

iPC-HDPLC

INTELLIGENT LIGHT CONTROL AND HIGH- SPEED COMMUNICATION



Developed for the use in street lighting and lighting in the vicinity of buildings, the iPC operates with a standardized high definition power line for communication purposes and enables control of electronic ballasts fitted with a 1-10 V/PWM and DALI interface and the usage of devices with ethernet-connector via TCP/UDP/IP, like CCTV's, voice guidance systems, emergency products, advertising panels, support for WiFi access points etc.. Individually programmable and updateable, the controller provides all the functions of a modern light management system and thus ensures a high degree of investment protection. It offers the wide range of Smart City applications for the future. If the controller is temporarily operated in stand-alone mode or if the network is temporarily down due to maintenance work, the basic function parameters of the light management system will be retained for control purposes and with that will yield approximately the same energy saving without energy-consumption values being lost.

Further Advantages

- High-Speed communication up to 240 Mbit/s including 2,5Mbit independent LonWorks-channel.
- Up to 10 self-organized repeaters to overcome large distances for communication.
- Consumption: ~3 W
- High precision measurement of U, I, P, PF, E. Accuracy <1%
- Interoperable luminaire controller in acc. with the OLC LonMark® profile
- High Definition Power Line Communication using broadband between 2 MHz and 28 MHz
- Connection of various sensors such as motion sensors, key switches and light sensors
- 5 years warranty

Typical applications

- Street lighting and lighting in the vicinity of buildings
- Car parks, bus stops and railway stations
- Company premises, warehouses
- Sports facilities
- Smart City application for the benefit of IP and LON communication

