


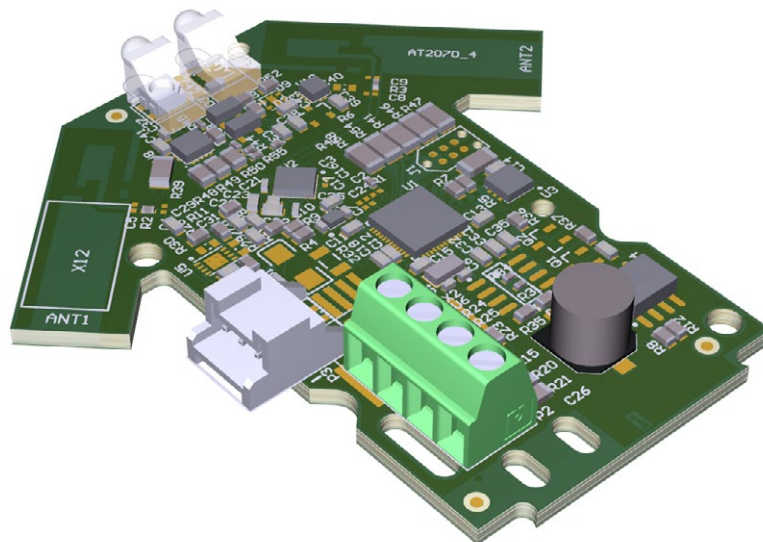
WCM-V2-CL

Long range intrinsically safe ATEX & IECEx Bluetooth Connectivity Module for integrating a 4-20 mA sensor

The WCM-V2 (Wireless Control Module) integrates connected devices into a  Wirepas or  Bluetooth enabled Mesh network. The WCM-V2-CL integrates a 4-20 mA process control current loop into such a network.

Applications

- ✓ Due to their ATEX and IECEx certificates, the WCM-V2-CL devices are mostly used in solutions in harsh environments.
- ✓ The main fields of operation for this type of device are the oil and gas industry, the mining industry and chemical plants.

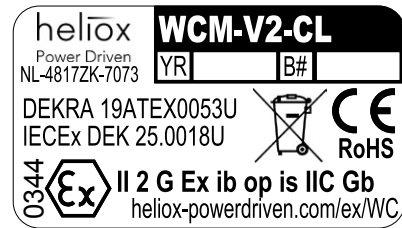


Product type marking

Each WCM module is marked with a sticker.

This sticker shows the following information:

- ✓ **Certification product type**
- ✓ **Identification numbers product**
- ✓ **Ex marking information**
- ✓ **Production year and batch number (blank in the example).**

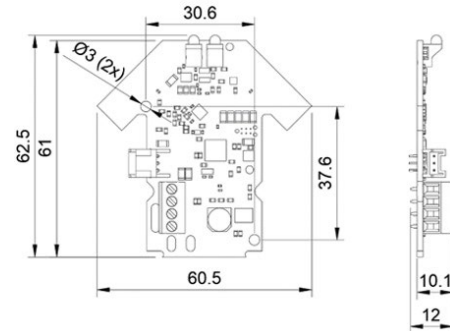


Mechanical installation

All WCM modules share the same mounting layout.

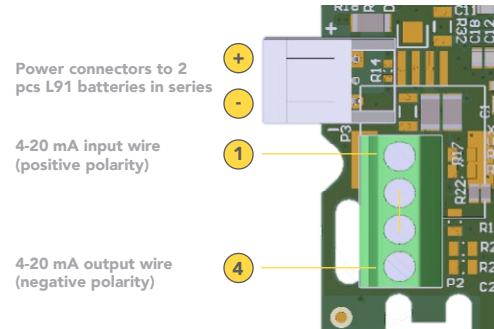
Non-metallic M3 screws or clip-on connectors should be used to secure the WCM on a non-metallic mounting plate. Heliox can review all other mounting solutions upon request.

When mounting the WCM V2, please ensure a minimal clearance of 1.5mm to the nearest metal component.



Electrical installation

The WCM-V2-CL has two connectors on board. The white connector (P1) is used to connect to the battery power supply while the green connector (P2) is used to connect to the 2 wires of a 4-20 mA looped circuit. This picture shows the pinout for both connectors. Please ensure that – in the final mounting position – there is no stress on the wiring and/or connectors.



Entity parameters

Connector P1 (white connector):

$U_i = 3\text{ V}$ nominal; 3.66 V max open-circuit voltage $I_i = 0\text{ }\mu\text{H}$; $C_i = 333\text{ }\mu\text{F}$;

Connector P2 (green screw connector):

$U_o = 3.66\text{ V}$; $I_o = 3.9\text{ mA}$; $P_o = 2.4\text{ mW}$; $L_o = 20\text{ }\mu\text{H}$;
 $C_o = 24\text{ }\mu\text{F}$;

$U_i = 30\text{ V}$; $I_i = 25\text{ mA}$; $L_i = 0\text{ }\mu\text{H}$; $C_i = 0\text{ }\mu\text{F}$

Schedule of limitations

Protecting enclosure required with IP20 rating minimum according IEC 60529

- ✓ Ambient temperature range is $-40\text{ }^{\circ}\text{C}$ to $+75\text{ }^{\circ}\text{C}$.
- ✓ The clearance between the board parts and metal objects shall be 1.5 mm minimum
- ✓ The clearance between the LED and any object shall be 1.5 mm minimum.
- ✓ Maximum board temperature is $94\text{ }^{\circ}\text{C}$ under fault conditions.
- ✓ Maximum component temperature is $147\text{ }^{\circ}\text{C}$, for components with a surface area $< 1000\text{ mm}^2$.

Please note that only the Energizer Ultimate Lithium Cells type L91 are allowed for the WCM-V2-CL.

Applying a custom light guide directly to the WCM-V2 LED within a 1.5 mm distance will be assessed by the notified body during the total product assembly certification

Power supply

The WCM-V2-CL are powered by two Energizer Ultimate Lithium Cells type L91 batteries. These are mounted in a 2 position AA battery keystone to be securely fixed inside the housing. Infalible insulation for the power supply wiring should be according to EN 60079-11 table 5 (10V): The solid insulation between the plus conductor and other circuit parts shall be at least 0.5mm

Initial start-up

To configure the button type. Please power on (insert power connector) within the range of a Bluetooth Mesh network. After powering up, follow the configuration steps in the network commissioning and configurator software tools.

Defective products

If the WCM malfunctions, contact Heliox Power Driven B.V. for a replacement product. The WCM modules may not be repaired by any party other than those approved by Heliox Power Driven B.V.