Installation and Instruction Manual

HYTRONIK®

GST type 6-pole Quick Connection Box for Dimming Application   QCB03

1. Technical Specifications

Mains voltage	220~240VAC 50/60Hz
Rated load	Rating of system 10A. Rating of each output 10A
Terminal capacity	0.75 - 4.0mm2 (max. 2 x 2.5mm2)
Storage temperature	-20°C ~ +60°C
Max. relative humidity	20 ~ 90%
Compliance	CE, UKCA
Insulation	Class II

1.Description

GST type 6-pole terminal base quick connection box for dimming application, with DALI or 0/1-10V output, 8 luminaire outlets and 1 sensor outlet. Freely switch between1-channel and 2-channel control. Rating of system 16A, rating of each output 10A.
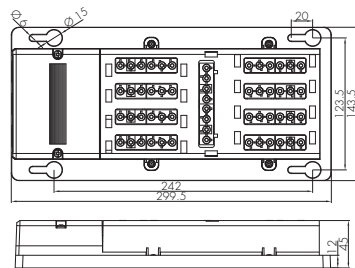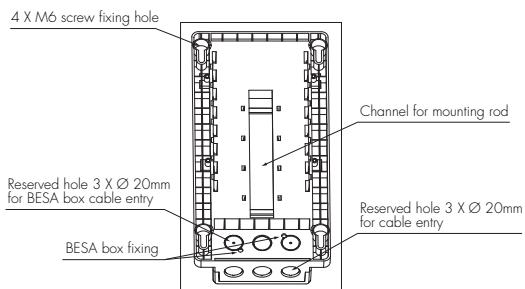
2. Key Features

• Dimmable control applications (DALI-2 or 0/1-10V)
• 8 luminaire outlets + 1 extra sensor outlet for sensor connection
• Luminaire outlet: GST type 6-pole terminal base (L' or L, N, E, Em, Dim+, Dim-)
• Sensor outlet: GST type 8-pole terminal base (L, N, E, L', P1, P2, Dim-, Dim+)
• Black housing and white housing available to choose from
• Freely switch between 1-channel (1 x 8) & 2-channel (2 x 4) control
• Tamper-proof structure design
• Expandable: easy extension to another QCB03 via plug' n' play
• Rating of system: Max 16A. Rating of each output: Max 10A
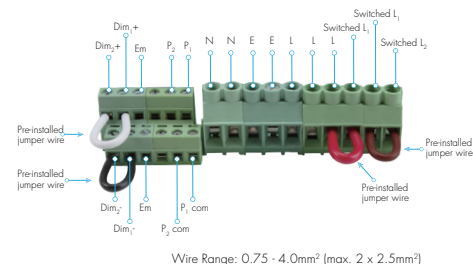• Flame-retardant material for safety protection

3. 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
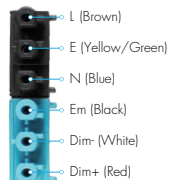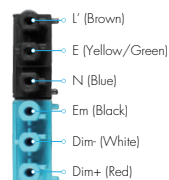• Can be supplied with pre-wired cables

4. Dimensions (mm)

4 X M6 screw fixing hole
Channel for mounting rod
Reserved hole 3 X Ø 20mm for BESA box cable entry
Reserved hole 3 X Ø 20mm for cable entry
BESA box fixing

123.5
143.5
242
299.5
45

5. Input & Output Terminal Function

Dim1+ Dim2+ Em P2 P1 N N E E L L L Switched L1 Switched L1 Switched L2 Switched L2

Pre-installed jumper wire
Pre-installed jumper wire
Pre-installed jumper wire
Pre-installed jumper wire

Dim2- Em P1 com
Dim1- P2 com

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

Luminaire outlet

When using DALI dimming

L (Brown)
E (Yellow/Green)
N (Blue)
Em (Black)
Dim- (White)
Dim+ (Red)

When using on/off switching or 0/1-10V dimming

L' (Brown)
E (Yellow/Green)
N (Blue)
Em (Black)
Dim- (White)
Dim+ (Red)

