

Controls Product Guide

interact

dynalite CD

Signify offers controls solutions for any requirements and budget

Benefits of Signify lighting controls

Energy savings – By using intelligent lighting systems features such as Adaptive Dimming and Dwell Time, lighting is only used when needed and adapted to occupancy patterns. Natural light is harvested, and supplementary lighting is adjusted accordingly, resulting in optimized environmental performance and minimized operating and maintenance costs.

Scalability – Signify control solutions adopt a flexible approach to accommodate building growth or churn – accommodating a building journey to be smarter, connected and adaptive to changing tenancies, staff numbers and space reformation. The same components can be used in a single-room application or in larger projects involving thousands of controlled units.

Ease of installation and configuration – Both Philips Dynalite and Interact Pro systems are easier to install and take less time to configure than conventional technologies, allowing customers to activate the project quickly and in a cost-effective manner.

Code compliance – Whether it is Title 24, IECC, ASHRAE or Well Building standard, Signify control solutions are up to date with the latest building code. See product specifications for compliance details.

Preset lighting control – This is more than just on/ off lighting control. Signify control solutions allow you to create ambiance and recall different lighting scenes to suit your mood and the occasion. **Distributed control and monitoring** – With logic being distributed between various devices in the network, there is not a single point of failure. Moreover, you can configure, control and monitor all the lights and system components by adding network gateways.

Flexibility in design – When layouts or control methods require modification, changes can be carried out via a simple configuration tool, allowing facilities to easily adjust and respond to changing times.

Advanced integration into other systems – Signify control solutions offer a range of integration devices, network gateways and APIs to integrated lighting and work in conjunction with other systems, such as building management systems, access control, fire and safety systems etc.

Human Centric Lighting – With the combination of tunable white technology and smart controls, get the freedom to create different ambiances in offices, schools, retail spaces and healthcare environments. Create personalized lighting to match the activity or enhance the atmosphere in the space. Moreover, automatically mimic daylight patterns by adjusting color temperature and brightness levels with respect to time of day for optimal visual comfort.



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Interact is a scalable system that offers luminiare integrated connected sensing technology, making it easier for you to take the leap from smart lighting to super smart lighting.

Why choose Interact?

- A simple wireless system with a tiered approach to suit your specific needs.
- Out of the box energy savings of up to $75\%^2$ and up to $85\%^3$ with gateways*
- · No gateway, no IT support required
- · No light point restrictions, no extra wiring
- Protect your day 1 investment and scale up to the next tier without replacing or retouching your day 1 lighting setup
- DLC and code compliant [ASHRAE 90.1 (2019), T24 (2019) and IECC (2018) building codes]
- · Fast and easy commissioning and start up
- <u>Adaptive dimming</u> and <u>dwell-time</u> features enable the system to adapt to occupancy patterns in real time

 delivering deep energy savings while maintaining occupancy comfort levels
- For more information go to: <u>www.interact-lighting.com/interactproscalablesystem</u>

philips dynalite ())

When you choose Philips Dynalite, you are selecting the world's finest lighting control system. Tried and tested in more than 30,000 projects, Philips Dynalite has implemented some of the largest and most extensive control networks around the globe. The same robust technology can be used in any application, on any scale.

Why choose Philips Dynalite?

- Up to 85% energy savings with a distributed networked controls approach^{2,3}*
- True hybrid system allowing for 0-10V, Phase cut, PWM, DALI, DMX, switching all dimming options from one system
- Highly configurable achieve any combination of sophisticated outcomes customized to the exact needs of each living space
- Get pre-configured room automation features
- Many different user interfaces from which to choose, supporting custom engraving to match your needs
- Operate as standalone or network your entire building for central management
- DLC and code compliant [ASHRAE 90.1 (2019), T24 (2019) and IECC (2018) building codes]
- For more information go to: <u>www.dynalite.org</u>

interact

A simple connected lighting offering thats makes your smart building journey easy and cost effective

