Drive Hub

BOB-E

Product Code - DHBE

DATASHEET

Description

The BOB-E enables the GDS Drive Hub system to integrate with a venue's emergency power system, seemlessly switching into emergency mode either by activation of an emergency power feed or by loss of power on the mains sense input, acting as a hold-off relay.

Under normal operation, the BOB-E is passive and will pass through LED power from the Driver, either using the RJ45 feed from a Drive Hub 4-Channel or 8-Channel CC Drive Card, the 2-core cable output from a IPM Smart BOB or any third-party constant current LED driver.

During emergency operation, the LED output is limited to 30W.This is determined by the LED voltage and the output current set. Any LED voltage above 42V will require the current to be set lower than 725mA .

Works with:

- ***DHDC4CHCC-1.5*** *- Drive Card 4Ch CC*
- ***DHDC8CHCC-0.7*** *- Drive Card 8Ch CC*
- ***DHBSM1CHCC1.0*** *- IPM Smart BOB*
- ***DHBIPM2-2CHCC*** *- IPM² Smart BOB 2Ch*
- ***DHBIPM2-5CHCC*** *- IPM² Smart BOB 5Ch*
- *Third-Party Constant Current LED Drivers**

** It is recommended to confirm third-party compatibility with GDS.*

Note:

The BOB-E only operates with constant current LED loads. Connecting constant voltage loads to the output will yield unsatisfatory results and could result in damage to the BOB-E or the connected LEDs.

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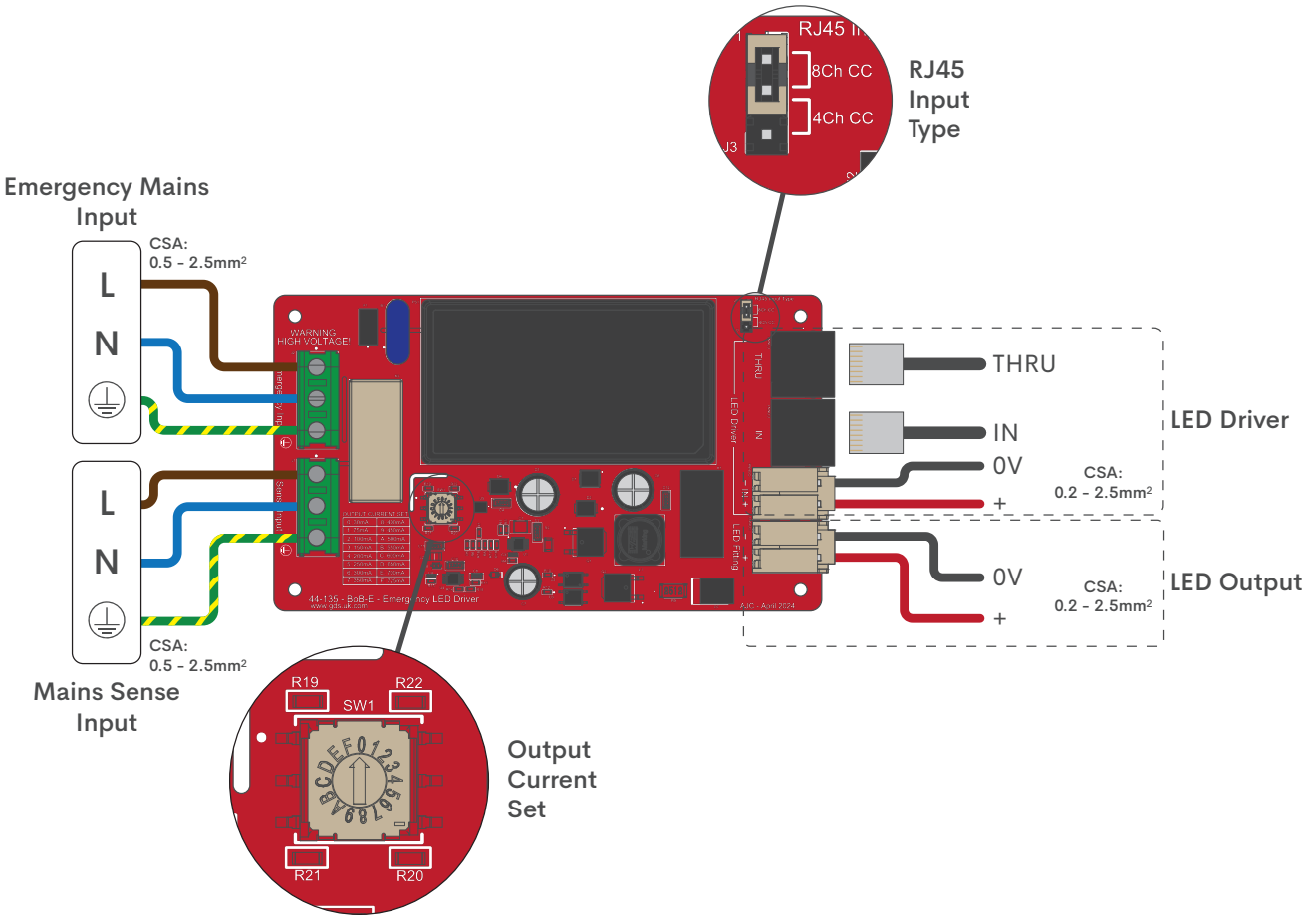
Installation Instructions

