Quick Connection Box with Bluetooth® 5.0 SIG Mesh

QCB02 QCB04

QCB02 for Wieland & QCB04 for Wago

HYTRONIK®

Product Description

Hytronik quick connection boxes, QCB series, offer a simple and easy way to configure a system by integrating luminaires of switch-dim, 1-10V or DALI controls, motion detectors and emergency control gear. The connection box is ideal for education, industrial, commercial and retail buildings or anywhere that requires costs control. Put it simply, it meets all demands in lighting controls and energy managment applications with ability of simplifying installation via plug'n'play connection and minimizing cost and time. What's more, with Bluetooth module built inside, the quick connection boxes become intelligent and even offer higher degree of connectivity as more features can be unlocked via **Koolmesh**™ app.

QCB02

QCB04

App Features

- Grouping luminaires via mesh network
  - Two levels: room & group
  - Sychronization control
- 7 types of scene options to set up*
  - Generic Scenes
  - Lux ON/OFF Scenes
  - Daylight Harvest (Open loop)
  - Daylight Harvest (Closed loop)
  - Circadian Rhythm (With daylight sensor)
  - Circadian Rhythm (Without daylight sensor)
  - Time-based Scene
- Push switch configuration
- Schedule to run scenes based on time and date
- Astro timer (sunrise and sunset)
- Floorplan feature to simplify project planning
- Status after re-powered on (memory against power loss)
- Offline commissioning
- Different permission levels via authority management
- Network sharing via QR code or keycode
- Remote control via gateway support HBGW01
- Interoperability with Hytronik Bluetooth product portfolio
- Compatible with EnOcean range of wireless switches
- Device firmware update over-the-air (OTA)
- Continuous development in progress…

* Certain scenes which require external photocell can be achieved by using together with Hytronik Bluetooth sensors, such as HBIR29, HCD038/BT + sensor head etc.

Hardware Features

- 1 x 6 channel output
- Plug'n'Play for flexible installation and cost saving assemble
- 2 switch input configurations
- 2 hoops on plugs to secure good connection to the main socket
- 4 alternative Bluetooth modules with on/off, 1-10V, trailing edge and DALI control output
- Various options on plugs, from 3 ways up to 6 ways, cable length from 1 meter up to 20 meters
- Support emergency luminaire (for QCB02 only)
- Double terminals for loop-in and loop-out to the next marshalling box
- Linect system enabled
- 5-year warranty

EnOcean
Self-powered IoT

Fully support
EnOcean switch
EWSSB/EWSDB

Technical Specifications

Bluetooth Transceiver	
Operation frequency	2.4 GHz - 2.483 GHz
Transmission power	7 dBm
Range (Typical indoor)	10~30m
Protocol	Bluetooth® 5.0 SIG Mesh

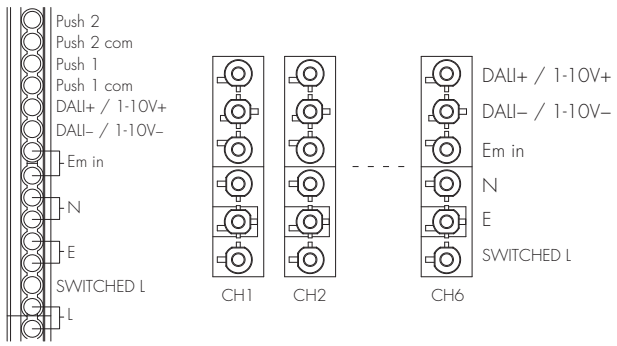
Safety & EMC	
EMC standard (EMC)	EN55015, EN61547 EN61000
Safety standard (LVD)	IEC/EN 61058, AS/NZS 61058 IEC/EN61535; IEC/EN61984 IEC/EN60670-1; IEC/60670-22
Radio Equipment (RED)	EN300 328, EN301 489, EN62479
Certification	CE RED

