-KNX gateway) must be configured using the KNX Association's ETS commissioning application. However, the DDNG-KNX gateway does require ETS to set an individual address.
- KNX group addresses, data types and commands/messages must be known in order to map them to their DyNet equivalent. Due to the complexity of KNX addressing and commissioning, you should keep detailed records of each KNX device's configuration.

Further Reading

Detailed information on the DDNG-KNX and general DyNet/KNX integration can be found in the KNX Gateway Commissioning Guide, available from Philips Dynalite.

www.philips.com/dynalite

www.philips.com/dynalite

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TECH-0102-1015-AZZAUS-1K