

Connection Boxes with Bluetooth® 5.0 SIG Mesh

SCB02/BLE

GST type 6-pole Quick Connection Box for Dimming Application



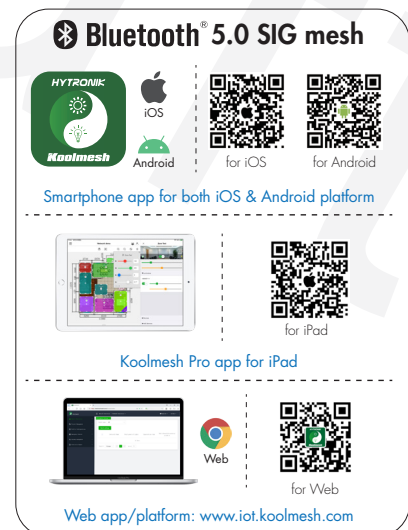
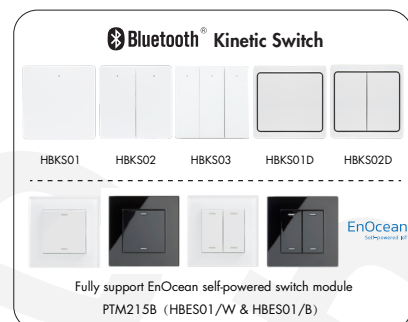
Product Description

SCB02/BLE is a dual-circuit quick connection box designed for low-voltage (SELV) applications, supporting SELV sensor connections and SELV PUSH/retractive switch operations. It features a GST-type 6-pole terminal base, suitable for DALI dimming and switching applications. It provides 14 luminaire output ports, 4 SELV RJ45 sensor ports, and 10 SELV switch input ports. The box supports up to 8 luminaire channels via the app, along with an additional VFC (volt-free contact) channel and 2 ELT switch channels. Meanwhile, simple device setup and commissioning can be done via **Koolmesh**® app.



App Features

- Quick setup mode & advanced setup mode
- Web app/platform for project deployment & data analysis
- Koolmesh Pro app on iPad for on-site configuration
- Floorplan feature to simplify project planning
- One-key device replacement
- Device social relations check
- Staircase function (primary & secondary)
- Remote control via gateway support HBGW01 or HBGW02
- Heat map
- Dynamic daylight harvest auto-adaptation
- Grouping luminaires via mesh network
- Scenes
- Circadian rhythm (Human centric lighting)
- Detailed motion sensor settings
- Schedule
- Astro timer (sunrise and sunset)
- Power-on status (memory against power loss)
- Offline commissioning
- Bulk commissioning (copy and paste settings)
- Different permission levels via authority management
- Network sharing via QR code or keycode
- Compatible with EnOcean BLE switches
- Interoperability with Hytronik Bluetooth product portfolio
- Internet-of-Things (IoT) featured
- Device firmware update over-the-air (OTA)
- Continuous development in progress...




Hardware Features

- Dimmable & Switching applications
- Dual-circuit design for applications with both essential & non-essential supplies
- Intelligent control with Bluetooth 5.0 SIG mesh module built in
- Luminaire outlet: GST type 6-pole terminal base (L or L', E, N, Em, DALI-, DALI+)
- 4 Low-volt SELV RJ45 sensors ports (can be daisy chained)
- 10 SELV switch inputs (9 PUSH interface+1EM interface)
- Support VFC (volt-free contact) & 2 ELT switches
- Support up to 8 luminaire channels (via app)
- Black housing and white housing available to choose from
- Tamper-proof structure design
- Expandable: easy extension to another SCB02/BLE wirelessly!
- Flame-retardant material for safety protection
- 5 - year warranty

Your Benefits

- Five types of installation methods meets different project needs
- Reduce labour hours and labour cost significantly
- Simple and intuitive wiring connections
- Improved safety level during wiring operations
- Clear and clean wiring makes it easy for future maintenance
- Can be supplied with pre-wired cables