Wireless

Start simple and lay the foundation

- Smart lighting with luminaire integrated occupancy and daylight sensor
- Simply connect the Interact Ready luminaires, retrofit kits and lamps with the intuitive Interact Pro app through a Bluetooth connection.
- Add sensors, switches, 3rd party 0-10V or phase dimming luminaires.
- Set-up is simple and straightforward, just like SpaceWise: no need for additional wiring or access to the building's internet connection.
- Save up to 80% on installation and material cost compared with more complex systems.¹
- Boost energy savings up to 75% with the unique adaptive dimming and dwell time features.²

Scale up for more benefits by adding a gateway

- Instant access to cloud-based benefits and functionality such as scheduling, remote access, adaptation and energy monitoring, light point information regarding lifetime and health, as well as regular feature updates.
- Integrate with utilities for Open ADR based demand response strategy
- As your system grows, you can keep and build on all previously installed light points.

Tap into the full potential of the IoT

- Access to occupancy, asset health and environmental sensing data
- Optimize workspace quality, improve safety and productivity and boost employee engagement – even across multi-sites.
- Unlock more savings with BMS integration
- Minimize waste with real time way-finding and desk/room booking tools







¹Compared to installation of wired networked lighting control systems.

² Based on installation in the GSA-operated Metcalfe Federal Building located in Chicago, Illinois. This project was installed under the GSA Green Proving Ground Program. https://www.assets.signify.com/is/content/Signify/Assets/philips-lighting/united-states/20201013-gpg-findings-integrated-with-alc.pdf
³ Additional savings derived from HVAC, plug load control integrations and optimizing performance based on usage trends.

Functionali	ties overview		Gateway Connected		
		Standalone	Option 1	Option 2	
	Integrated occupancy and daylight sensing	\checkmark	\checkmark	\checkmark	
	Manual ON	✓	\checkmark	\checkmark	
	Partial automatic ON	\checkmark	\checkmark	\checkmark	
	Multi-level continous dimming	✓		\checkmark	
	Automatic shut-off control	✓		\checkmark	
Meet building	Automatic daylight responsive control	✓	<u> </u>	\checkmark	
coues	Dimming, daylight harvesting & occupancy controls	✓	~	✓	
	Automatic receptacle control (Plug load control)	✓	~	✓	
	Outdoor Parking Sensor*	✓	~		
	UL924 Emergency	✓	~	\checkmark	
	Automatic Demand Responsive controls (Open ADR)		~	✓	
	Networking of luminaires and devices	\checkmark	\checkmark	\checkmark	
	Luminaire Level Lighting Control (LLLC, integrated)	✓	\checkmark	\checkmark	
Comply	High-end trim	✓	\checkmark	\checkmark	
with DLC	Zoning	✓	~	\checkmark	
	Individual addressability	✓		\checkmark	
	Cybersecurity	✓	~	~	
	Adaptive dimming (light when you need it, where you need it)	\checkmark	\checkmark	\checkmark	
	Dwell time	\checkmark	\checkmark	\checkmark	
Maximize	BlueTooth (BLE) connectivity (for commissioning only)	\checkmark	\checkmark	\checkmark	
energy	Scene control	\checkmark	\checkmark	\checkmark	
savings, rebates &	Personal control for a single user	\checkmark	\checkmark	\checkmark	
comfort	Energy reporting and export		\checkmark	\checkmark	
	Scheduling		\checkmark	\checkmark	
	Device monitoring/remote diagnostics		<u> </u>	~	
	Circadian lighting support	\checkmark	\checkmark	\checkmark	
	Remote management		\checkmark	\checkmark	
	Multi-site management		\checkmark	\checkmark	
	Floor plan visualization			\checkmark	
Powerd code	Occupancy analytics (heatmaps)			\checkmark	
Beyond Code	BACnet integration			✓	
	APIs (light control, occupancy, people count)			✓	
	Physically swap/upgrade sensors			~	
	Room booking via App (e.g. meeting room reservation)			\checkmark	
	Interface for Outlook and Google calendar integration			\checkmark	
InT	Desk booking via App			\checkmark	
	People estimation (via SC1500 sensor, and people counting supported via external PointGrab sensor)			~	
features	Temperature & humidity sensing (via SC1500 sensor)			\checkmark	
	Noise classification sensing (via SC1500 sensor)			 	
	Wayfinding via App				
	Indoor positioning SDK			✓	
	loT Apps: Kiosk App, Space Management App, Workspace App			\checkmark	