Sensor outlet

L E N L' P1 P2 Dim- Dim+

Pre-installed jumper wire
Pre-installed jumper wire

Pre-installed jumper wire
Pre-installed jumper wire

Channel 1 (4 x Luminaire Outlet)
Sensor/Controller input (1 x Sensor Outlet)
Channel 2 (4 x Luminaire Outlet)
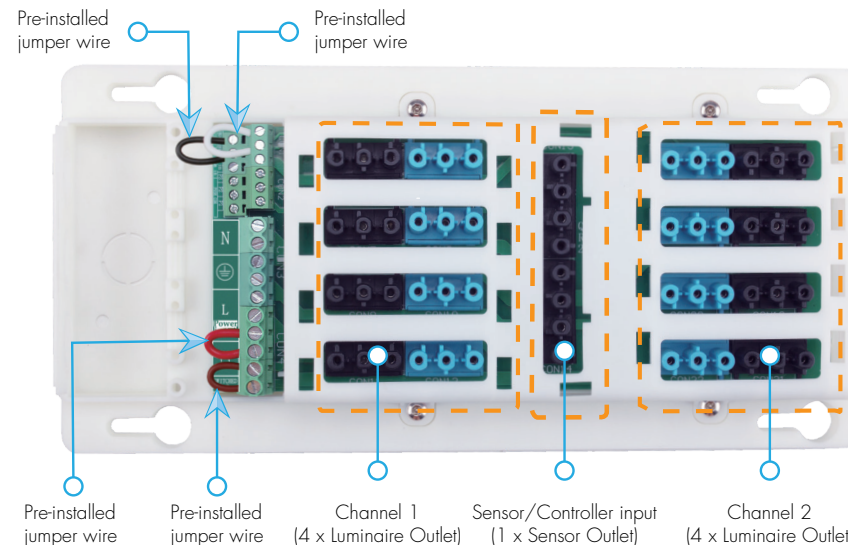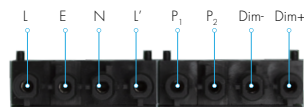
Factory default for QCB03 comes with four pre-installed jumper wires. The brown wire short-connects Switched L1 and Switched L2 together, the red jumper wire short-connects Switched L and L, the black jumper wire short-connects Dim1- and Dim2-, and the white jumper wire short-connects Dim1+ and Dim2+. With these jumper wires, user can freely choose different dimming control method and also freely switch between one-channel and two-channel control.

1) one-channel (1 x 8) DALI dimming -- -- -- keep all four jumper wires.

2) two-channel (2 x 4) dual DALI dimming -- -- -- keep red wire & brown wire, remove black wire & white wire.

   In this case the two channels will be controlled separately (channel 1 is controlled by Dim1+ & Dim1-, and channel 2 is controlled by Dim2- & Dim2+).

3) one-channel (1 x 8) 0/1-10V dimming -- -- -- remove red wire, keep brown wire & black wire & white wire.

4) two-channel (2 x 4) dual 0/1-10V dimming -- -- -- remove all four jumper wires.

   In this case the two channels will be controlled separately (channel 1 is controlled by Switched L1, Dim1+ & Dim1-, and channel 2 is controlled by Switched L2, Dim2- & Dim2+).

5) two-channel (2 x 4) DALI dimming + on/off switching -- -- -- keep red wire, remove brown wire & black wire & white wire.

   In this case the two channels will be controlled separately (channel 1 is controlled by Dim1+ & Dim1-, and channel 2 is controlled by Switched L2).

6) two-channel (2 x 4) 0/1-10V dimming + on/off switching -- -- -- remove all four jumper wires.

   In this case the two channels will be controlled separately (channel 1 is controlled by Dim1+ & Dim1-, and channel 2 is controlled by Switched L2).

This flexible design aims to reduce model inventories for users, and just one box is capable enough to handle different dimming requirements on the project site. Easy for management, and powerful for usage!

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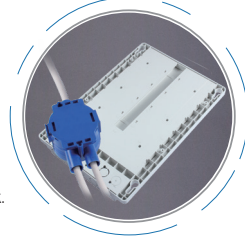
6.Installation methods

Surface Mount ▼

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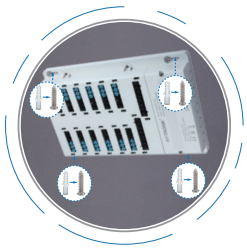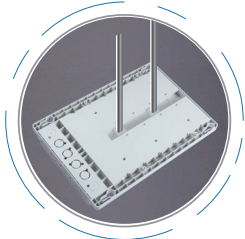

BESA/Junction Box Connection ▼
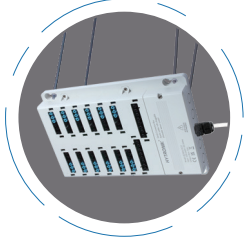
It can be connected with BESA/junction box.

Channel Nut Mount ▼

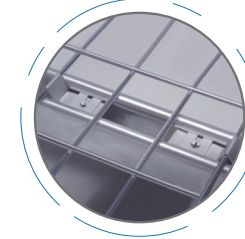It can work with channel nuts to fasten into the back.

Mounting Rods ▼

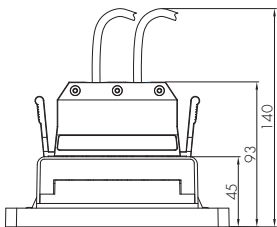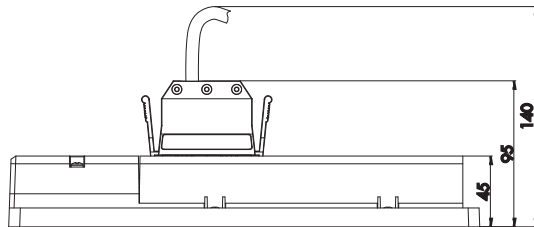It can be fixed with mounting rods.