Technical Data

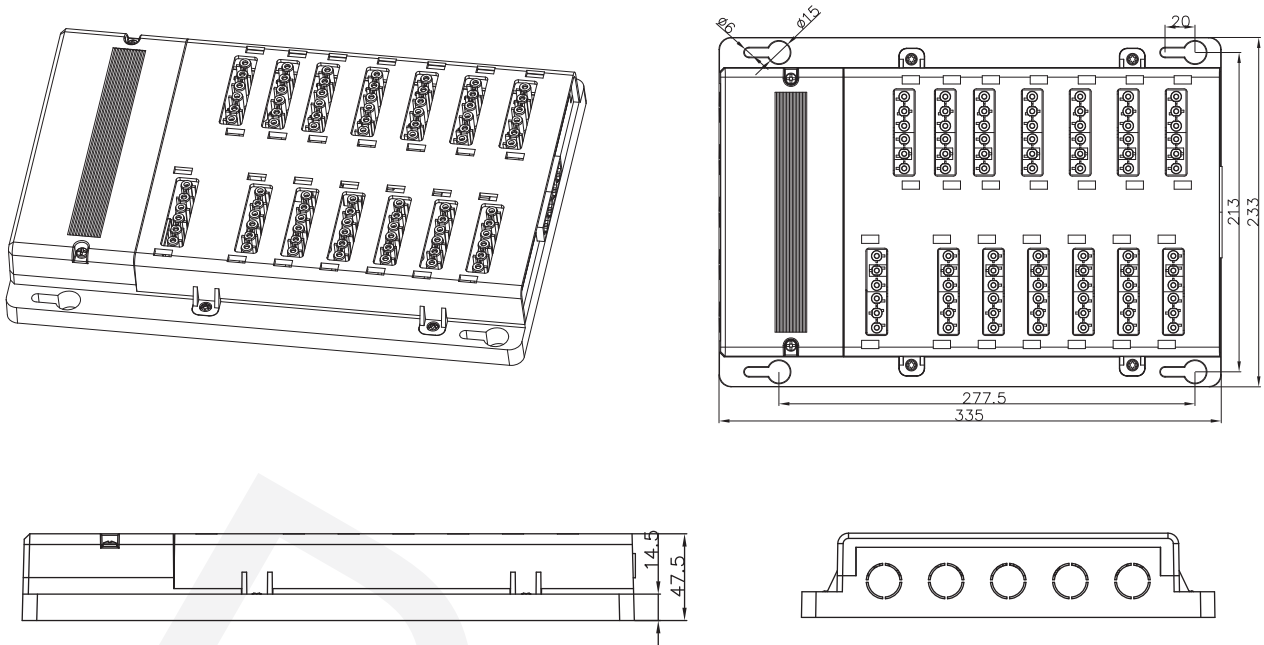
Bluetooth Transceiver	
Operation frequency	2.4 GHz - 2.483 GHz
Transmission power	4 dBm
Range (Typical indoor)	10~30m
Protocol	 Bluetooth® 5.0 SIG Mesh

Input & Output Characteristics	
Input voltage	220~240VAC 50/60Hz
Stand-by power	< 3W
Input power	15W
Power Supply	I guaranteed : 40mA I max : 60mA U rated : 14-16VDC
Overall load(Max.)	12A
Rated load(Max.)	10A capacitance, 10A resistance (without relay switch)
	3A capacitance, 6A resistance (with relay switch)

Environment	
Operation temperature	Ta: -10°C ~ +40°C
Storage temperature	-40°C ~ +70°C
Relative humidity	10 ~ 90%
IP rating	IP20
Insulation	Class II

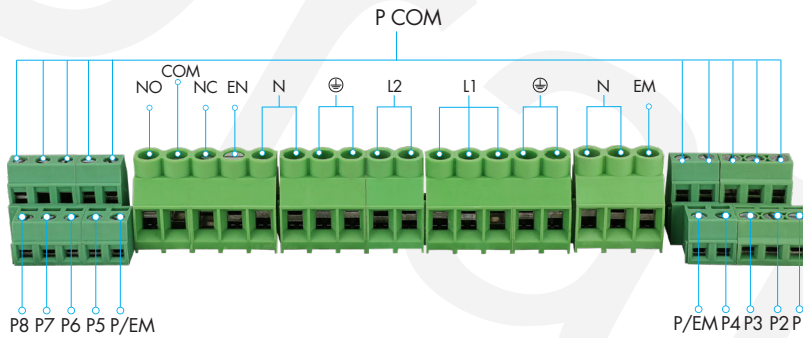
Safety & EMC	
EMC standard (EMC)	EN61547
Safety standard (LVD)	EN55015 EN61000-6-1/-6-3 EN60730-1 EN61347-1/-2-11 EN61984
RED	EN300 328, EN301 489-1/-17 EN50663
Certification	CE , UKCA,RCM

