



# WCM-V2-PT1000

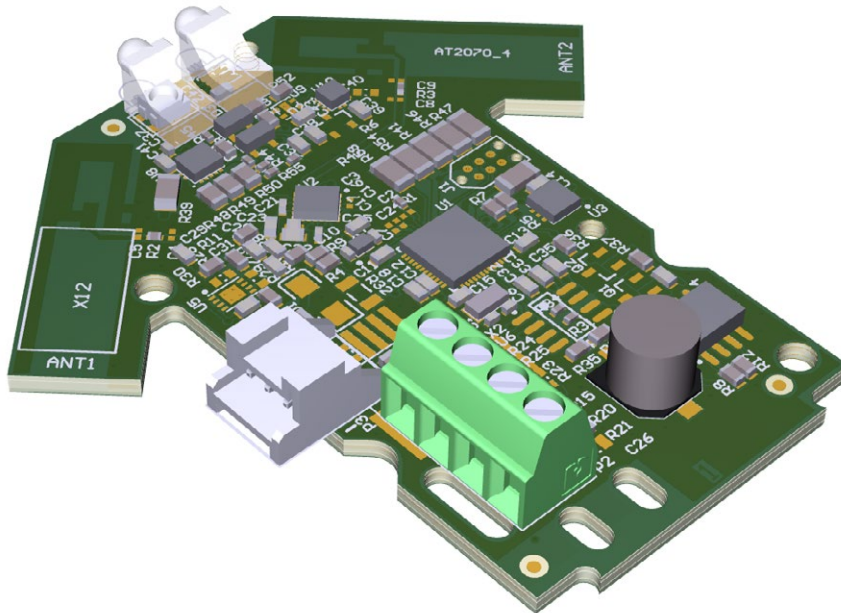
## Long range intrinsically safe ATEX & IECEx Bluetooth Connectivity Module for one PT1000 temperature sensor

The WCM-V2 (Wireless Control Module) integrates connected devices into a  Wirepas or  Bluetooth enabled Mesh network. The WCM-V2-PT1000 is used to integrate a PT1000 type of temperature sensing probe into such a network.

## Applications

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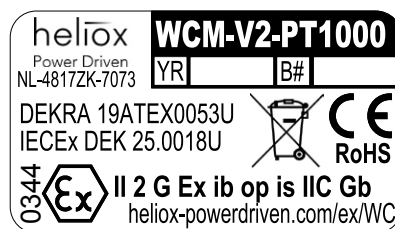
- ✓ Due to their ATEX and IECEx certificate, the WCM-V2-PT1000 devices are mostly used in solutions in harsh environments.
- ✓ Main fields of operation for this type of device are the oil and gas industry, the mining industry and chemical plants.



## Product type marking

Each WCM module is marked with a sticker.  
The sticker includes the following information:

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

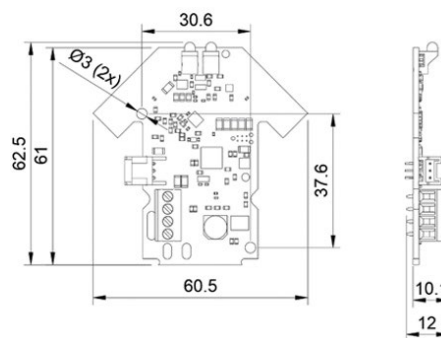


## Mechanical installation

All WCM modules share the same mounting layout.

Use non-metallic M3 screws or clip on connectors to secure the WCM on a non-metallic mounting plate. All other mounting solutions can be reviewed by Heliox upon request.

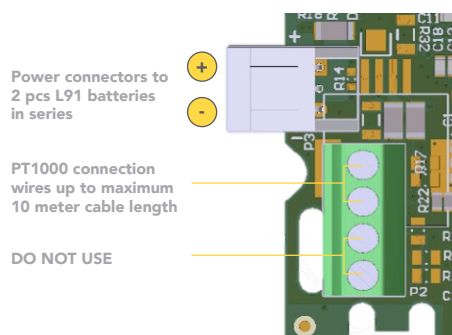
When mounting the WCM V2, please ensure a minimal clearance of 1.5mm to the nearest metal component.



## Electrical installation

The WCM-V2-PT1000 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 PT-1000 probe.

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 header):

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

### Connector P2 (green screw connector):

$U_o = 3.66\text{ V}$ ;  $I_o = 10\text{ mA}$ ;  $P_o = 6\text{ mW}$ ;  $L_o = 20\text{ }\mu\text{H}$ ;  
 $C_o = 24\text{ }\mu\text{F}$ ;

## 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  $< 1000\text{ mm}^2$ .
- ✓ The screw terminals shall only be connected to passive devices.

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-PT1000 is powered by two Energizer Ultimate Lithium Cells type L91 batteries. These are mounted in a 2 position AA battery keystone which is to be securely fixed inside the housing. Infallible 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.

Please note that only the Energizer Ultimate Lithium Cells type L91 are allowed for the WCM-V2-PT1000.

## Initial start-up

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

## Defective products

In case of a malfunctioning WCM, contact Heliox Power Driven for a replacement product. The WCM modules are not to be repaired by any other party than those approved by Heliox Power Driven.