iPC-HDPLC

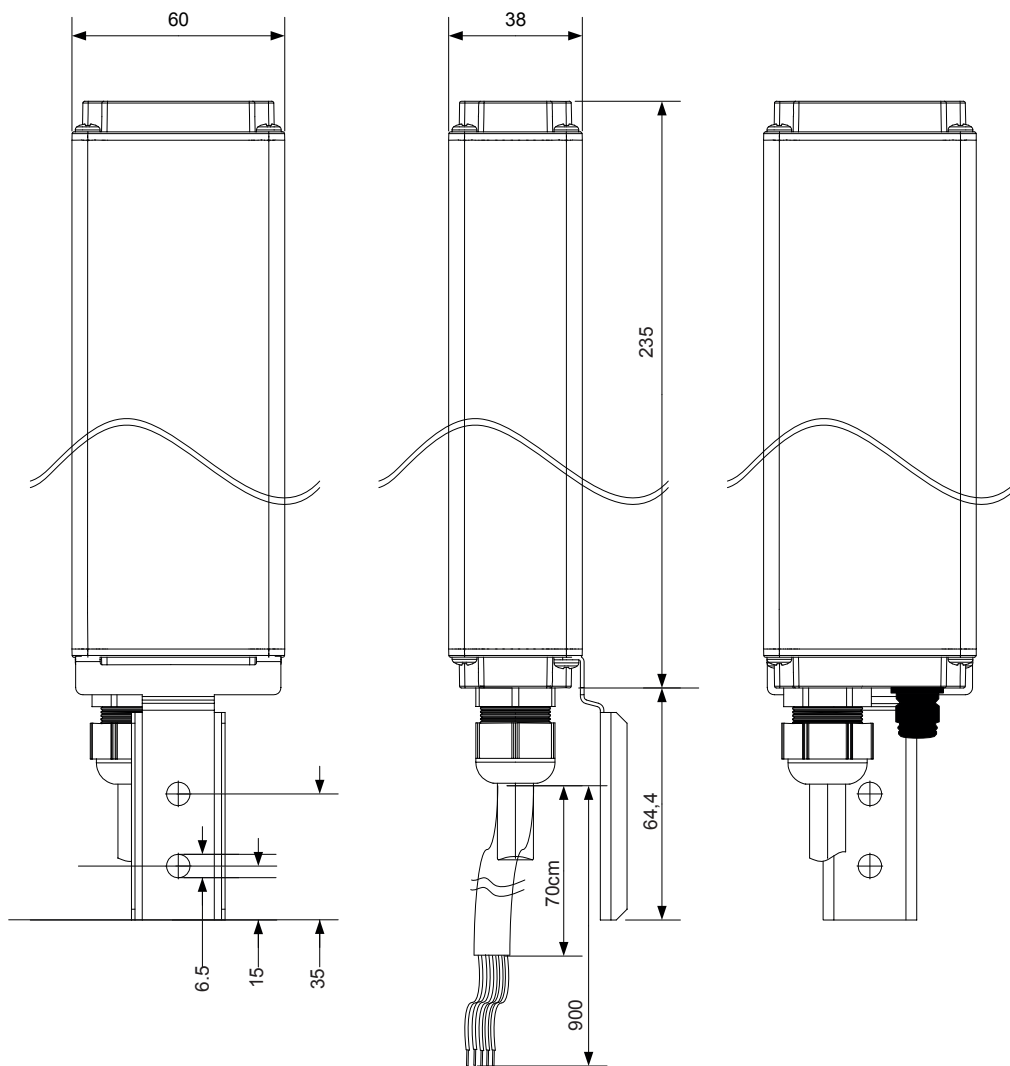
Technical Details

Electronic Light Controller	186761
Type	iPC-HDPLC
Input voltage	85 V AC – 305 V AC
Mains frequency	50 / 60 Hz (+1 % / -2 %)
Power consumption	~ 3.0 W
Communication	Via the High Definition Power Line in acc. With IEEE 1901
Band	2 MHz - 28 MHz
Coding	OFDM
Data transfer (USA)	ANSI CEA 709.1, ANSI CEA 709.2
Data transfer (Europe)	EN 14908-1, EN 14908-8
Galvanic isolation	isolation of control outputs for DALI/1-10V/PWM driver
Switching current	10A resistive load -> 100T switch cycle 6A PF=0,7 inductive load -> 15T switch cycle 2,5A PF=1 LED driver -> 25T switch cycle
Switching cycles	For any further load please ask for support
Programmable	Yes
Configurable parameters	Yes
Switching output luminaire	1 x for connecting several luminaires
Control output EB	1 x DALI or 1-10 V: short-circuit-proof, suitable for respective ballasts, DALI bus master interface for max.4 ballasts
Connection	1,5 mm ² , 900 mm
Conductor type of the connection terminals	Stranded with ferrule bare end of core
Firmware update / Parameter config.	Via High Definition Power Line
Control and monitoring parameters	Switch on and off
Capture of measured data	Voltage, current, power factor, output, energy, temperature, lighting hours with an accuracy of better than 1%
Software interface	Interoperable in acc. with the Lonmark® OLC profile, use of network variables and configuration parameters, repeatable
Operating temperature range tc	-25°C to +70°C
Storage temperature range	-25 to +85 °C
Humidity	90% non-condensing
Surge voltage protection	4 kV / 1.2 / 50 in acc. with DIN EN 61037
Degree of protection	IP65
Casing material	PC
Dimensions (W x H x D)	66.4 x 298.4 x 54 mm
Weight	400 g
Country of origin	Made in Germany

The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification. Please find further detailed information at www.vossloh-schwabe.com.

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Dimensions (mm)