Dimensions and Terminals(Unit: mm)



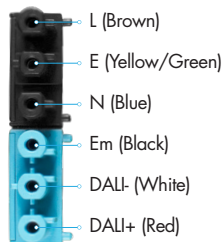
Input & Output Terminal Function

Input Terminal

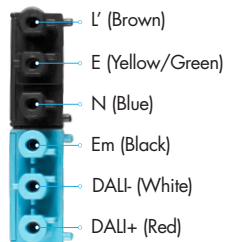


Wire Range: 0.75 - 4.0mm² (max. 2 x 2.5mm²)

Luminaire outlet



with DALI dimming



with relay switch +DALI dimming

Bluetooth sensor interface

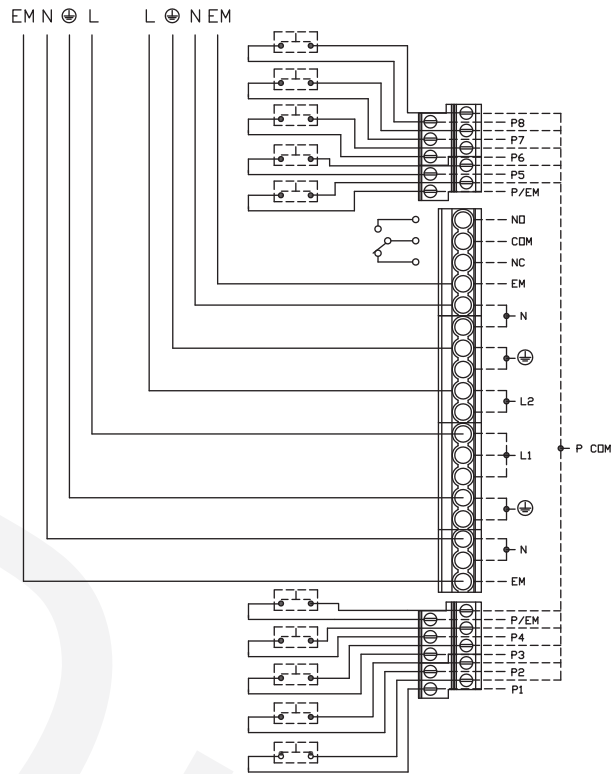
*The Bluetooth sensor interface is compatible with the HBIR38DC.



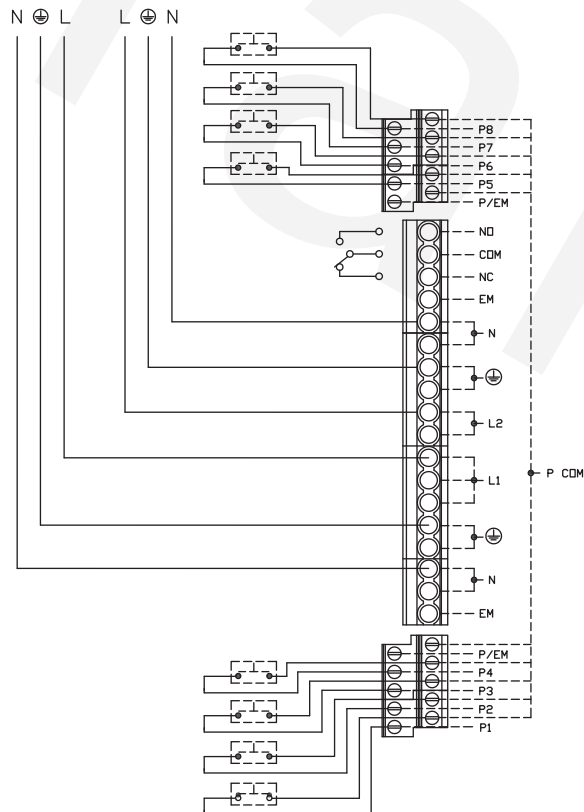
Supply voltage 12VDC
Supply current 250mA(Max)

