

# Quick Connection Box



# HYTRONIK®

Model: QCB01 - DALI / 0/1-10V Version

## Applications

Known as marshalling box, this quick connection box supports DALI, switch-dim, 1-10V, on/off and emergency luminaires, enables plug'n' play commissioning for lighting installations in industrial, commercial and retail buildings.



QCB01

## Features

- Hassle-free wiring on-site
- 1 x 8 channel output
- Intuitive installation, save time, plug' n' play
- Assemble flexibility
- 2 push switches input configuration
- 2 hoops on plugs secures good connection to the main socket.
- Various options on plugs, from 3-ways up to 6 ways, cable length from 1 meter up to 20 meters.
- Double terminals for loop-in and loop-out to the next marshalling box.

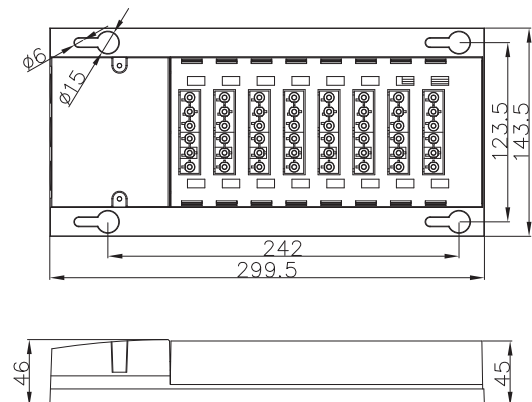
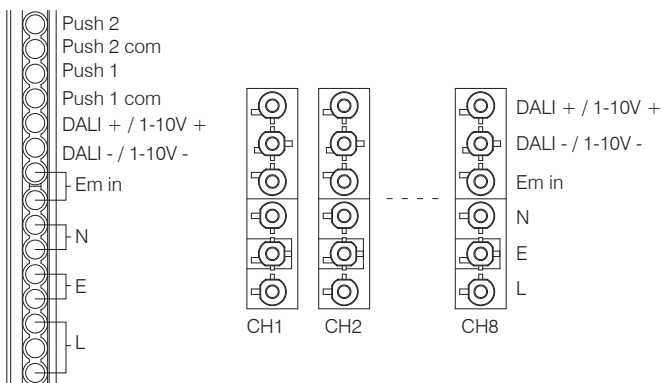
## Specifications

QCB01	
Input power supply	220 - 240VAC 50/60Hz
Current (Max.)	10A
Channel	1 channel x 8 output
Working Temp.	-20 ~ + 50 C
Humidity (RH%)	20% ~ 90%
Storage temp.	-10 ~ + 60 C
IP Rating	IP 20

## Safety and EMC (Common Data)

Safety standard (LVD)	IEC/EN61535; IEC/EN61984 IEC/EN60670-1; IEC/EN60670-22
Certification	CE ENEC

## Dimensions and Terminals



## Pluggable Connectors



2 hooks to the main socket

Blue terminal:  
DALI + / 1-10V +  
DALI - / 1-10V -  
Maintained live

Black terminal:  
Neutral  
Earth  
Live

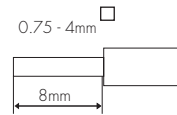
Cable:  
Red  
White  
Black

Blue  
Green & Yellow  
Brown

## Wire Preparation



Rising clamp terminal.



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

## Manual Override (P1 & P2 terminals)

Connected to push switch, the P1 terminal allows end-users to manually switch on/off, or adjust the light level for DALI DT6 driver, and P2 terminal for colour temperature adjustment (for DALI DT8 drivers).

\* Short Push (<1s): permanent on/off function.