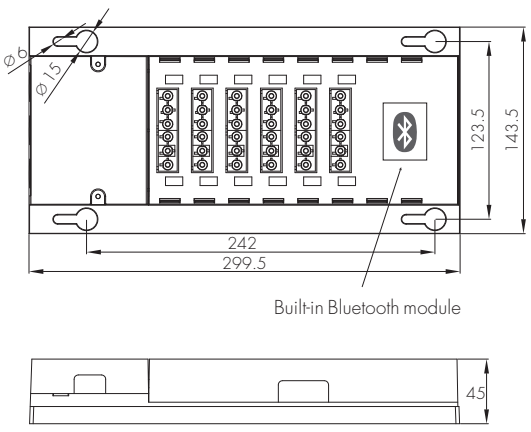
Input & Output Characteristics	
Input power supply: With HBTD8200S/F With HBTD8200T/F With HBTD8200V/F With HBTD8200D/F	 220~240VAC 50Hz 230VAC 50Hz 220~240VAC 50Hz 220~240VAC 50/60Hz
Stand-by power	<0.5W
Load ratings: With HBTD8200S/F With HBTD8200T/F With HBTD8200V/F With HBTD8200D/F	 400VA(Capacitive), 800W(Resistive) 150VA(Capacitive), 150W(Resistive) 400VA(capacitive), 800W(resistive) 100mA, 16VDC(max. 50 devices)
Channel	1 channel x 6 output

Environment	
Working temperature	Ta: -20°C ~ +50°C
Humidity (RH%)	20% ~ 90%
Storage temp.	-20°C ~ + 60°C
IP rating	IP20