Wiring Diagram

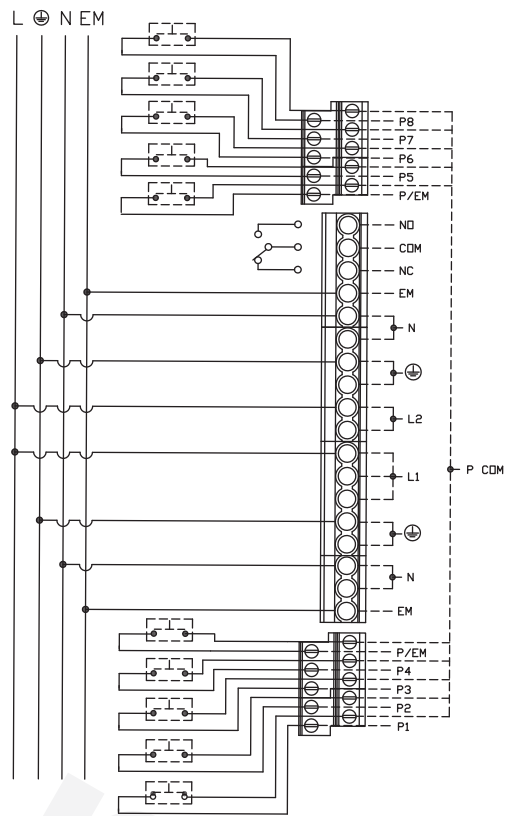
Dual Power Input With Emergency Test Switch



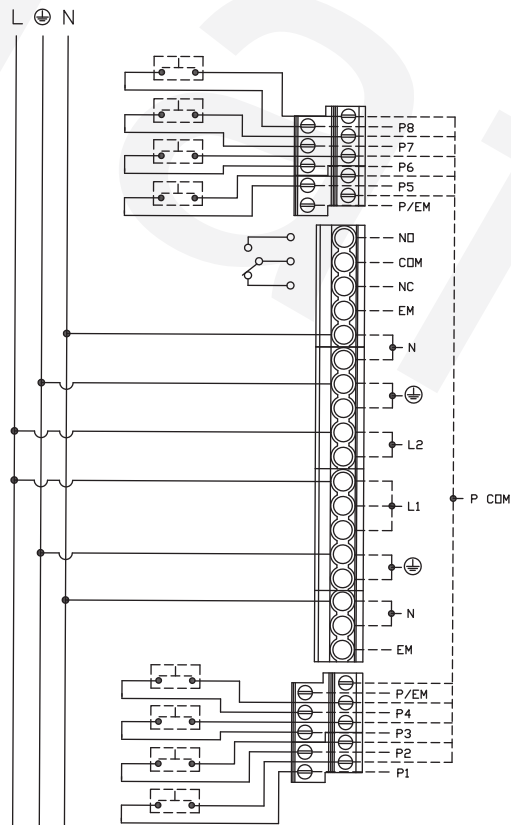
Dual Power Input No Emergency Test Switch



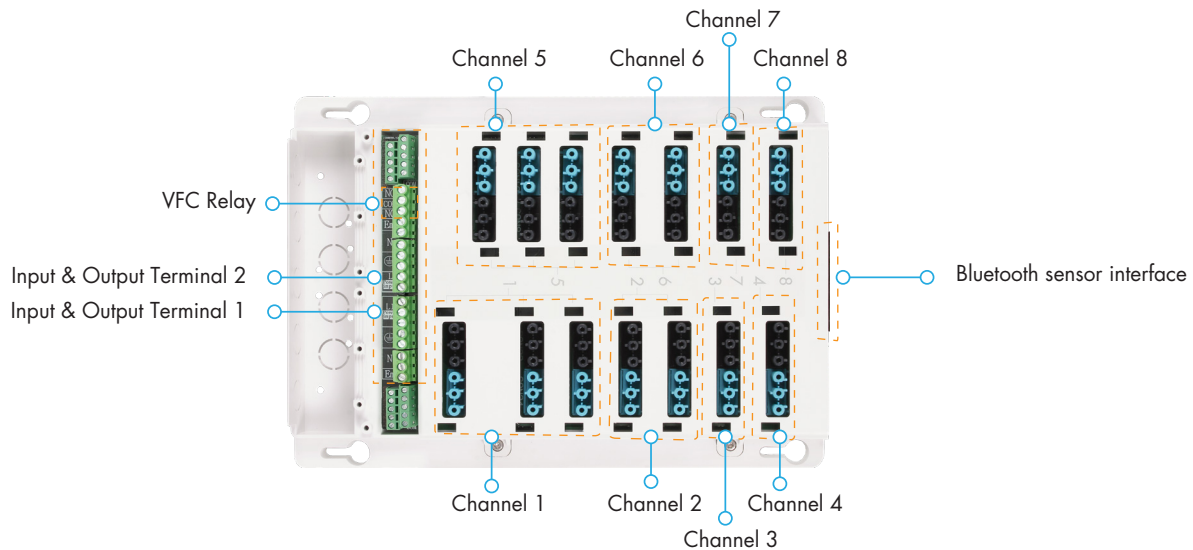
Single Power Input With Emergency Test Switch