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Interact supported devices

Devices for standalone	behaviors			
1000				• • • •
Interact-ready wireless luminaires	Commissioning device (IRT9015)	Zigbee Green Power Switch and Scene Selector (UID8465/10)	Wireless scene switches (SWS200)	Battery powered wireless IP42 sensor*
			1° off	
Lumininare integrated sensor SNS210IA (SWZCS)	IP65 wireless occupancy sensor (LCN3110/05) IP65 wireless occupancy and daylight sensor (LCN3120/05)	Wireless switch relay controller (RFSR20)	UL924 shunt module (ER100/00)	Multi sensor bundle (SC1500)
0-10V or Phase control modules (SBAZ10-CS or SBAELS-CS)				
Add-on gateways for sy	stem monitoring	Software suite		
		4 Material 3 Material 4 Material 4 Material 5 Material 4 Material		
Wireless gateway for level 2 functionality (LCN1840/05)	Wireless gateway for level 3 functionality (LCN1850/05)	Interact Pro portal	Interact web software application	
Wireless gateway for demand response (LCN1870/05)		Space management and Workspace mobile apps	Interact Pro app for Android and iOS	

Interact system architecture for office, education, healthcare, retail and industrial applications



A one-stop solution with stand-alone or multi-system capabilities, featuring a strong hardware portfolio with maximum software and system integration flexibility.

Controls

Choose your desired level of control

- Save up to 75%² energy with occupancy and daylight sensor based controls. Up to 85%³ savings with integration to HVAC, plug load and other sub-systems.
- Independent functionality with distributed intelligence and no single point of failure.
- Integrate your lighting controls with HVAC, blinds and AV systems with a comprehensive range of integration devices.
- Be it DALI, 0-10V, DMX, relay or phase dimming, the system offers flexibility around multiple dimming protocols.
- Deploy as standalone controls or network multiple spaces together for central monitoring and management.
- Choose design options from the award winning <u>Antumbra</u> user interfaces for chic look and feel.

See how the hardware, protocols, and software work together with ease

 All Dynalite system components (hardware, protocols and software) directly complement each other, granting every device on the network access to all the system features and functions as needed.

Get the ultimate end-user experience with System Manager

- System Manager is the dedicated head-end software for Dynalite systems. With direct access and oversight across the entire system, this application presents the most advanced and powerful features in an intuitive and representative format, enabling true end-user ownership of system operations.
- It includes maintenance tools, detailed reports of energy usage, lighting status, and system performance, paired with an easy-to-use console and clear and concise floor plans.



² Based on installation in the GSA-operated Metcalfe Federal Building located in Chicago, Illinois. This project was installed under the GSA Green Proving Ground Program. https://www.assets.signify.com/is/content/Signify/Assets/philips-lighting/united-states/20201013-gpg-findings-integrated-with-alc.pdf
³ Additional savings derived from HVAC, plug load control integrations and optimizing performance based on usage trends.

Functionalities overview

		Controls	System Manager
	Ceiling and wall mounted occupancy and daylight sensing	\checkmark	✓
	Manual ON	\checkmark	✓
	Partial automatic ON	\checkmark	✓
	Multi-level continuous dimming	\checkmark	✓
Meet building	Automatic shut-off control	\checkmark	✓
00000	Automatic daylight responsive control	\checkmark	✓
	Automatic receptacle control (Plug load control)	\checkmark	✓
	UL924 Emergency	\checkmark	✓
	Automatic Demand Responsive controls (Open ADR)		✓
	Networking of luminaires and devices		
	High-end trim		
Comply	Zoning		
with DLC	Individual addressability		
		•	
			•
	Adaptive dimming (at an area level)	\checkmark	✓
	Tunable white and color control	✓	✓
Maximize	Dwell time	 Image: A second s	✓
energy	Scene control	 Image: A set of the set of the	✓
rebates &	Scheduling	 Image: A second s	✓
comfort	Personal control		✓
	Energy reporting and export		✓
	Device monitoring/remote diagnostics		✓
	BACnet integration		
	Advanced integration (A/V, blinds, motor etc.)		
	Multi-protocol support (DALL DMX_0-10V_phase)		· · ·
	Pre-configured solutions (eq. Room automation system, UVC controls)		
Beyond code	Multi-site management	• 	
	Floor plan visualization		
	Occupancy analytics (heatmaps)		
	User profiles and role based permissions		
	Temperature & humidity sensing (via Antumbra & Revolution UIs)	✓	✓
loT features	IoT Apps: iOS and Android	✓	✓
IOT Teatures	Remote upgrades: Software and firmware upgrades over the network		✓
	APIs (light control, curtain control)		✓