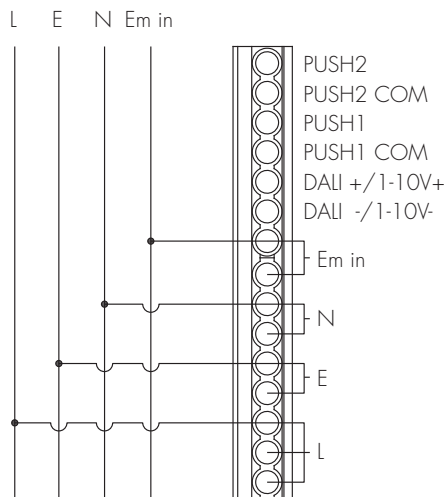
\* Long Push (>1s): Brightness level adjustment or colour tuning according to the function of connected DALI device.

Notes:

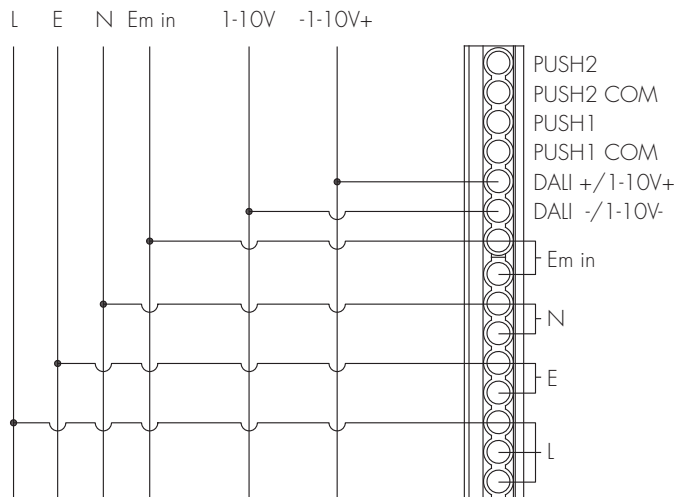
The P1 & P2 terminals may be left unconnected if no manual control is required.

## Wiring Diagram

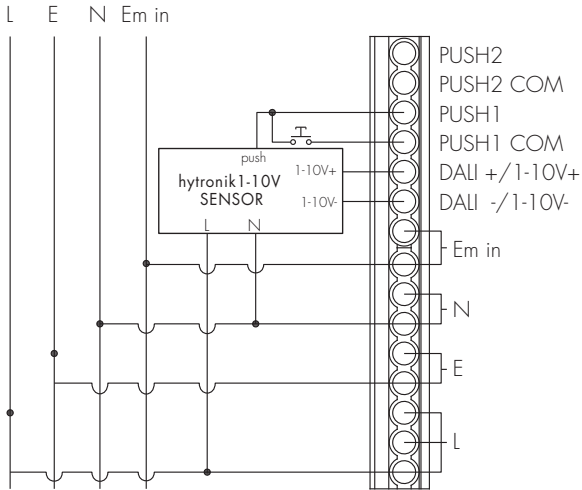
### 1. On/off control, including emergency



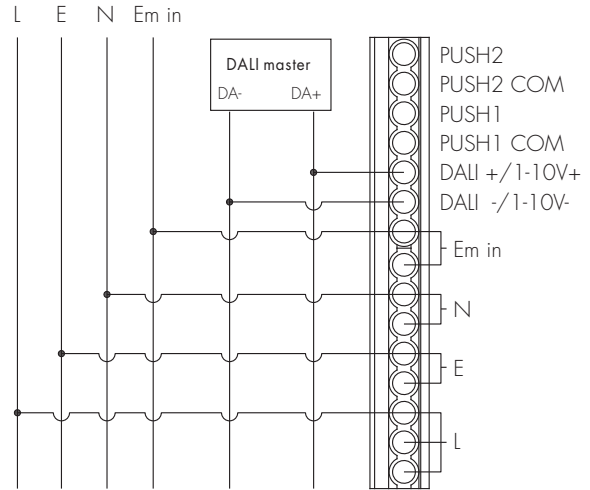
### 2. 1-10V control, including emergency.



