PHILIPS

LFC7550

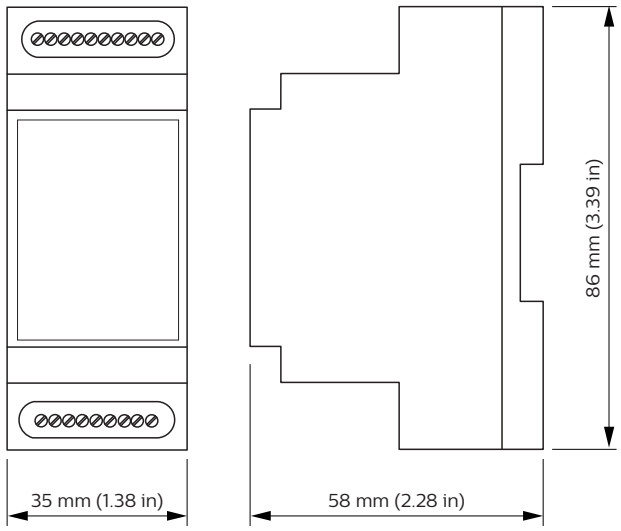
Specification Sheet

Cabinet Control RS485

The Cabinet Control RS485 is a client interface module in the Cabinet Control System. It is designed for two-way communication with RS485 compatible equipment from various manufacturers. In Cabinet Control Metering - an advanced metering infrastructure system - the Cabinet Control RS485 is used for establishing two-way communication with RS485 compatible electricity meters. The Cabinet Control RS485 can easily be connected with up to ten electricity meters. The Cabinet Control RS485 collects readings and other data from the meters and subsequently transfers these data to an Cabinet Control SCU which is acting as a data concentrator and WAN module. The Cabinet Control SCU delivers the data to the central server when required. Direct communication and power supply between the Cabinet Control RS485 and the Cabinet Control SCU are handled by an incorporated A-Bus interface, which is based on the industrially proven RS-485 technology.

For more detailed information, see the specific manuals and guides.

Dimensional drawing



Dimensions in mm

Functionality

Communication	A-Bus two-way communication with A-Bus masters, e.g. Cabinet Control SCU.
RS-485 communication	According to ANSI TIA/EIA-485-A, half duplex. The module supports the following protocols: General purpose serial communication, dlms mode C, dlms/COSEM (HDLC). For a complete list of all supported meter types, please contact your local Signify representative.
Auto discovery	The module is automatically discovered by the Cabinet Control SCU. In case a module is disconnected from the Cabinet Control SCU, this is reported to the server application and the module is listed as missing. If the module is reconnected to the Cabinet Control SCU or another Cabinet Control SCU, it will be rediscovered.
Real-time clock	The real-time clock is automatically synchronized with the Cabinet Control SCU, which in turn is synchronized with the Network Time Protocol (NTP).
LED	Status LED (orange): indicates whether the A-Bus is up and running.

Connections

A-Bus	A-Bus client module, check SCU specification for details.
RS485	RS485 A and RS485 B connect to one meter or a collection of meters (maximum 256 nodes). A = Inverting data signal and B = non-inverting data signal. The total cable length between Cabinet Control RS485 module and connected meter(s) is limited to 3 meters.

Reliability & Maintainability

Software upgrade	The software on the Cabinet Control RS485 can be updated remotely from the central server.
Installation of new software	New software is transferred without interrupting the normal functionality of the Cabinet Control RS485. When the software has been transferred, the integrity of the software is checked and the software is installed.
Self-test	A built-in self-test is performed after power-up.
Watchdog and brown-out reset	Watchdog and brown-out reset ensure that the system is up and running at all times.

