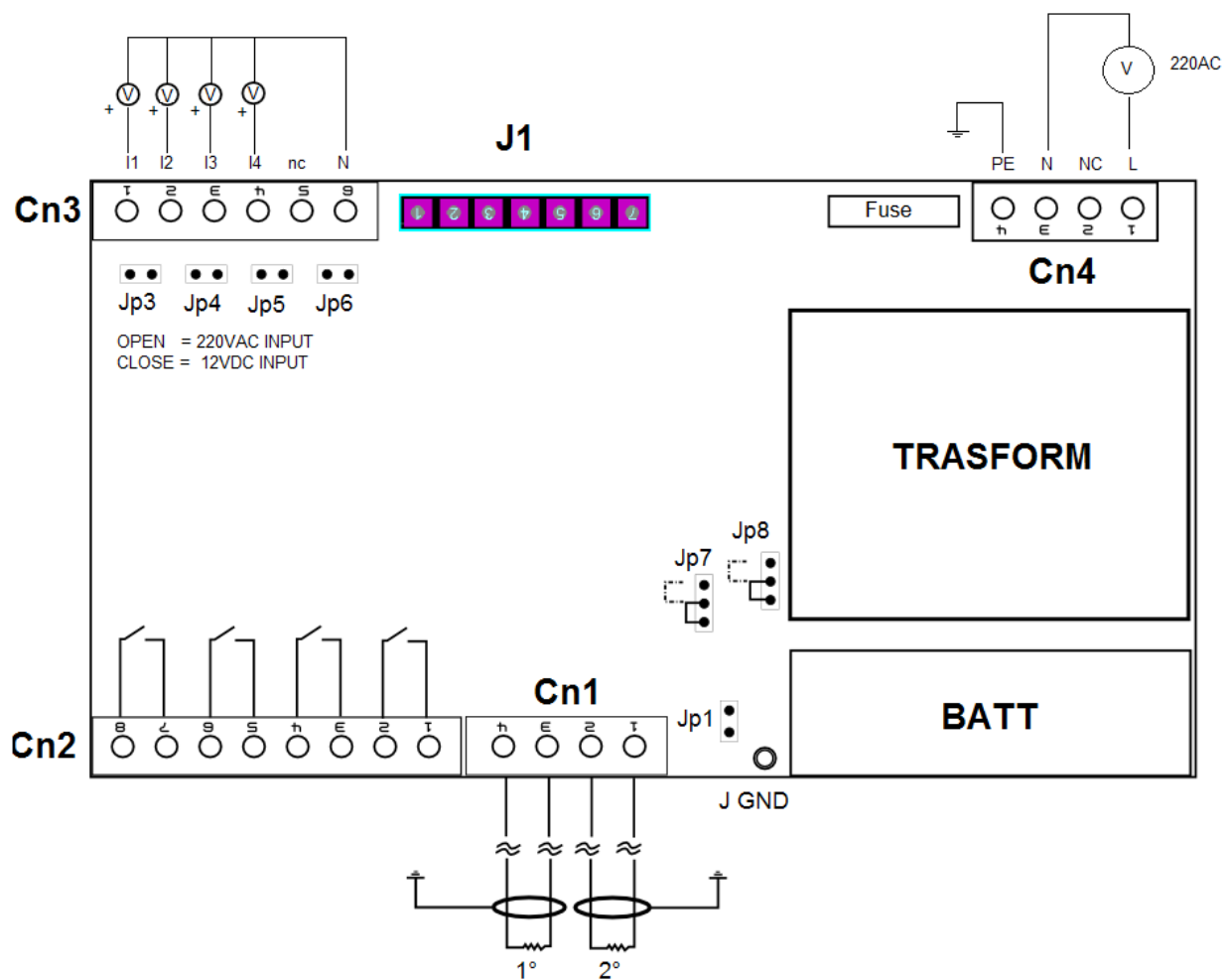# Module Technical characteristics

- Power supply 220VAC

- Average power consomption 0.1W

- Peak power consumption 25W
- Battery 1400mAh :(charge average about 3 days)

- 4 Input opto-isolated 220AC o 12VDC

- 4 separated output relai (NO) 10A

- 2 Analogue Input for temperature sensors (PT100 or any PTC with KTY81/210 sensor (example SN7POBxxxx Eliwell):

  - Resolution: 0.1 °C

  - Precision: 1.5 °C

- Power supply continuous Monitor

- Modem GSM Telit GM852-QUAD (refer to Telit reference manual for further information)

- Adhesive Antenna GSM length 3m mounted or not

Electric schema:

Legenda:

BATT: Battery

TRASFORM: Device Transformer

CN4:   Power supply connector 220AC

- pin 1:Phase

- pin 2:Not connected

- pin 3:Neutre

- pin 4:Earth connection

FUS: Fuse 2,5A

J1:   Jtag Connector reserved for module programming

CN3:   Input connector

- pin 1-2-3-4: Input

- pin 5: Not connected

- pin 6: Com Reference for all input

```
CN2:      Isolated Relais output
CN1:      Analogue Input for temperature sensors
          – pin 1-2: Resistive sensor 1
          – pin 3-4: Resistive sensor 2
JGND:      optional screw mass connection
```

JUMPER CONNECTIONS

JP3-JP6

Jumpers for Input type.