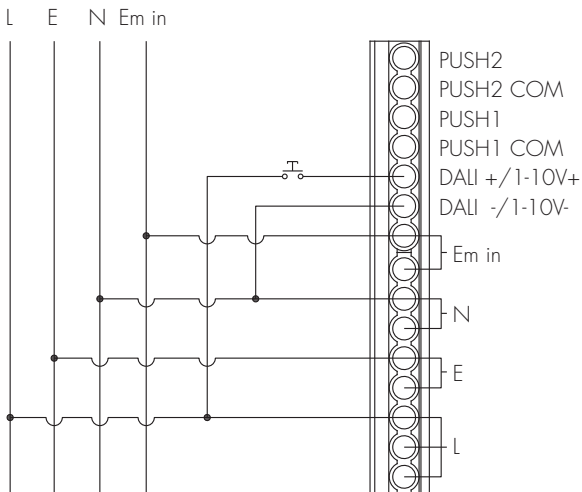
3. When connected to hytronik 1-10V motion sensor with push terminal.



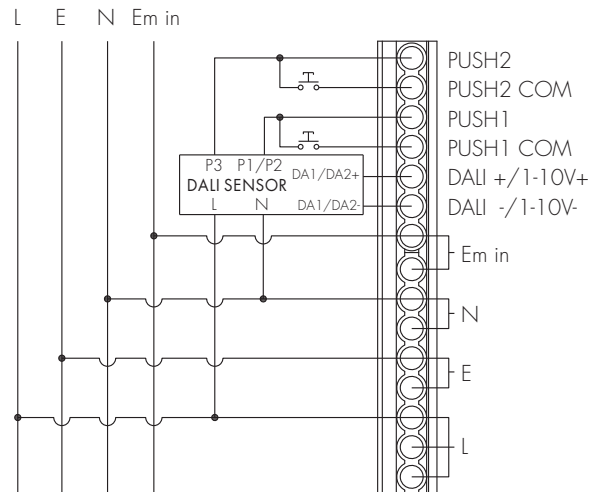
4. In DALI BUS system .



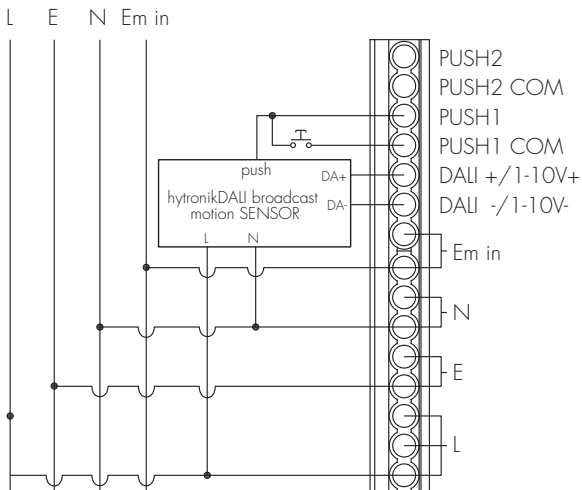
5. For switchDIM control



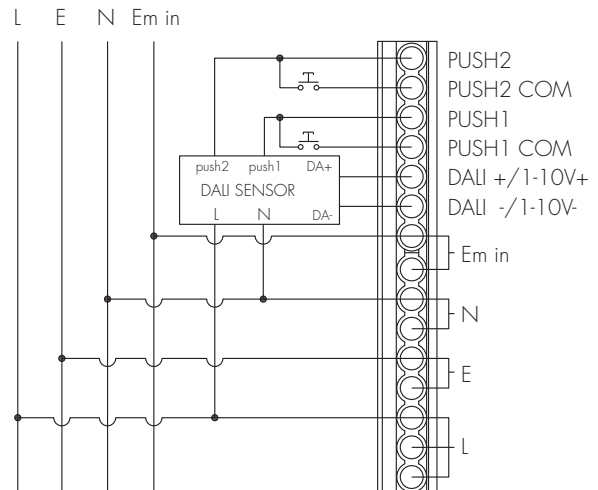
6. for hytronik HCL sensor HBHC25, P1 for dimming control, P2 ( connected to P3 terminal on the sensor ) for color tuning.



7. when connected to hytronik DALI broadcast motion sensor with push terminal.