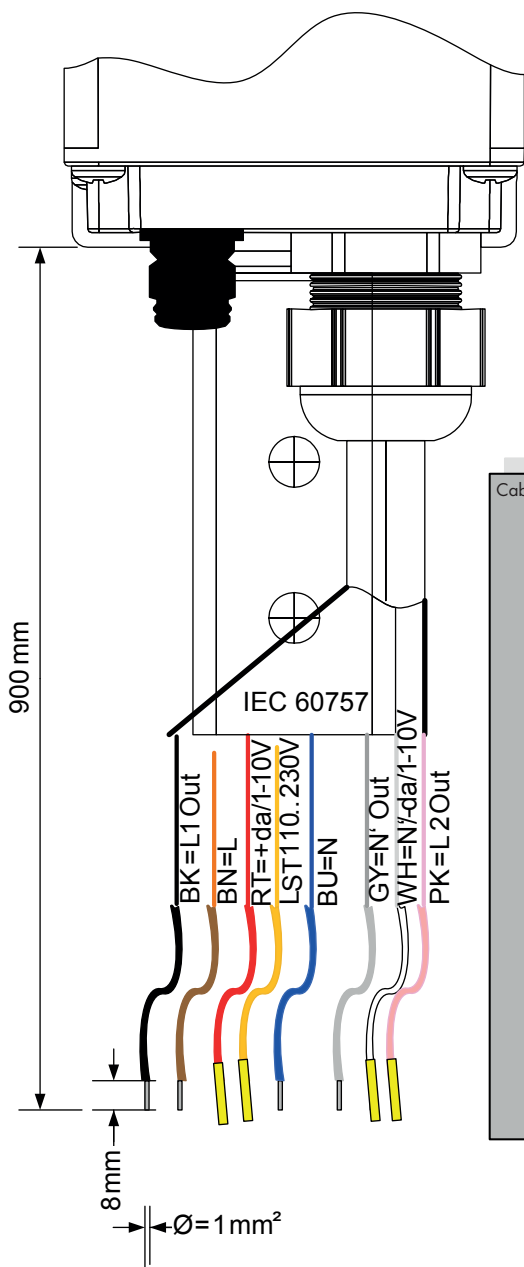


The 1–10 V/PWM/DALI output of the built-in pole controller enables control of 4 (max.) electronic ballasts to enable effective control of luminaire groups or, for instance, LEDs for R, G, B and W. The configurable parameters of the applications as well as optional firmware updates ensure a high degree of investment protection. Also, OEM- and customer-specific versions can be protected against unauthorized distribution with a special software key. Please contact your VS representative for more information on this function. All I/O's are completely electrical isolated.

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Main cable for supply, control of driver and sensor



Cable Assignment Supply Side
According to IEC 60757

Colour	IEC 60757		Configuration	Feature Product 186761	
Abbreviation					
Black	SW	sw	BK	L1 Out	
Brown	BR	br	BN	L IN	
Red	RT	rt	RD	+CTRL Out	+(1-10V/DALIPWM)
Orange	OR	or	OR	L _{ST} 110 .. 230V	Shrinking
Green/Yellow	GRGE	gr/ge	GR/YE		
Blue	BL	bl	BU	N IN	
Grey	GR	gr	GY	N' Out	
White	WS	ws	WH	-CTRL Out	-(1-10V/DALIPWM)
Pink	RS	rs	PK	L2 Out	Shrinking

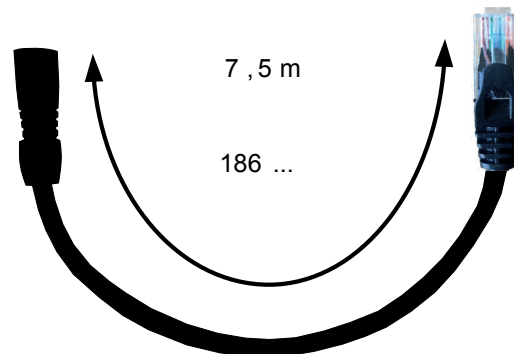
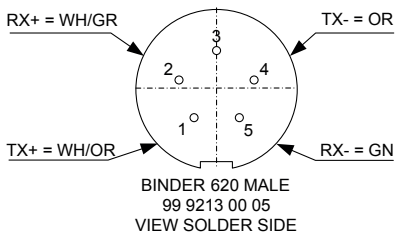
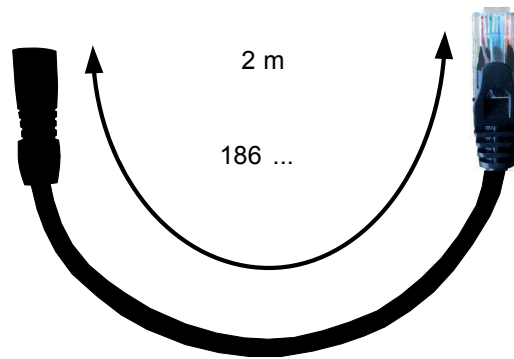
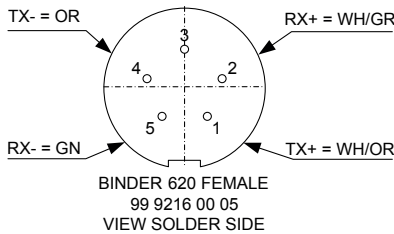
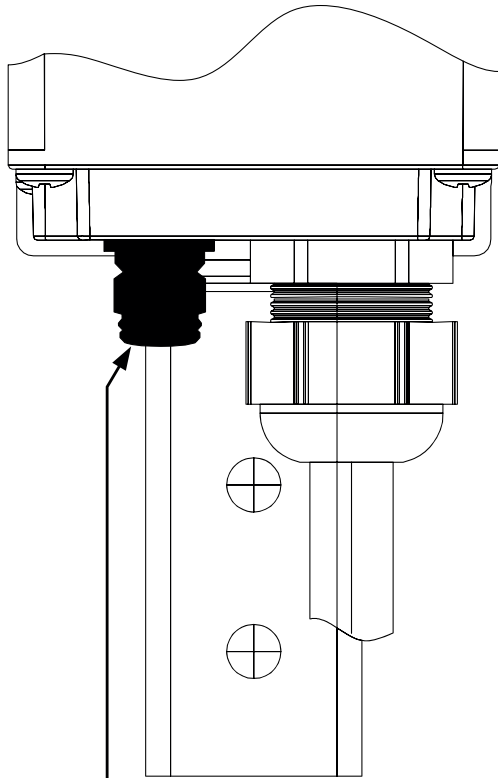
IEC = International Electrotechnical Commission