Single Power Input No Emergency Test Switch



*This product should be installed by a qualified electrician.



SCBO2/BLE is a Bluetooth intelligent control fast junction box, through Bluetooth APP or PUSH, turn DALI signal and relay for dimming and color, or switch control.

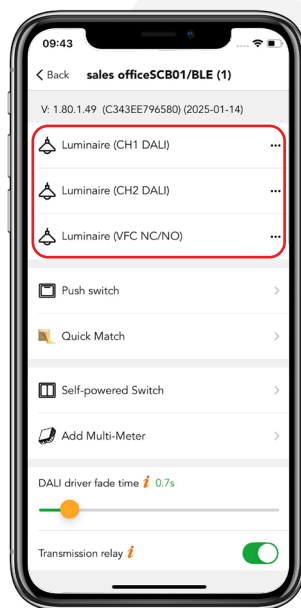
According to different lamp types, it can be selected with relay switch +DALI channel (channel 1/2/5/6), or simple DALI control channel (channel 3/4/7/8), and provides emergency control interface, dry contact interface, 8 PUSH interfaces, 2 emergency test switch interface, 4 RJ45 Bluetooth sensor interface.

SCBO2/BLE built-in 4 Bluetooth control modules, divided into 4 devices:

- (1). CH1 DALI CH2 DALI/VFC(NC/NO)
- (2). CH3 DALI CH4 DALI/PUSH(1)/PUSH(2)/PUSH(3)
- (3). CH5 DALI CH6 DALI/PUSH(4)/PUSH(5)
- (4). CH7 DALI CH8 DALI/PUSH(6)/PUSH(7)/PUSH(8)

*SCBO2/BLE supports up to 14 luminaires, divided into 8+1 channels in the app. Channel 9 is a VFC relay, while Channels 1, 2, 5, and 6 allow shared control for multiple luminaires. The remaining channels provide independent DALI output. DALI and relay modes are switchable but cannot operate simultaneously.

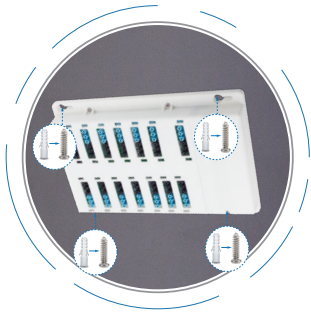
The simple setup can be done through the **Koolmesh**® app



Installation methods

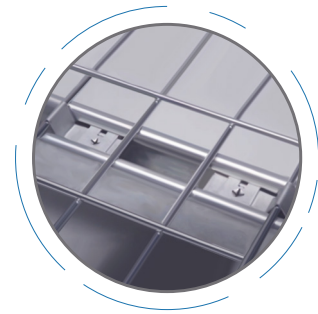
Surface Mount ▼

It can work with 4 x M6 screws to fix onto both walls and ceilings.



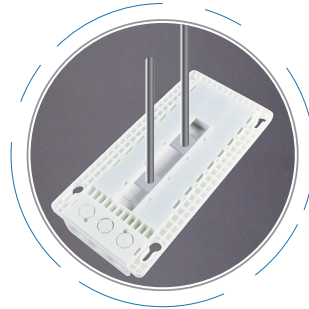
Marco Tray Mount ▼

It can work with Marco clips steel wire cables tray system.



Channel Nut Mount ▼

It can work with channel nuts to fasten into the back.