8. For hytronik HCL sensor HHC24, P1 for dimming control, P2 for color tuning.



Push function: on/off and dim.

## Applications

Additional to QCB01, this marshalling box has a built-in bluetooth module, which can control a group of 6 channels of luminaires, including DALI, 1-10V, switchDIM luminaires, to achieve on/off, bi-level dimming, tri-level dimming, even tunable white and human centric lighting control.

4 optional inter-changeable bluetooth module of on/off, 1-10V dimming, DALI, and trailing edge dimmer, can meet all demands in projects. Configuration of grouping and multi-functions is done via the hytronik powerful app. in both android and iOS version.

## Features

- Bluetooth hassle-free wiring on-site, function and group configuration on mobile app
- 1 x 6 channel output
- Intuitive installation, save cost, plug 'n' play
- Assemble flexibility
- 2 switches input configuration
- 4 alternative bluetooth module 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.
- Double terminals for loop-in and loop-out to the next marshalling box.



QCB02

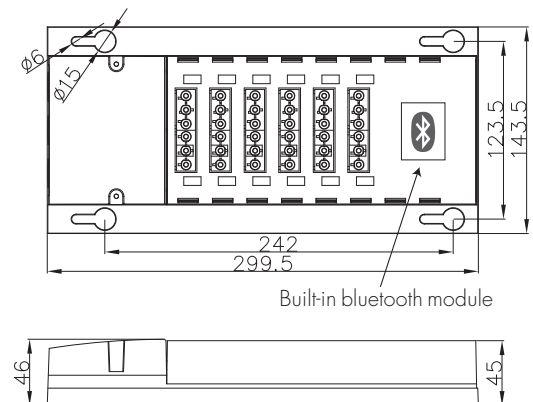
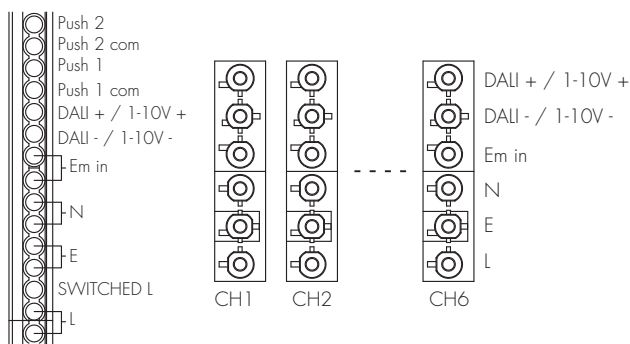
## Specifications

QCB02	
Input power supply	220 - 240VAC 50/60Hz
Current (Max.)	10A
Load rating:	
DALI PSU	100mA, 16VDC (max. 50 devices)
0/1-10V	300VA (capacitive), 400W (resistive)
Trailing edge	1-150VA (Capacitive) / 1-150W (Resistive)
On / off	300VA (Capacitive) / 400W (Resistive)
Stand-by power	< 0.5W
Channel	1 channel x 6 output
Working Temp.	-20 ~ + 50 C
Humidity (RH%)	20% ~ 90%
Storage temp.	-10 ~ + 60 C
IP Rating	IP 20

Bluetooth Transceiver	
Operation frequency	2.4 GHz - 2.483 GHz
Transmission power	7 dBm
Range (Typical indoor)	15~30m
Protocol	Bluetooth® 4 Wireless Mesh

Safety and EMC (Common Data)	
EMC standard (EMC)	EN55015, EN61547 EN62479, 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 ENEC

## Dimensions and Terminals

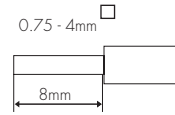


## Pluggable Connectors



Blue terminal:	Cable:
DALI + / 1-10V +	Red
DALI - / 1-10V -	White
Maintained live	Black
Black terminal:	
Neutral	Blue
Earth	Green & Yellow
Live	Brown

## Wire Preparation



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

## Manual Override (P1 & P2 terminals )

The P1 & P2 terminals allow manual override for the end-user to switch on/off, or adjust the light level (and colour temperature with DALI DT8 drivers) by retractive push-switch. Furthermore, by using the binding option in the App, entire groups of fixtures may be wirelessly controlled by a single switch.