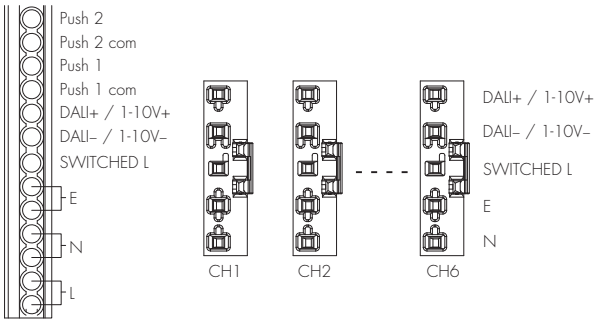
Mechanical Structure & Dimensions

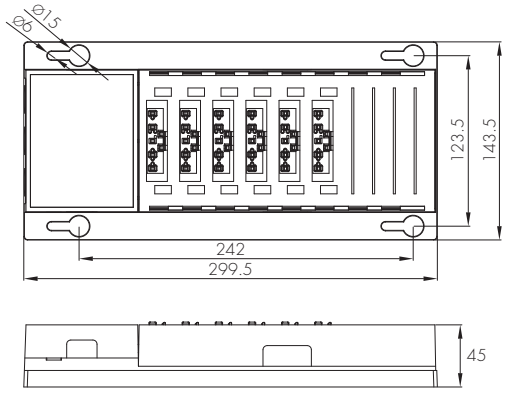
QCB02





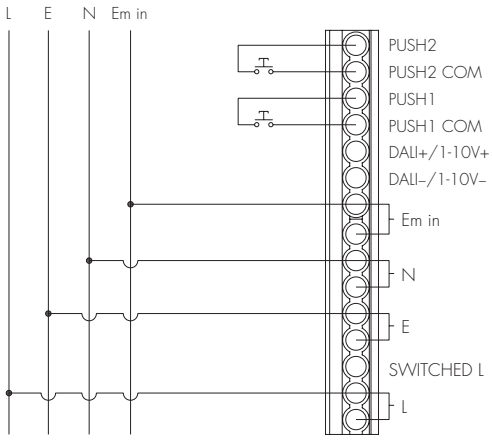
QCB04



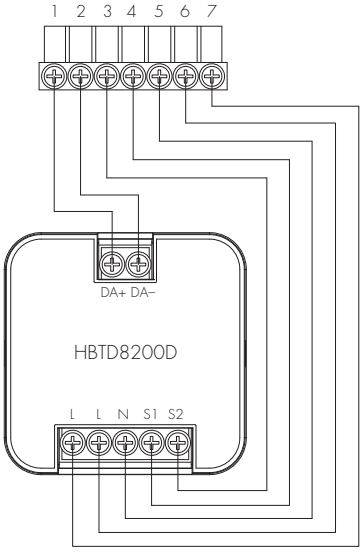


Wiring Diagram for QCB02

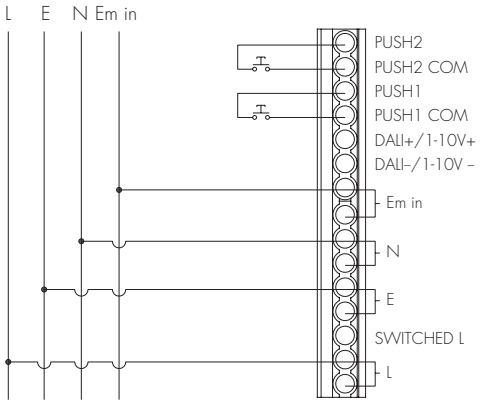
1. Bluetooth version for DALI output



Wiring for built-in Bluetooth modules



2. Bluetooth version for 0/1-10V output



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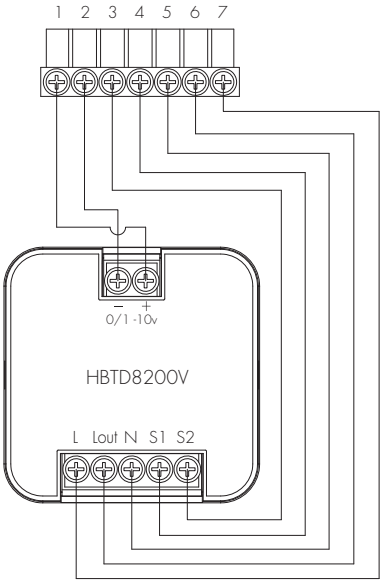
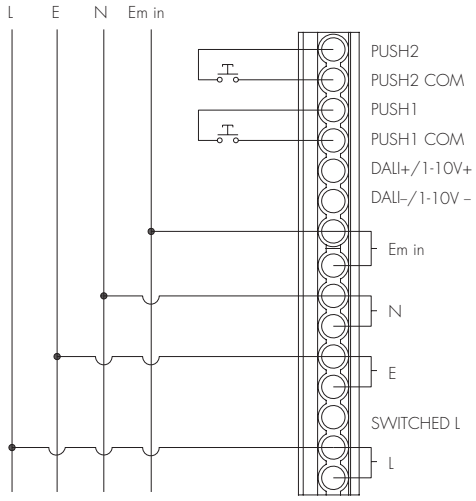


3. Bluetooth version for Trailing edge output



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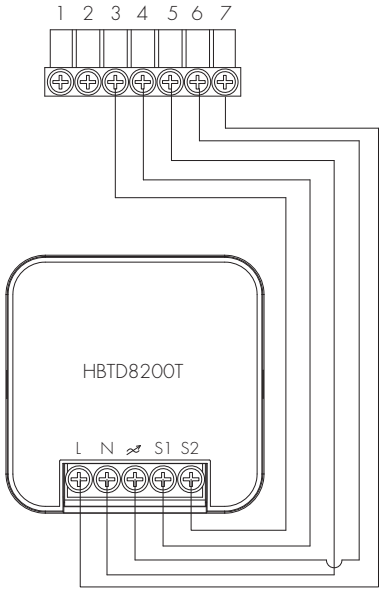
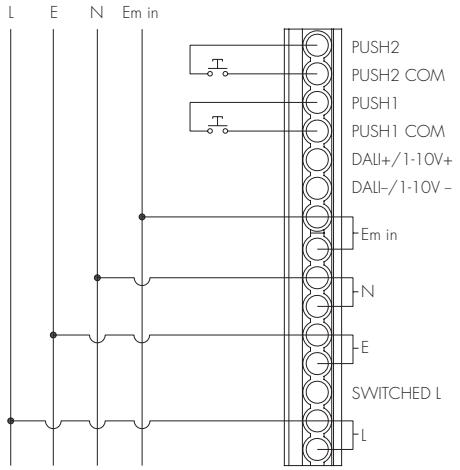


