1. GENERAL FEATURES:

Reading points: 24; (20) infrared memories, (1) temperature reading, (1) brightness and (1) motion sensor, and (1) tamper;

Control Points: 8 outputs infrared;

Control: Via MD BUS;

Applications: Reading temperature and luminosity, infrared interfacing and reading sensors PIR and Tamper;

2. GENERAL SPECIFICATIONS:

Voltage: 12VDC;

Consumption: 35mA @ 12VDC;

Storage Temperature: -10 ºC to 60 ºC;

Operating Temperature: 10 ºC to 50 ºC;

Maximum humidity: 80% non-condensing;

Reading Temperature: 0 ºC to 50 ºC;

Brightness: 10 levels;

Entries infrared: 20 keys remote control are recognized as inputs Mordomus;

Infrared outputs: 8 Learning Keys to remote data output (command devices infrared).

Physical Specifications:

Dimensions: 110mm X 65mm X 40mm;

Level of Protection: IP20, for indoor use.

Directives:

CE *-Electromagnetic Compatibility Directive / EMC Directive 2004/108/EC*

3. COMPATIBILITY:

PCCWd Compatibility: Firmware 3.4 or higher version V3.31 with BUS Adapter;

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

4. SECURITY:

Before making any connections, please read these instructions.

5. CONNECTIONS:

And specification section of conductors:

Circuit Bus:

CAT6 Cable F/UTP shielded, twisted;

Power Circuit:

CAT6 Cable F/UTP shielded, twisted;

Table of Connections:

Number	Function
1	+12VDC
2	GND
3	Contact PIR (normally closed)
4	Contact PIR (normally closed)
5	Tamper (normally closed)
6	Tamper (normally closed)
7	MD Bus RX (a)
8	MD Bus RX (b)

Fig 1

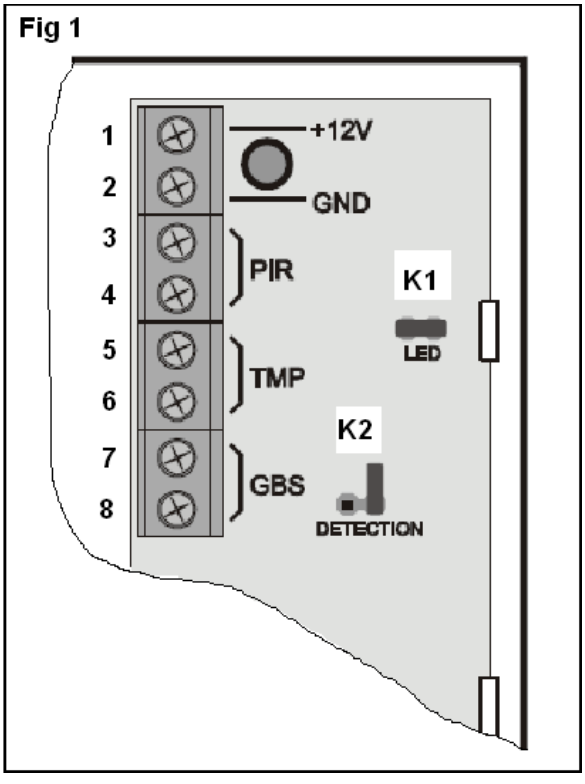
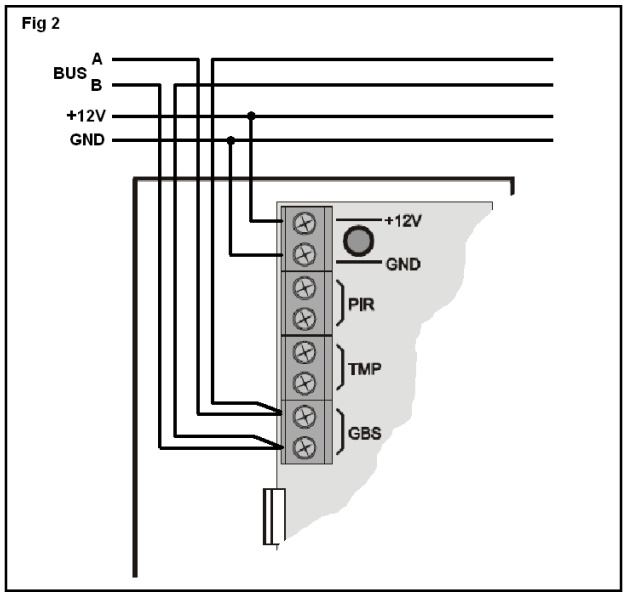