Cable 10 x 1 mm², cable length ca. 100 cm, oilflex-sheathed cable classic 100.
Assembled on the product side for solder connection, connection side with cable end sleeves.

Standard cables, with more length than necessary, must be cut flush with the sheathing.

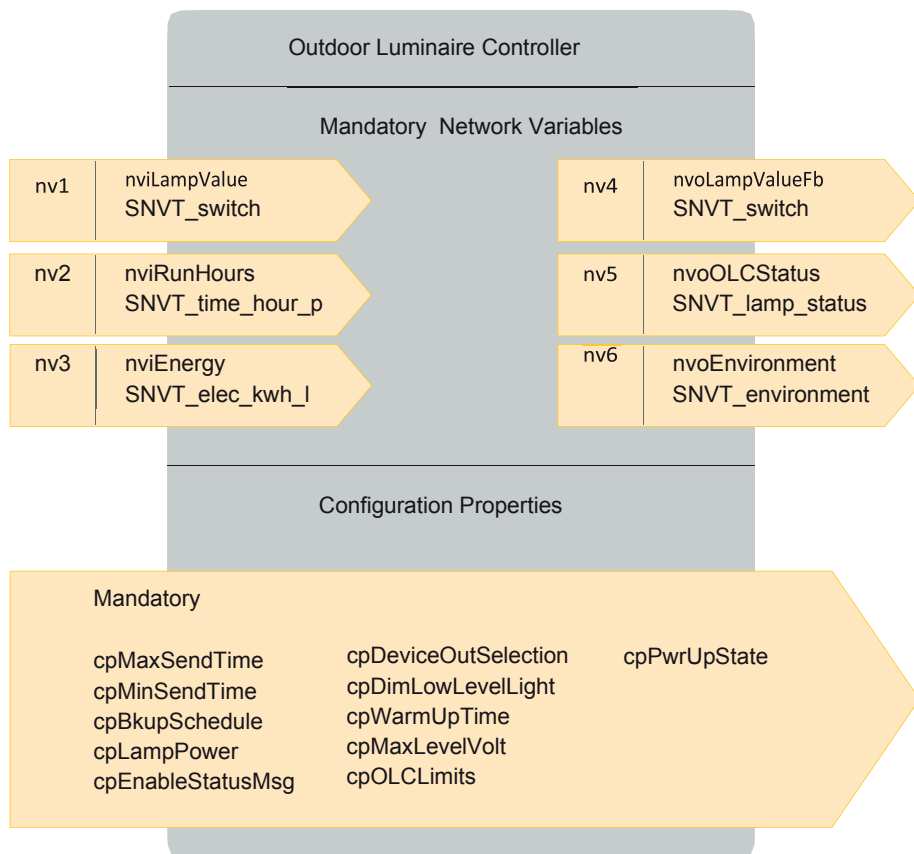
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IP CAT5 cable 100BASET with IP65 protection class as optional accessory



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Lonmark© OLC Profile



In accordance with the mentioned ANSI and EN specifications, the controller is fitted with an interoperable network interface, which is essential for setting up heterogeneous networks. The definition of the exact data structure for data transfer purposes is fixed in accordance with the Lonmark definition in line with the so-called OLC profile (Outdoor Luminaire Controller). Controllers that are manufactured in line with this standard, even if produced by different manufacturers, can be integrated into a common network. All communication data are completely routable to other medias like FT 10, Wireless or Narrow Band PL.

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Typical Application