DALI version:

- \* Short Push (<1s): on/off function; can also be configured to recall scene selection.
- \* Long Push (>1s): Brightness level adjustment or colour tuning.

0/1-10V version:

- \* Short Push (<1s): on/off function; can also be configured to recall scene selection.
- \* Long Push (>1s): Brightness level adjustment.

Trailing edge

- \* Short Push (<1s): permanent on/off function; can also be configured to recall scene selection.
- \* Long Push (>1s): Brightness level adjustment.

On / off

- \* Short Push (<1s): on/off function; can also be configured to recall scene selection.
- \* Long Push (>1s): control the bonding device ( bonding via app in the same mesh network )

Notes:

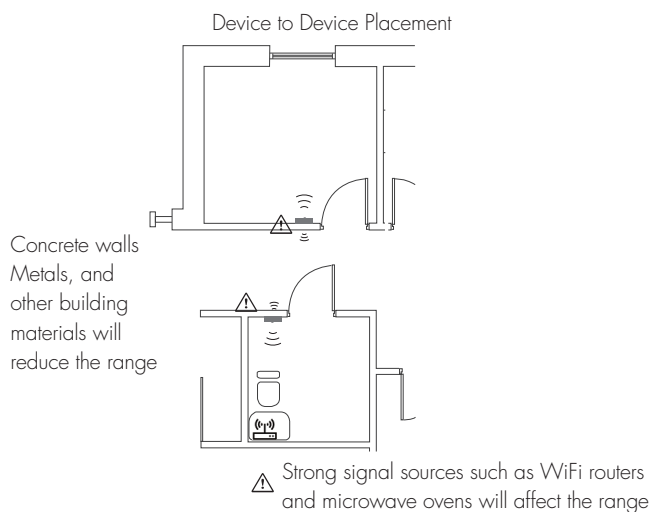
- 1) When binding with Hytronik other bluetooth devices, the lights bound will be dimmed and colour tuning.
- 2) Both the adjustment on App and push switch can overwrite each other, the last adjustment takes control.
- 3) The switch functions are configured in the App.
- 4) The P1 & P2 terminals may be left unconnected if no manual control is required.

## Placement Guide and Typical Range

Network Considerations:

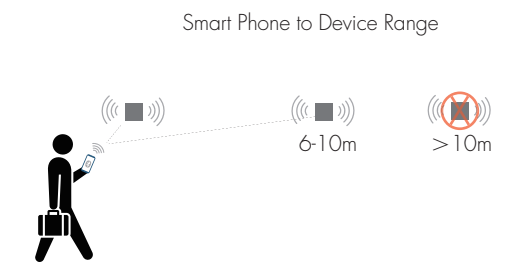
The recommended maximum distance between dimmers is 15m - 30m. Please be aware that building materials such as concrete and sheet steel will effect the range achievable when installed.

Other forms of interference which may affect the range include WiFi routers, microwave ovens and other such sources which emit strong signals should be taken into consideration when installing.



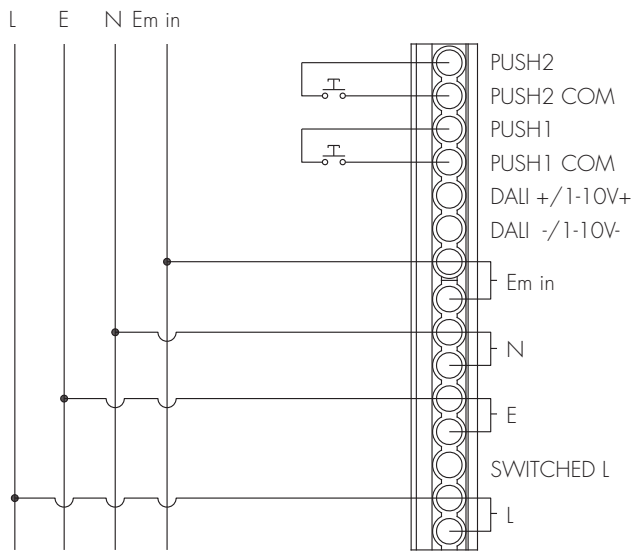
The smart device with the App installed will have a typical range of 10m, but varies from device to device. During commissioning, the installer will need to be in range of the devices when searching for devices to add to the network.

