1. GENERAL FEATURES:

Reading points: 2 mutually exclusive;

Control: Via MD BUS;

Applications: Reading RTD's (PT100 or PT1000) or temperature read out integrated sensor;

Installation: Control panel on DIN rail or other convenient location.

2. GENERAL SPECIFICATIONS:

Mains Voltage: 12VDC;

Consumption: 30mA @ 12VDC;

Storage Temperature: -10ºC to 60ºC;

Operating Temperature: 10ºC to 50ºC;

Maximum humidity: 80% non-condensing;

Specifications for PT100 or PT1000:

Temperature Range:

-49ºC to 246ºC;

Resolution:

0,5ºC between -49ºC and 246ºC;

Specifications for internal sensor:

Temperature Range:

10ºC to 50ºC;

Resolution:

0,5ºC between 10ºC and 50ºC;

Physical Specifications:

Dimensions: 90mm x 35mm x 70mm, mounting on DIN rail (2 modules);

Box Plastic self-extinguishing UL 94-V0;

Level Protection: IP20, for indoor use.

3. COMPATIBILITY:

PCCWd Compatibility: Firmware 3.4 or higher;

Mordomus Software Compatibility: Mordomus Software v2015.2 or higher;

4. SECURITY:

Before making any connections, please read these instructions carefully.

5. CONNECTIONS:

Thickness of conductors:

Bus Circuit:

CAT6 Cable F/UTP shielded, twisted;

Power circuit:

Mono-wire or multi-wire at least 0.75mm²;

Table of Connections:

Table 1:

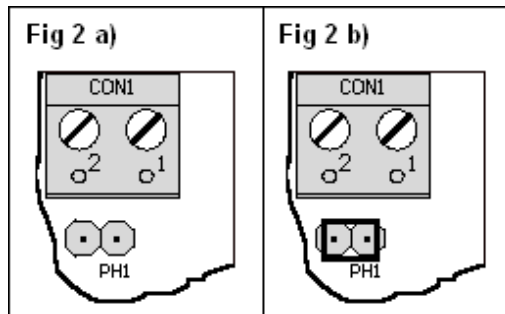| Number	Function
2	MD BUS Inputs (A)
3	MD BUS Inputs (B)
4	GND
5	+12VDC PSU
10	RTD Red
11	RTD Red
12	RTD White

Connect the Bus:

To connect the BUS, must be used a pair-Interlace CAT6 cable. For example, Green for **A** and Green/White for **B**, The shield should be connected to GND.

Connect the 12VDC:

The use of *Mean-Well*, *DR60* or *DR30-12-12* power supplies is recommended.

Fig 1
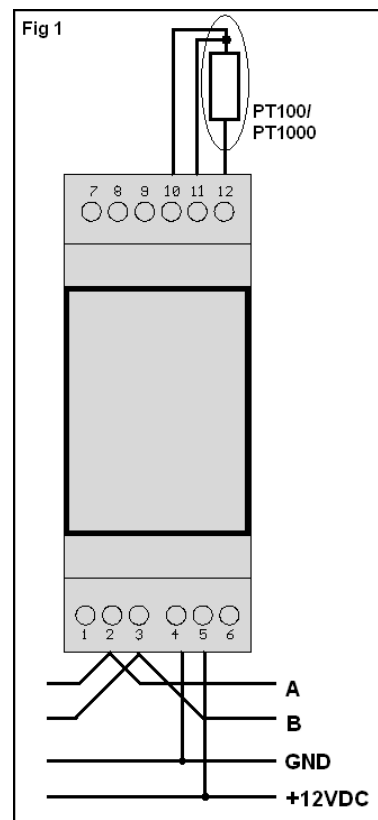
If the module is the last module at Mordomus Bus, the jumper must be placed according to Fig 2 b) to close the BUS chain. In other situations it should remain as in Fig 2 a).

Connect the RTD:

The RTD is connected to the terminals 10, 11 and 12 at MDt3Wd. The MDt3Wd allows connection 3-wire mode and 2-wire mode. For PT100 and wire lengths exceeding 2m is advisable to use a 3-wire RTD in order to be able to compensate for the resistance of the connecting wires. Without this compensation measuring can return erratic values. It is advised not exceed 30m cable between MDt3Wd and RTD.