Important:

- The BOB-E should only be installed by a qualified electrician, ensuring the installation complies with all necessary local standards.
- Always isolate all mains supplies prior to installation.
- Fire Performance (FP) cable should always be used for the incoming mains supply.
- The output cable connecting the BOB-E to the LED load should be no longer than 1 metre. Any output cable longer that this should be FP rated and connected in accordance with local safety regulations.
- Each BOB-E should have a designated mains feed, do not daisy-chain.
- Ensure the controlgear is installed in a location that allows adequate ventilation and is free from excessive heat, moisture, and dust.
- The BOB-E should be securely mounted to prevent movement or vibration that could lead to damage or disconnection.
- Ensure all connections are tight and secure to prevent arcing or overheating. Ceramic terminals are recommended for interconnects between FP cables.
- After installation, perform thorough testing to ensure the BOB-E operates correctly in both normal and emergency modes. Document the results and any adjustments made.

Connections



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Connection Definitions

Emergency Mains Input

This is the main power feed for the BOB-E, it enables the internal power supply to provide power to the connected LED. In a system whereby the mains feed becomes active during emergency state, mains power presented here will trigger emergency mode in the BOB-E.

Recommended cable CSA:

Note: *FP (Fire Performance) cable must be used to supply power to the Emergency Mains Input*

Mains Sense Input

This feed will be used in systems whereby a loss of power triggers an emergency state. It will need to be connected in conjunction with the Emergency Mains Input so that the BOB-E remains powered-on in an emergency state. Loss of power to the Mains Sense Input will trigger emergency mode in the BOB-E.

LED Driver

IN and THRU connections are presented on RJ45 ports. The IN port will take an RJ45 connector either directly from a 4Ch or 8Ch Drive Card (or via a Baby BOB/BOB-E in some 8Ch Drive Card systems).

The THRU port allows for connection to other Baby BOBs or BOB-E in an 8Ch Card system.

The LED DRIVER IN connector allows for IPM/IPM² Smart BOBs or third-party drivers to be connected to the LED output, where RJ45 connectors are not used.

LED Output

This is the output for the LED that is required to be on in an emergency state. In normal operation, this output will be passively driven from either of the LED driver inputs. In emergency state, the LED Output will be driven directly from the BOB-E power supply, this will be a fixed output level based on the setting of the *Output Current Set* encoder.

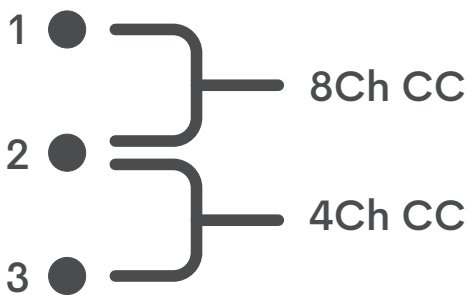
Output Current Set

This allows the output current to be set based on requirements. In emergency mode, the LED will be driven at the selected current (up to 30W):

0: 30mA	**4: 200mA**	**8: 400mA**	**C: 600mA**
1: 75mA	**5: 250mA**	**9: 450mA**	**D: 650mA**
2: 100mA	**6: 300mA**	**A: 500mA**	**E: 700mA**
3: 150mA	**7: 350mA**	**B: 550mA**	**F: 725mA**

RJ45 Input Type

A jumper will need to be placed on these pins in a configuration based on the type of Drive Card being connected to the RJ45 LED Driver Input:



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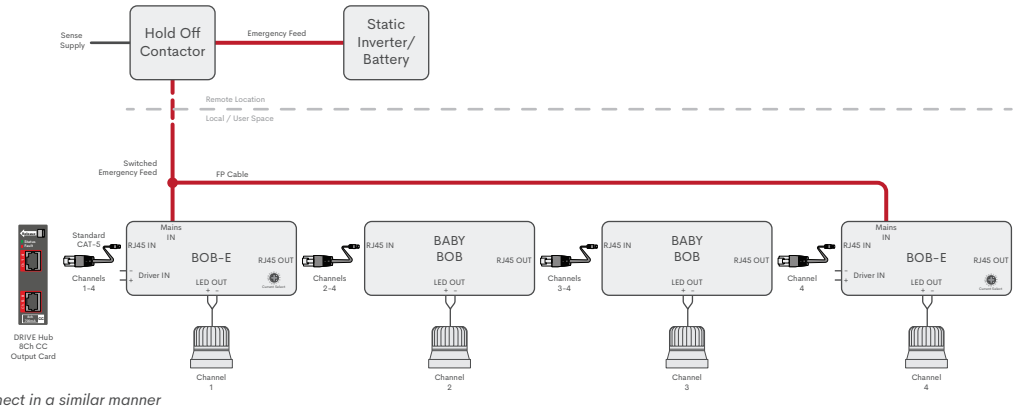
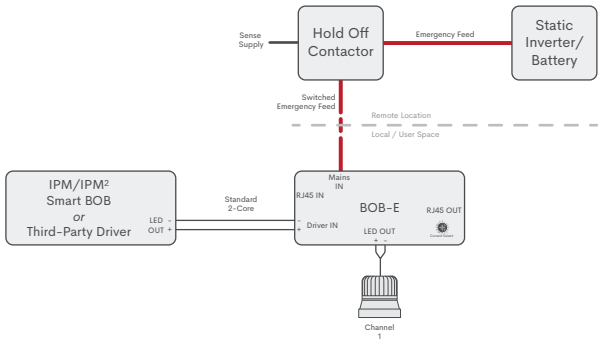
Single Mains Input Example

8Ch Drive Card



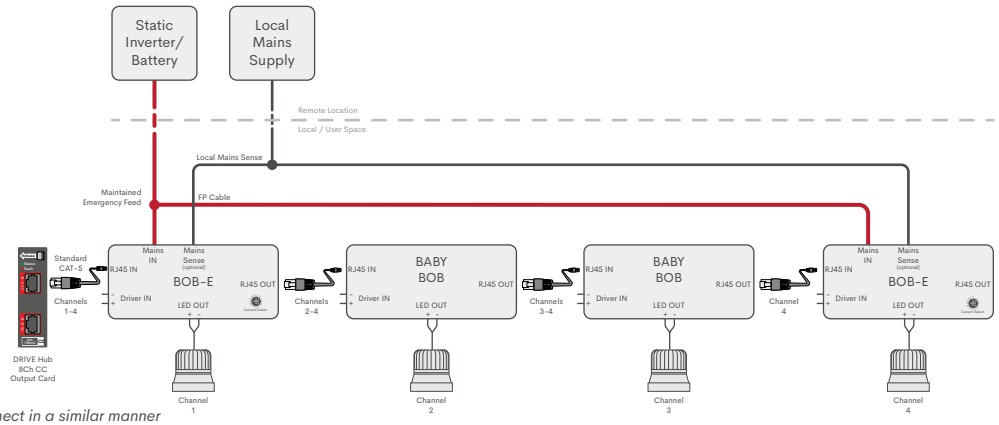
**The 4Ch Drive Card will connect in a similar manner with only 2x LED outputs per cable*

Other Drivers



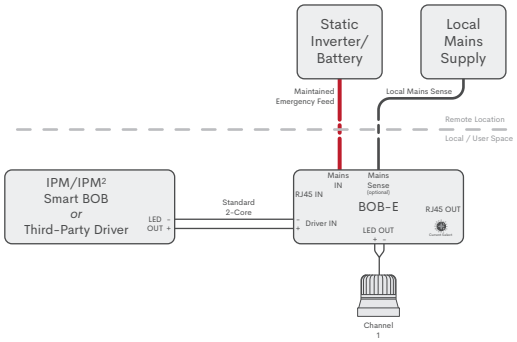
Mains Sense Example

8Ch Drive Card



**The 4Ch Drive Card will connect in a similar manner with only 2x LED outputs per cable*

Other Drivers



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Safety Information:

The Drive Hub products should only be installed by a qualified and competent electrical installation technician. All products should be inspected for damage prior to installation.

IP20 Protection

The fittings is protected against penetration from solid bodies of over 12mm in diameter. There is no protection against water/liquid ingress.

Maximum Ambient Temperature

This product should not be installed and operated in an environment where the ambient temperature exceeds 40°C.

Disposal

The fitting is supplied in compliance with European Directive 2012/19/EU - Waste Electrical and Electronic Equipment (WEEE). Please dispose of accordingly.