Marco Tray Mount ▼

It can work with Marco clips steel wire cables tray

Minimum Installation Height
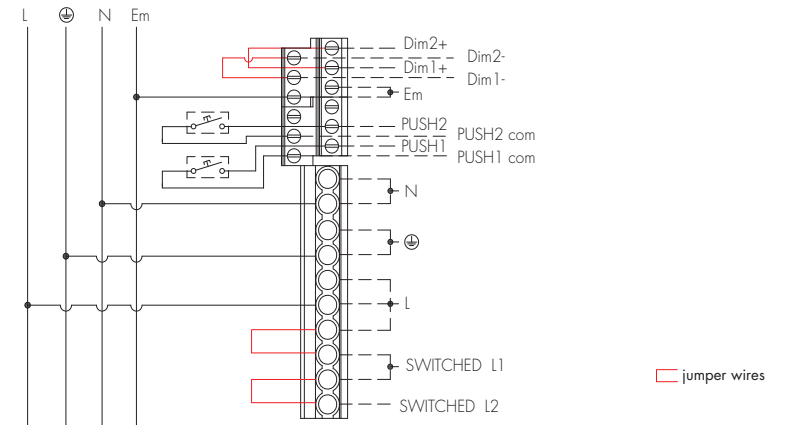

Sensor plug (HP06)

Luminaire plug (HP03)

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

7. Wiring Diagram

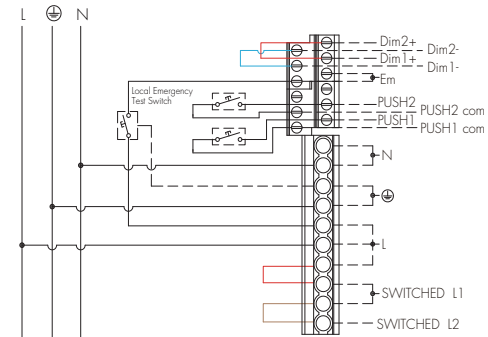*----This product should be installed by a qualified electrician.*

Factory default setting with four pre-installed jumper wires
One-channel (1x8) DALI dimming control

□ jumper wires

Note: 1. By removing different jumper wires, users can achieve different dimming/switching control.

2. Do not wire across phases.

8. Wiring & Emergency Test
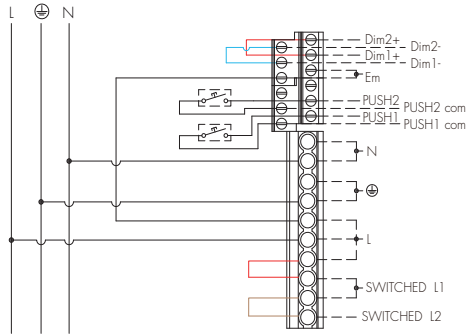
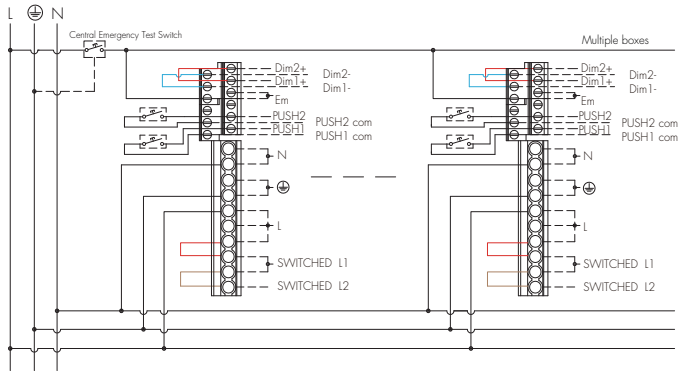Local lighting switch and local emergency test switch

Note: Do not wire across phases.

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Using Local lighting switch for power interruption

Note: 1. A local lighting switch may still be used when there is a central emergency test switch or when a circuit breaker is used to interrupt the power.
2. Do not wire across phases.

Emergency test using central switch

Note: 1. A local lighting switch may still be used when there is a central emergency test switch.
2. Do not wire across phases.

9. Ceiling Rose/ Conduit Box Connection

Description

Ceiling rose QCCR02 can be used when there is a need to take power and dimming signal from a conduit box. The installation-friendly design comes with a very spacious termination space for really easy wirings.
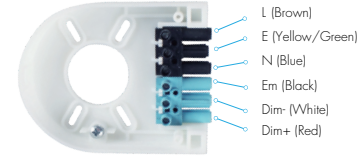
Connection to Hytronik's QCBs

L (Brown)
E (Yellow/Green)
N (Blue)
Em (Black)
Dim- (White)
Dim+ (Red)

Key Features:

- Can be freely placed or fixed with BESA/junction box
- Taking power from BESA/junction box
- 6-pole GST type connector (L, E, N, Em, Dim+, Dim-)
- Allowing fast connection with Hytronik quick connection box
- 15mm depth big cabling space
- 48-68mm pitch for conduit mounting

Mechanical Structure & Dimensions

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