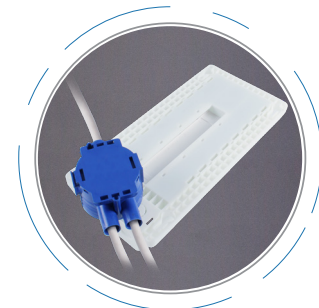
Mounting Rods ▼

It can be fixed with mounting rods.



BESA/Junction Box Connection ▼

It can be connected with BESA/junction box.



Connection Box Associated Products



Description

HBR38DC is a Bluetooth PIR motion sensor equipped with an RJ45 network port. It connects to SCB01/BLE or SCB02/BLE via an external RJ45 cable and is powered by a 12V DC supply from the SCB01/BLE or SCB02/BLE.

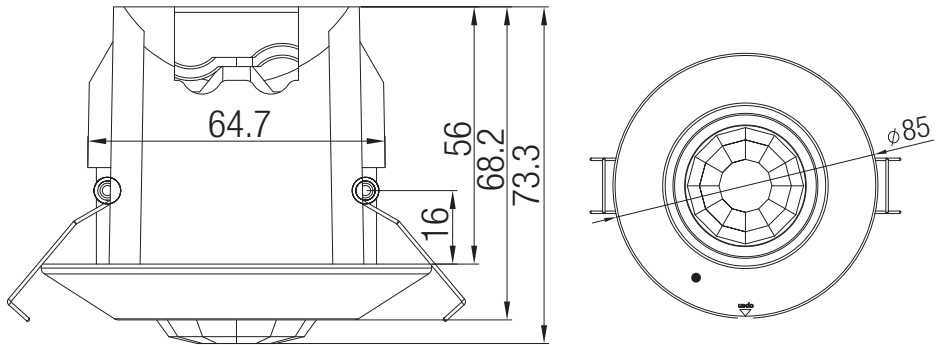


Description

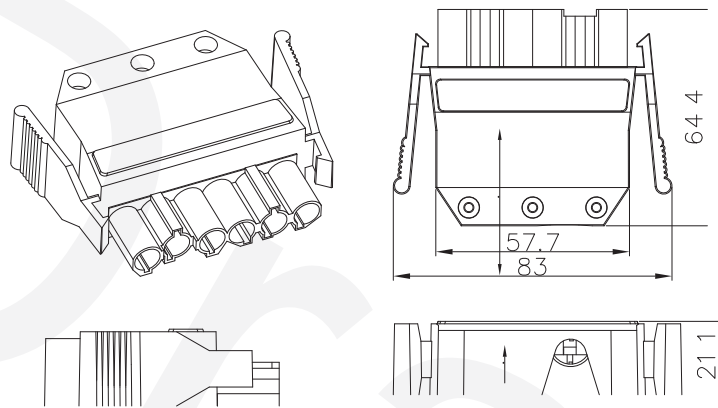
The HP03 is a durable GST type 6-pole male plug for standard luminaires, offering reduced wiring labor, enhanced safety, and user-friendly plug-and-play functionality.