Wired

Controls

Dynalite controls devices

User interfaces									
		J							
AntumbraButtton (PAXBPA) AntumbraDis		splay (PADPA)	y (PADPA) AntumbraTo		Revolution Series (PDRxA)		DyNet Communication Module (DACM-DyNet)		Networked Touchscreen (PDTS)
Sensors									
							T		T
Multifunction Sensor (DUS360CR)	Multifunctio (DUS360CS)	n Sensor	Multifunction Sensor DALI (DUS360CS-D) (DUS804CS-UP)		Multifunction Sensor 90° (DUS90CS)		Multifunction Sensor 30° (DUS30CS)		
Relay controllers									
		and the second sec				-		Li Ti	
Multi-Protocol Switching Ro Controller (DDRC-GRMS-E)	oom)	4 Channel Re (DDRC420FR	nel Relay Controller 20FR)		8 Channel Relay Controller (DDRC810DT-GL)		12 Channel Re (DDRC1220FF		Relay Controller R-GL)
Power dimmers	Signa	al dimmers		-		-			
							A LITTLE ST		500
PWM Controller DALI-2 Driver Control (DDLEDC605GL) 1 DALI universe (DDBC		DILI-2 Driver Con C120-DALI) uiniverses (DDBC3		ontroller, 3 DALI Signal Dim 3C320-DALI) 5 Channe		nmer Controller, Sign I (DDBC516FR) 12 (nal Dimmer Controller, Channel (DDBC1200)	
Multipurpose contr	ollers							ł	
				and				ALL MALL	
Multipurpose Modular Controller + Control Modules (DDMC802)			Multipurpose Modular Panel + Control Modules Multipurpose Modular Panel + Control (DMC2) (DMC4)			el + Control Modules			

Integration devices					Electrical accessories		
and the second s							
RS-232 Network Gateway (DDNG232-NA)	BACnet Network Gateway (DDNG-BACnet)	Dry Contact Interface (DLL18180)	Interface Low Level Input Integrator (DDMIDC8-NA)		Network Power Supply (DMNP24040-P-NA)		DIN Rail Enclosure (DH2X24)
Network devices	-						
					10		
Ethernet Gateway - Supervisor (PDDEG-S)	Ethernet Gateway (PDEG)	RS-485/DMX512 Gateway (DDNG485-NA)	y PC Node (DTK622-US	PC Node (DTK622-USB-J-NA)		al Port Node NG -232-NA)	Serial Port Node (DMNG -USB-NA)
Software and Apps	-					Wired System	
		PHILIPS	PHILIPS dynalite (1)	PHILIPS			A LAND
Philips Dynalite System Manager	Philips Dynalite System Builder	Philips Dynalite Phil Control App Env	ips Dynalite isionTouch	Philips Dynalite DynamicTouch	e	UV-C Control System (PDUVCC-NA)	Room Automation System (PDRAS)

Dynalite system architecture



Controls

Room Automation System (PDRAS)

Single-box solution

• Assembled, programmed, and tested in the factory to provide complete out-of-the-box functionality.

Multi-zone support

 Each control system can manage up to five separate zones in single- or dual-room applications.

Networked Multifunction sensor

• Reduce installation complexity and ceiling/plenum clutter with combined occupancy and light level (lux) detection.

Optional networked PIR and ultrasonic sensors

• Expand your system's occupancy detection footprint with up to three extra PIR sensors and/or one long-range ultrasonic sensor per room. Sensors communicate with each other so that their combined occupancy status determines the system response.

Integrated daylight harvesting

 Multifunction sensors micro-adjust lighting levels to meet energy management regulations without disrupting occupant comfort.

Stations with large buttons and simple labelling

• Ensures straightforward operation for non-technical users.