Fig 2



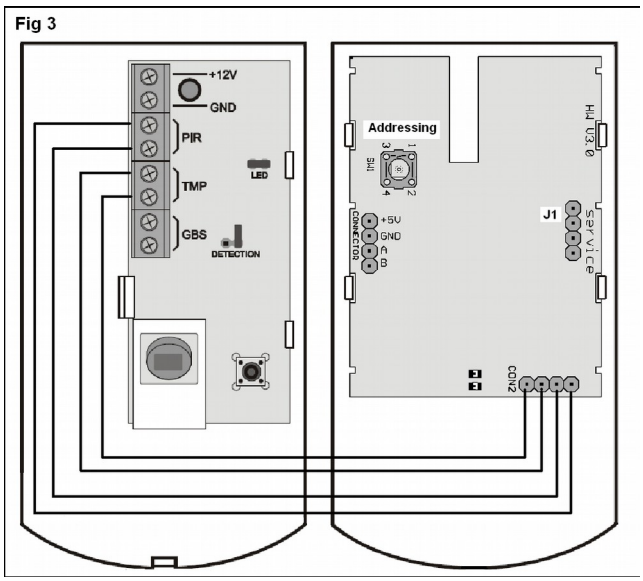
Connect the Bus:

To connect the BUS should be used a twisted pair cable CAT6. For Example: Green for **A** and Green / White to **B**. The shield should be connected to GND.

Connect the 12VDC:

It is recommended the use of Mean-Well power supplies, DR60-12 and DR30-12.

Fig 3



Connection PIR and Tamper inputs:

The connection PIR contacts and Tamper be effected according to Fig 3.

6. ADDRESSING AND CONFIGURATION:

After the module properly connected and powered to perform the following steps:

1. In **Mordomus software** go to **Config** -> **Modules** / **Addresses** -> **Registration Module**, press the '**Register New**';
2. Press the (Addressing) at module. At this time the Blue Led 1 blinks slowly. Mordomus software should detect the module and automatically opens a configuration window for it. Note that after three minutes without having assigned a new address, the module automatically returns to normal.
3. In this window you should select the desired address, ensuring that there are no other modules with the same address;
4. After applying the new address in the Mordomus software, the module will take the new address confirmed by blue Led 1 that should stop blinking.

Led k1 - Removing this jumper disables the LED indicator motion detection, the installer should keep this jumper off to ensure a better functioning light sensor from PIR MS;

K2 Detection - Removing this jumper decreases the sensitivity of the PIR detector (response time). This option is recommended in case the sensor is applied in an area where rapid temperature changes occur or electromagnetic interference. For more details refer to the sensor JS-20.

7. FUNCTIONING:

Code of LEDs:

Blue Led (D1) blinking: Indicates reception or emission of infrared

Blue LED blinking fast: In learning mode of new infrared signals;

Blue LED blinking slowly: In learning mode of address;

Red LED (D2) blinking: Indicates transmission of data (only visible with the lid open);

Green LED (D3) on: Power LED indicates that the PIR-Ms is powered (only visible with the lid open);

Green LED (D3) blinking: Indicates reception of data (only visible with the lid open).

Considerations about the operation:

1. Do not put the Multi-Sensor directly exposed to fluorescent lamps or light sources;
2. The device to control via infrared, must be unobstructed visual;
3. Learning can be difficult or even impossible because of the light emitted by fluorescent lamps that are in the vicinity of Multi-sensor. Should turn them off when you want to learn a command IV;
4. The Pir-Ms supports most protocols used in remote controls, however it is possible that there is a specific remote control that can't be interpreted;
5. Ability to memorize and reproduce Outputs Infrared up to 640 bits of data;
6. Ability to memorize and recognize Inputs Infrared up to 256 bits of data;
7. Automatic functions for AC may get to work unproperly. This is because the replicated command by Pir-Ms contains always the same time when the remote control command is learned and the AC unit could take this time as the correct.

Warnings on the volume control:

The module PIR-MS has the memorization features 20 single function keys and not a repeating function. Moreover these functions are not always present in the infrared remote controllers. The increase in volume or other similar function should be done by pulses (by pressing the key repeatedly).

The explanation for this behavior is that the PIR-MS is not a simple command receiver for audio or adjustable values but an infrared receiver for any type of remote controlled device.

Warnings in control of air conditioners:

Most air conditioning systems, use complex remote controllers, and when sending a set-point (Ex: Change of temperature), it is also sent the time and date that is set in the remote's LCD. Thus learning functions such commands, in most cases, can lead to unexpected changes in these systems, eg sending the date and time it was "learned" this function when creating.