4. Bluetooth version for on/off with relay output



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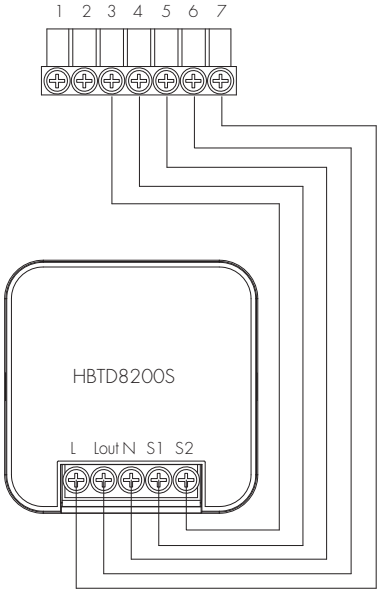
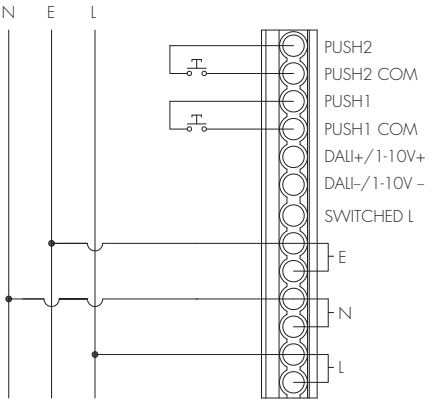


Wiring Diagram for QCB04

1. Bluetooth version for DALI output



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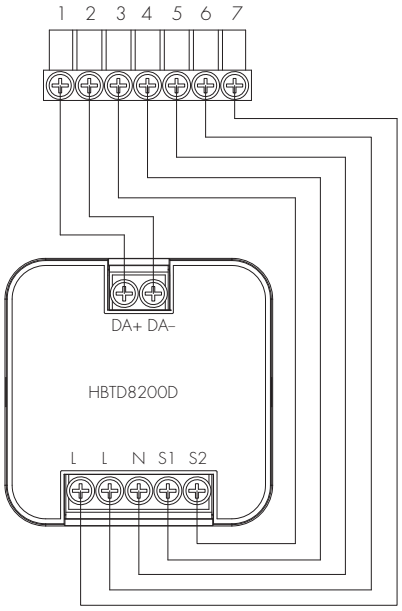

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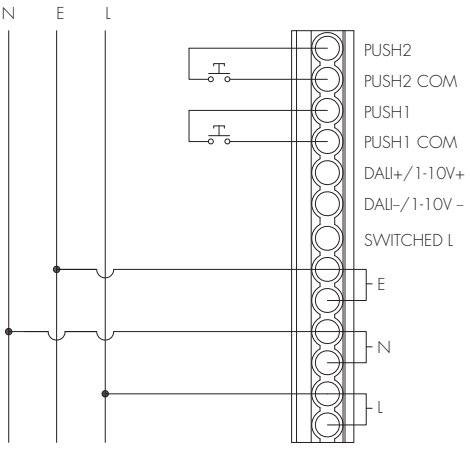