UL924 input

• Integrates seamlessly with compatible emergency systems.

Direct-drive relays

• Isolate power to lighting groups and wall outlets to eliminate standby power consumption

Software-selectable 1-10V / DALI control

• Although factory-set for 1-10V, each control channel can be individually configured for DALI operation using Dynalite's System Builder commissioning software on a connected PC or laptop.

Ethernet connectivity*

 Enables network access to the school LAN for centralized monitoring and management.



* Future provision for -E variants only, not enabled at release.

Wired

Philips Dynalite Room Automation System architecture



Only one ultrasonic sensor per room

Sensor placement depends on local architecture

Controls

UV-C control system relay controllers (PDUVCC-NA)

Single-box solution

• Assembled, programmed, and tested in the factory to provide complete out-of-the-box functionality.

Integrated Antumbra Display

 Allows authorized users to adjust UV-C disinfecting dosage and monitor lamp life management. Includes multilanguage support.

Physical key switch protection

• Helps to ensure that only authorized users can modify settings or activate the system.

External control inputs

• Robust, reliable connection to door switches, emergency shutoff buttons, and vacancy confirmation checkpoints

Motion sensor integration*

 Designed to work with Dynalite's best-in-class network sensors to automatically shut down the UV lamps if motion is detected in the disinfection area.

System status indicators

• Eight clearly labelled LEDs on the front of the enclosure show the device's status at a glance.

Onboard event logging

• All system events are logged and timestamped for reporting.

Ethernet connectivity

- Enables secure network access to configuration and event logs via System Manager head-end software.
- * Sensors must not be relied on as a safety measure.
 The authorized user must always perform a visual check of the area before starting the cycle.



Disclaimer

This product's effectiveness in the inactivation of certain viruses, bacteria, protozoa, fungi or other harmful micro-organisms is as described in the product documentation. Signify and its group of companies do not promise or warrant that the use of the products will protect or prevent any user from infection and/or contamination with any viruses, bacteria, protozoa, fungi, illness or disease. The products are not approved for, are not intended and must not be used as medical devices. In addition to and without limitation of any exclusions or limitations of liability of Signify and its group of companies as set forth in any agreement for the sale, distribution or otherwise making available of the products, Signify and its group of companies shall have no responsibility or liability whatsoever for any claim or damage that may arise from or relate to any use of the products outside of their intended use.

Warnings and Cautions

- This UV-C product is not approved and/or certified as a medical device.
- This UV-C product cannot be used to disinfect the surfaces of medical devices (such as medical devices in a room, surgical masks and/or surgical respirators). The device cannot be used in medical settings. The device cannot be used for disinfection of human skin
- UV-C radiation can damage the human eye and can cause severe sunburn-like reaction to the human skin.
- UV-C can have adverse affects on organics such as plants and animals.
- UV-C radiation may damage or discolor materials such as plastics and rubber, among others.
- UV-C products should be installed and maintained by a trained technician following installation instructions and user manual.

Wired

PDUVCC-NA system architecture



* Peripheral devices and Philips UV-C luminaires & lamps supplied separately

PDUVCC-NA peripheral devices

Devices peripheral to the PDUVCC-NA cabinet and Philips UV-C luminaires and lamps supplied separately.

	Device	Function	Action	Electrical Requirements
	Occupant warning alarm	Warns occupants that the UV-C lamp cycle is about to begin	Flashing lights, audio alarm, or any other warning devices as per local regulations	max 12 A, 120 VAC
	Emergency stop button (red)	Immediately stops the UV-C lamp cycle	Normally closed momentary push-button switch	Rated switching voltage:
	Door switch	Ensures that all doors to the UV-C area are closed before UV-C cycle can begin	Closed contact when door is closed.	≥ 24 VAC/DC Rated switching current: ≥ 0.5 A
P	Checkpoint button (yellow)	Confirms that the authorised user has physically inspected the area for occupants before UV-C cycle can begin	Normally open momentary push-button switch	Minimum switching capacity: ≤ 10 mA @ ≤ 5 VAC/DC

* Sensors must not be relied on as a safety measure.

The authorized user must always perform a visual check of the area before starting the cycle.

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