Testing:

Regular testing is crucial to ensure the reliability and safety of emergency lighting systems. According to **BSEN61347-2-7:2001**, the following testing schedule is recommended:

Monthly Tests

Perform a functional test to ensure the emergency lighting activates correctly when the main power supply fails.

Annual Tests

Conduct a full duration test to verify that the emergency lighting can operate for the specified duration on emergency power.

Battery Condition Checks

Regularly check the condition and charge level of any battery backup system, ideally every month.

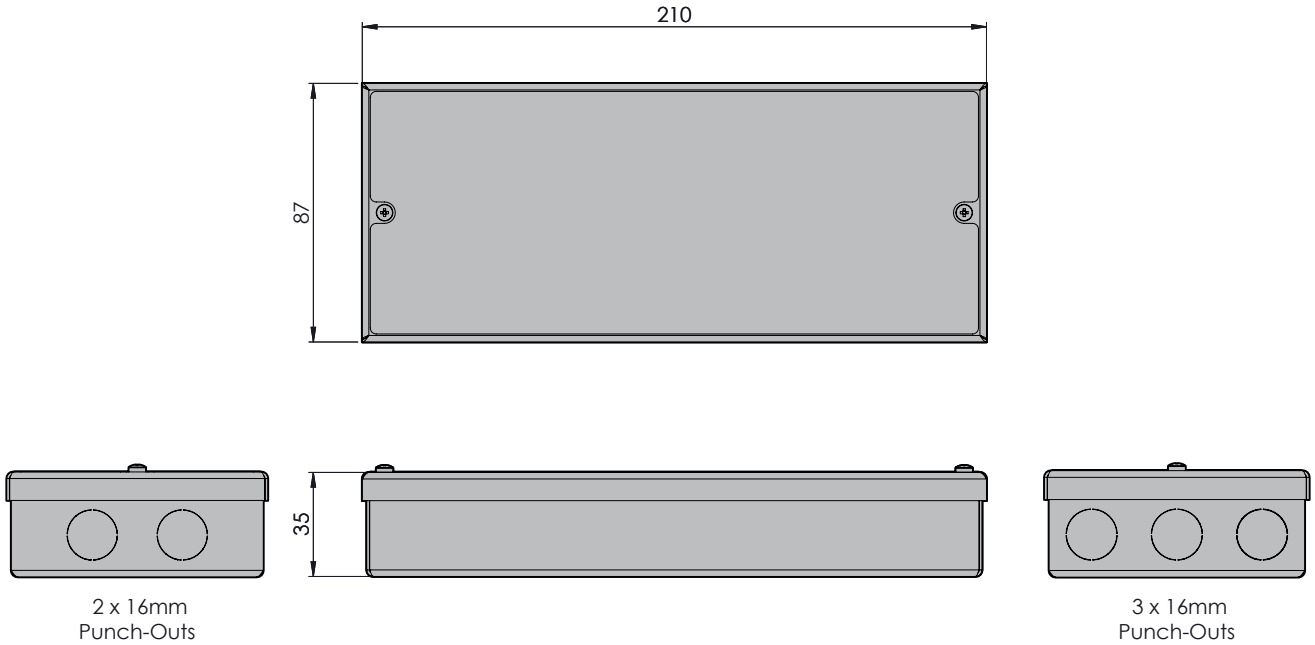
Visual Inspections

Perform visual inspections monthly to check for any signs of damage, loose connections, or other issues

Technical Parameters

Emergency Input (AC)	85-305VAC, 50/60Hz, 0.35A max.
Emergency Input (DC)	120-430VDC, 0.25A max.
Power Consumption Max	30W
Emergency Input Connector	Phoenix Screw Terminal - CSA 0.5-2.5mm²
Mains Sense Input	180-230VAC, 50Hz, 4-5mA
Mains Sense Power Consumption Max	1W
Mains Sense Input Connector	Phoenix Screw Terminal - CSA 0.5-2.5mm²
IN/THRU LED Connectors	Wago PicoMAX® 5 - CSA 0.2-2.5mm²
IN/THRU LED Voltage Max	48V
IN/THRU LED Current Max	2000mA
LED Output Voltage Max	42V (@725mA) - 48V (@600mA)
LED Output Current Range	30-725mA
LED Output Max Power	30W
Open Circuit Voltage (U-Out)	48V
Case Material	Galvanised Steel
Dimensions	210 (L) x 87 (W) x 35 (H) mm
Weight	0.75Kg
Operating Temperature (Ta)	-24°C to +40°C

Dimensions



Conforms to BS EN 61347-2-7

EL IP20

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