Once the devices have been added to the network via the App, the devices will start communicating within the wireless mesh. This means that once the network is complete, all devices are accessible from the smart device when in a 10m range of a single point.



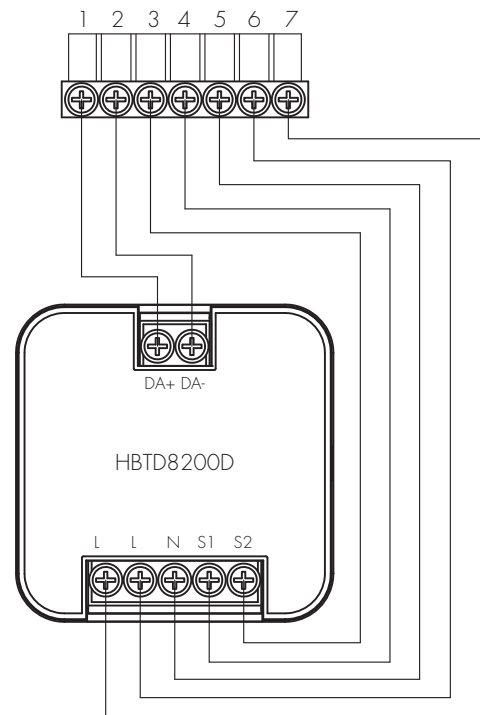
# Wiring Diagram

## 1. DALI enabled bluetooth version

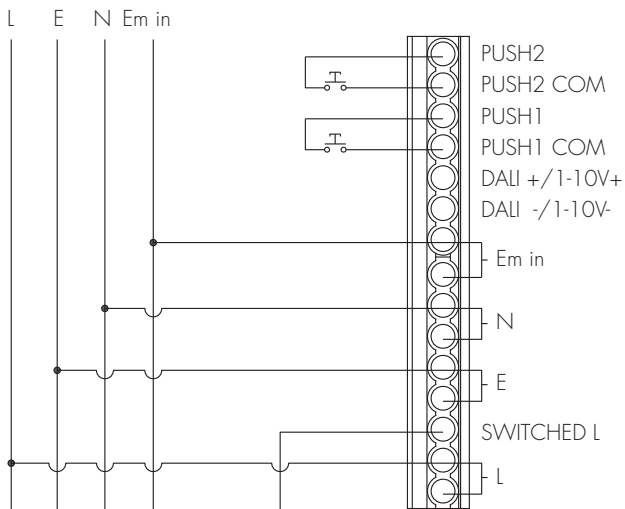


With DT8 driver: P1 for manual override , or scence recall. P2 for color tunning.  
 With DT6 driver: P1 and P2 for manual override or scenes recall.

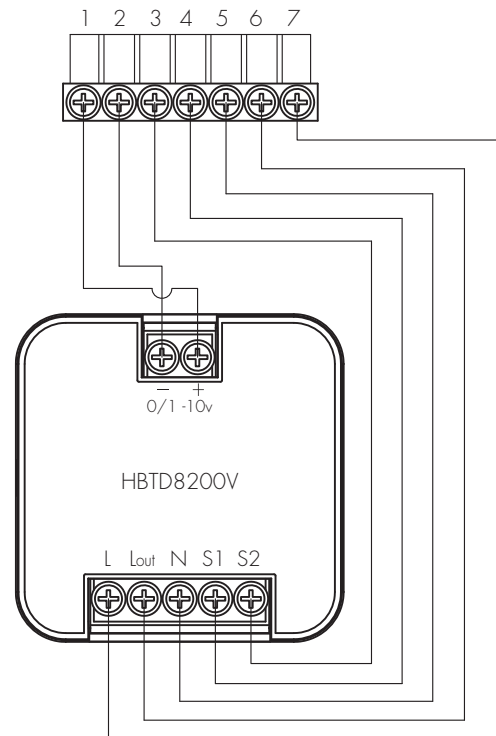
## Wiring for built-in bluetooth modules