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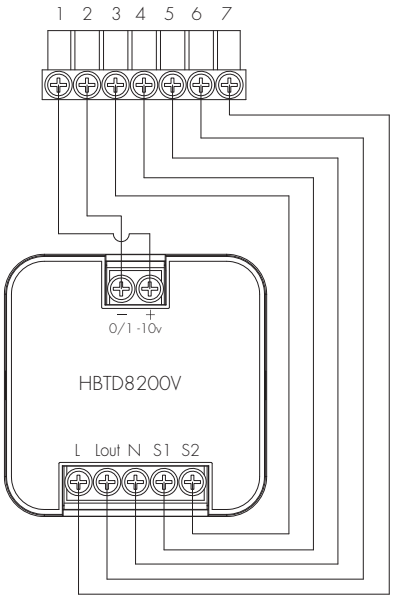
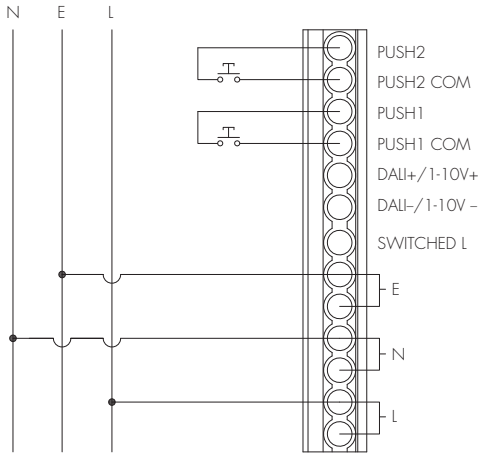


3. Bluetooth version for Trailing edge output



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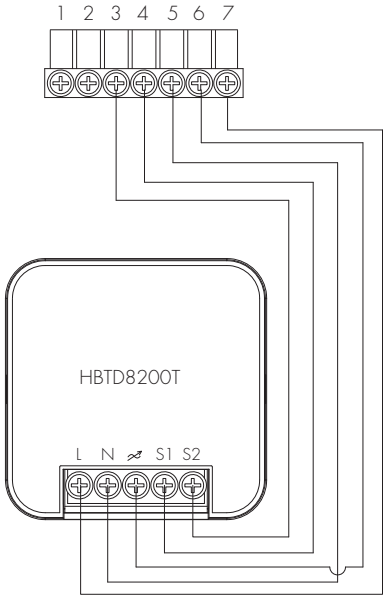

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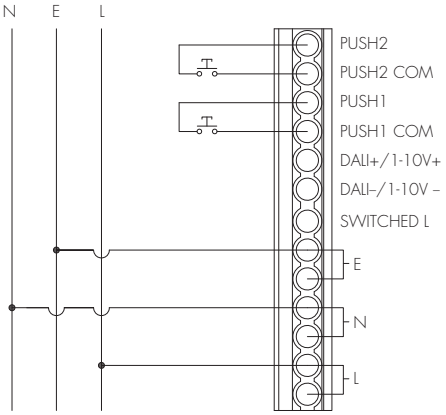

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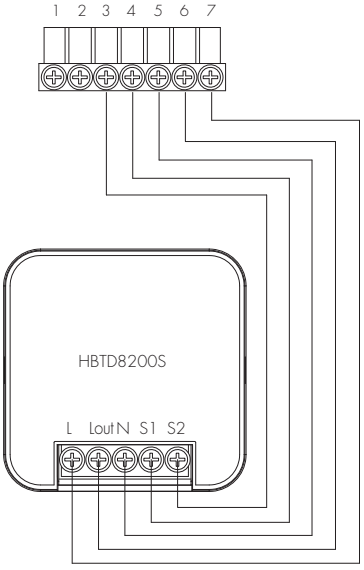
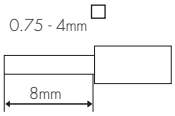


Wire Preparation

Rising clamp terminal.



To make or release the wire from the terminal, use a screwdriver to push down the button.