Installation

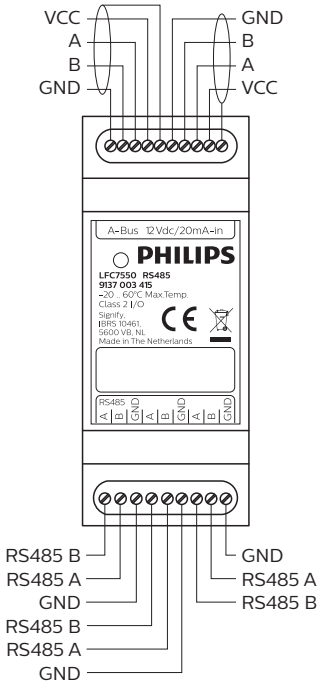
The Cabinet Control RS485 should be protected from dust and water, preferably by enclosing the system in a metal IP class 65 (NEMA type 4) outdoor cabinet.

Use shielded cables, with the shield connected to GND (pin5 and 10 for the A-Bus). If the use of shielded cables is not possible keep the cable length as short as possible and avoid placement close to sources of interference, for example RF antennas and mains power lines.

A-Bus cable	Use shielded twisted pair (2x2) cable. The Cabinet Control RS485 can be connected to any master module in the Cabinet Control System, e.g. Cabinet Control SCU. Double connections on the A-Bus makes daisy-chaining of the signals easy. For detailed information, see wiring diagrams.
A-Bus cable length	< 3 m (10 ft)
RS485 cable	Use shielded twisted pair cable (leave shield floating).
RS485 cable length	< 3 m (10 ft)

Wiring

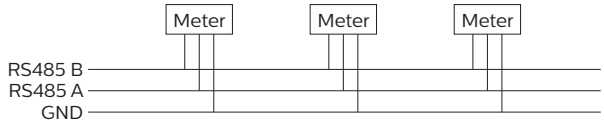
A-Bus connection



RS485 connection

Terminals: 0.5 mm² (AWG 20)

A collection of meters can be connected to each RS485 output.



A collection of meters can be connected to each RS485 B / RS485 A.
A = inverted data signal and B = non-inverted data signal.

Specifications

Environmental conditions

Storage temperature	-40 to 85 °C (-40 to 185 °F)
Operating temperature	-20 to 60 °C (-4 to 140 °F)
Max humidity	90% (non-condensing)

Supply characteristics

Input voltage	12 Vdc via A-Bus
Current consumption	Typical 15 mA, Maximum 20 mA
RS-485 voltage	Bus pin short circuit protection from -7 to +12 V
RS-485 current	Pins short-circuit protected

Mechanical

Housing	Top part Gray (RAL 7035) Lexan 940 Base part Black (RAL 7021) Noryl VO 1550 Coating Conformal coated
Mounting	DIN-rail (EN50022)
Weight	50 g (1.8 oz)

Connections

A-Bus and M-bus connector	0.14 to 0.5 mm^2 (AWG 26 to 20) solid/stranded; copper conductors only, wire rating 65 °C (149 °F) min.; wire strip length: 4.5 mm; screwdriver, bladed, size 0.4 x 2.0; tightening torque: min 0.12 Nm, max 0.15 Nm (1.1-1.3 lb in)

Standards and approvals

2006/95/EC, Low Voltage Directive (LVD)
2004/108/EC, EMC Directive
1999/5/EC, R&TTE Directive
2002/95/EC, RoHS Directive
2006/121/EC, REACH directive
UL 916
C22.2 No.205-M1983

Packing data

Type	Box dimensions	Qty	Material	Weight	
				net	gross
LFC7550 Cabinet Control RS485	395 x 290 x 205 mm (15.6 x 11.4 x 8.1 in)	60	Cardboard	3.0 kg (6.6 lb)	3.9 kg (8.6 lb)

Ordering Data

Type	MOQ	Ordering number	EAN code level 1	EAN code level 3	EOC
LFC7550 Cabinet Control RS485	1	9137 003 41503	8727900 947663	8727900 947670	947663 00

3222 636 36245 24 January 2019

www.philips.com/lighting