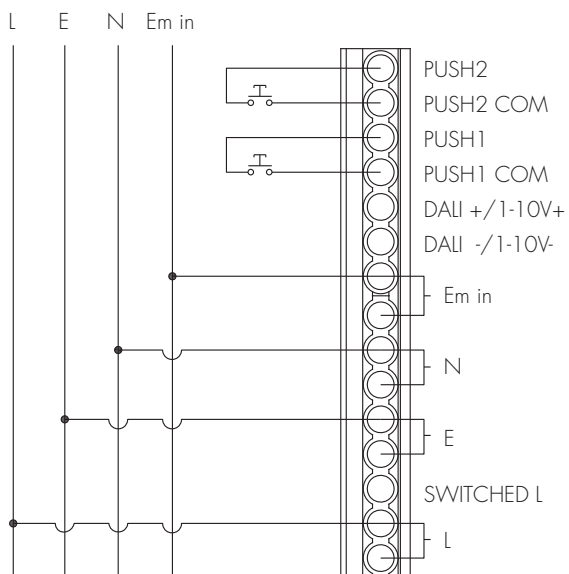
## 2. 0/1-10V enabled bluetooth version



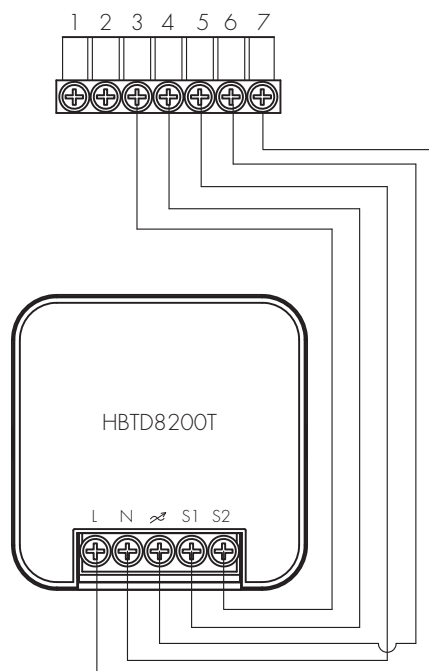
## Wiring for built-in bluetooth modules



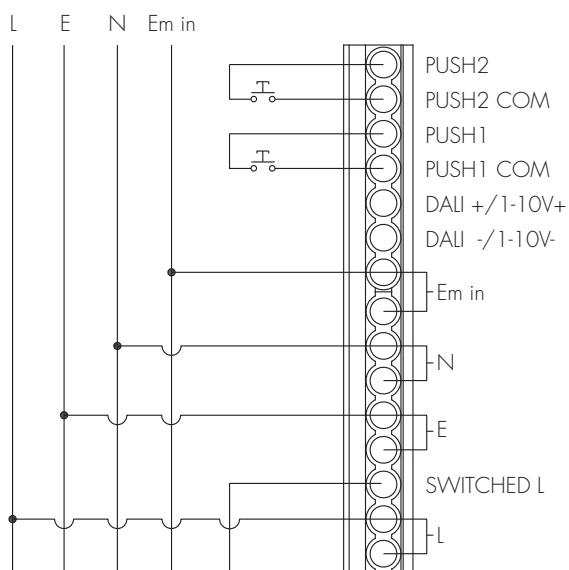
### 3. Trailing edge enabled bluetooth version



### Wiring for built-in bluetooth modules



### 4. Bluetooth version for on/off with relay output



### Wiring for built-in bluetooth modules