3 Conductors:

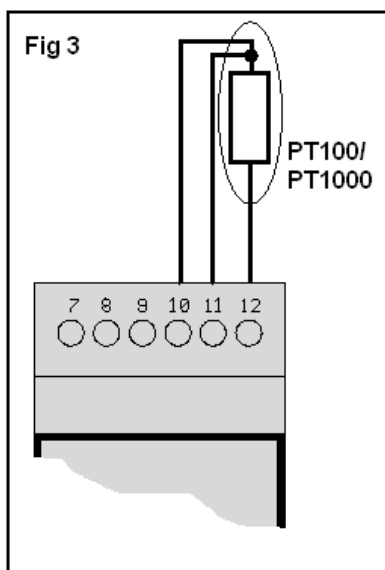To connect an RTD 3 wire connect it as Figure 3 and Table 2.

Table 2:

Conductor Color Pt100/Pt1000	Terminal MDt3Wd
Red	10
Red	11
White	12

2 Conductors:

To connect a 3-Wire RTD connect as shown in figure a Fig. 4 and Table 3.
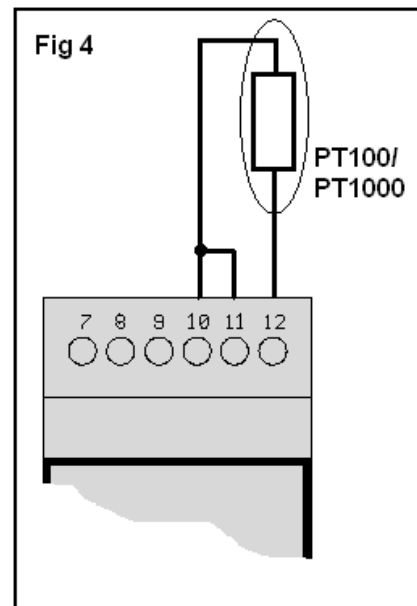
Table 3:

Wire colorPt100/Pt1000	Terminal MDt3Wd
Red	10, 11
White	12

6. ADDRESSING AND CONFIGURATION:

6.1 Addressing:

To assign the desired address to the module proceed as following:

1. Open the "Registering Modules" window at Mordomus software.

2. Remove the module cover loosening the housing screws by means of a PH1 tool.

3. Press (Addressing) button inside the module. The Green LED will flash slowly and the Red LED will pulse once.
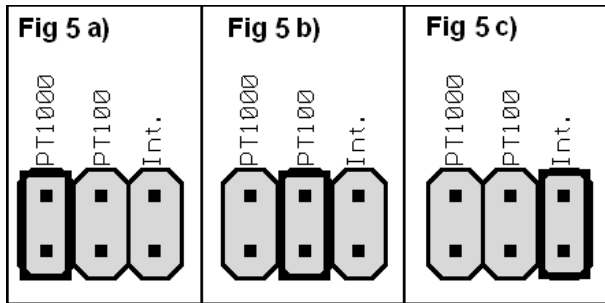
Note that after three minutes without having assigned a new address, the module automatically returns to normal mode.

4. Define the desired address at Mordomus software at the displayed window.

The chosen address must not be shared with another module.

6.2 Configuration:

To choose the desired type of temperature sensor, place the jumper in the desired position.

The options are PT1000 Fig 5 a), PT100 Fig 5 b) and Int. Fig 5 c) (internal sensor). The settings are mutually exclusive. Different configurations from those indicated may result in unexpected behaviour.

Refresh rate:

This is configurable at Mordomus software in the parameter that defines the readings frequency.

Possible values are 1, 3, 5, 10, 30 seconds, and 1, 3, 5, 10, 30 minutes. The default is 10 seconds.
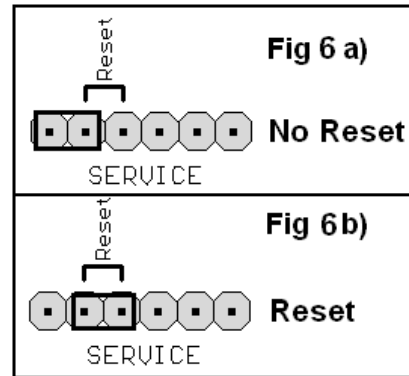
7. FUNCTIONING:

Code of Leds:

Green LED ON: Module powered;

Green LED blinking briefly: Module receiving data;

Green LED blinking continuously: Module awaiting address definition;

Red LED blinking: module sending data.

Reset: To perform a reset to the module, cut power supply 12VDC for a few seconds or place the jumper according to Fig 6 b) for about 3 seconds and put it back in its original position (Fig 6 a)).