Plug Types

Wieland

2 hooks to the main socket

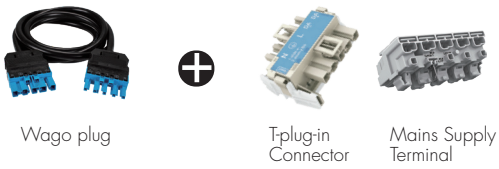
Blue terminal:
3.DALI + / 1-10V +
2.DALI – / 1-10V –
1.Maintained live
Black terminal:
N.Neutral
⏚.Earth
L .Live

Wago

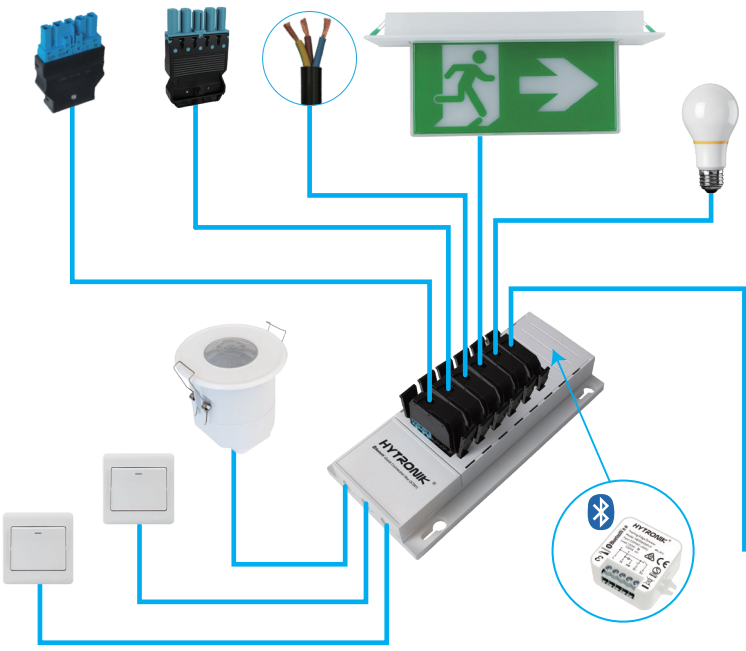
Blue terminal:	Cable:
DALI + / 1-10V +	Grey
DALI – / 1-10V –	Black
L .Live	Brown
⏚.Earth	Green & Yellow
N.Neutral	Blue

Hytronik provides various options of plug cables. Plugs on both ends can be fitted either with Wieland plugs, Wago plug or just loose ends. In the meanwhile, we also offer flexible cable options from 3-core to 6-core, length from 1 meter to 20 meters.

Connecting to linect System



Wago plug | T-plug-in Connector | Mains Supply Terminal



Linect is a universal connection system for recessed luminaires. All luminaires fitted with a Linect interface can be connected to a plug-in connector system from various manufactures. The components for the Linect plug-in connection system for light installation include:

- Linect mains supply terminal in the luminaire
- Linect T-plug-in connector

With Hytronik cable fitted with Wago plug, our QCB series is ideal for Linect ready luminaires to maximize installation efficiency and minimize labor cost significanty.

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.	- Turn on/off - Turn on only - Turn off only - Recall a scene - Exit manual mode - Do nothing
	Double push	- Turn on only - Turn off only - Recall a scene - Exit manual mode - Do nothing
	Long press (≥1 second)	- Dimming - Colour tuning - Do nothing
Simulate sensor	/	- Upgrade a normal on/off motion sensor to a Bluetooth controlled motion sensor

Additional Information / Documents

1. To learn more about detailed product features/functions, please refer to www.hytronik.com/download->knowledge ->Introduction of App Scenes and Product Functions

2. Regarding precautions for Bluetooth product installation and operation, please kindly refer to www.hytronik.com/download ->knowledge ->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 www.hytronik.com/products/bluetooth technology ->Bluetooth Accessories

4. Regarding Hytronik standard guarantee policy, please refer to www.hytronik.com/download ->knowledge ->Hytronik Standard Guarantee Policy