Mechanical Structure & Dimensions

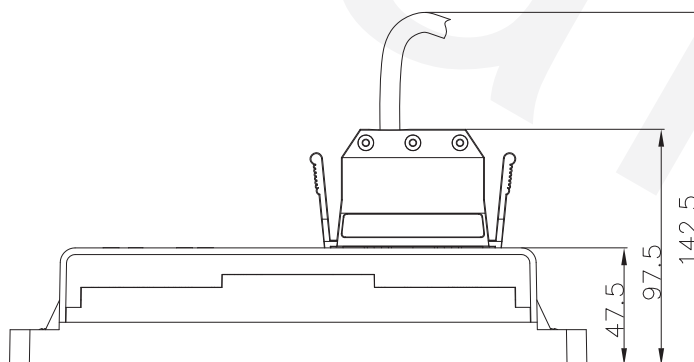
Sensor:HBIR38DC



Plug:HPO3



Minimum Installation Height

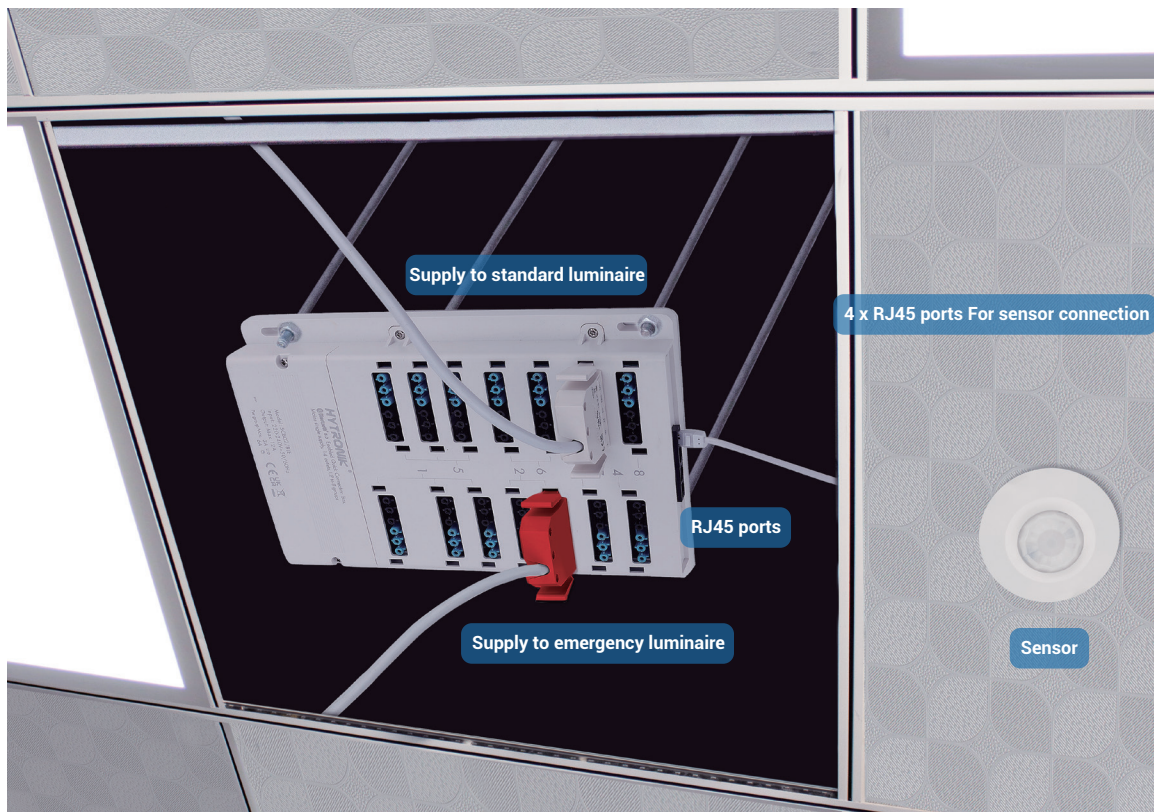


Luminaire plug (HPO3)

Note: The minimum height for total height of unit is 140mm(including connectors and cables).

*More details about HPO3 with different specification, please visit <https://hytronik.com/products/modular-wiring-systems>

Installation Scenario



Dimming Interface Operation Notes

Switch-Dim

The provided Switch-Dim interface allows for a simple dimming method using commercially available non-latching (momentary) wall switches. Detailed Push switch configurations can be set on Koolmesh app.

Switch Function	Action	Descriptions
Push switch	Short press (<1 second) * Short press has to be longer than 0.1s, or it will be invalid.	<ul style="list-style-type: none"> - Turn on/off - Turn on only - Turn off only - Recall a scene - Quit manual mode - Do nothing
	Double push	<ul style="list-style-type: none"> - Turn on only - Turn off only - Recall a scene - Quit manual mode - Do nothing
	Long press (≥ 1 second)	<ul style="list-style-type: none"> - Dimming - Colour tuning - Do nothing

Additional Information / Documents

1. To learn more about detailed product features/functions, please kindly refer to <https://hytronik.com/products/SCBO2-BLE>
2. Regarding precautions for Bluetooth product installation and operation, please kindly refer to <https://hytronik.com/service/downloads> (Bluetooth Products Precautions for Product Installation and Operation)
3. Data sheet is subject to change without notice. Please always refer to the most recent release on <https://hytronik.com/products/modular-wiring-systems>
4. Regarding Hytronik standard guarantee policy, please kindly refer to <https://hytronik.com/service/downloads> (Guarantee Conditions document)

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