Jp3 is referred to input 1 (named I1);

Jp4 is referred to input 2 (named I2);

Jp5 is referred to input 3 (named I3);

Jp6 is referred to input 4 (named I4);

Jumper Open (default)   : Input 220AC

Jumper closed   : Input 12VDC

WARNING:

Select any input for 12VDC and connecting them to 220VAC means DESTROY the device.

JP1

Connects the battery to the system.
Closing JP1 jumper connects power from the battery to the module so that it can operate even without power supply.

By default jumper is open to avoid permanent power supply for the module.

When JP1 is closed,the module becomes operational even no main power supply and the only way to permanently shut down the system is remove that jumper (obviously without the main power supply)

JP7-JP8

These jumpers are used to feed the system:
  1) Supply system with battery backup included (default: black lines in the figure)
  2) Power systems with battery backup escluded (place the jumper as dotted lines)

If not interested in actions when power is absent place the
jumpers as shown in dotted lines and leave open the jumper JP1.

WARNING

Much attention should be paid when you move these jumpers because
if they are left open or any other position than the previous two
(as shown) the module will be damaged irreversibly.

If you set the power system 1 (factory default) you should also
need to close jumper JP1 to ensure the proper working of the Telit
GSM module. If you don't close IP1 the GSM module won't work
properly when powered by Network 220AC and the result will be GSM
Telit won't connect to the GSM network.

MOUNTING

The module can be mounted either vertically or horizontally.
It comes with or without antenna mounted.
In case the antenna is mounted by yourself you need to do a hole
on the module cover or simply use the ventilation grilles.
The antenna cable connector is connected directly on the Telit
module in the only connector available alongside the module.

The module is even DIN rail mounting (EN 60715) DIN 43880

SIM INSERTING

Sim is always good to insert or remove it the module is off even
if it can withstand an insertion when power is on.
Taking the module ahead with the LEDs on your left you insert the
sim into the connections toward you as shown in figure.
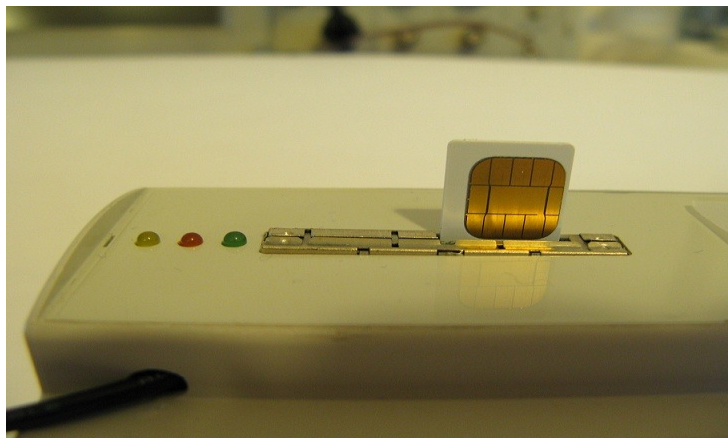
LED'S DESCRIPTION

YELLOW LED (first from left)

Status of Telit GSM modems:

- ALWAYS OFF
  - GSM Telit modem if OFF
- BLINKING
  - Quick Blink for 1 second with 0,5 seconds ON: Research in progress GSM network
  - 3 seconds blink with 0,3 seconds ON: Registered to GMS network and waiting for commands
- ALWAYS ON
  - Calling in progress

RED LED (second from left)

220VAC Power supply ON.

GREEN LED (third from left)

Module state.

- ALWAYS OFF
  - The module is initializing and resetting all parts.
- LIGHTING
  - The blink time on and off are 0,25 seconds. Terminated the numeric blinking sequence the led is off for 1 second.

The blinking numbers give you an indication of the module state:

NUMBER OF BLINK	MEANS
1 / 2	Telit Modem Initialization
3 / 4 / 5	Network GSM research
6	Read SIM book
7	Ask for credit (if any)
10	Ready for command
Infinite (in truth 100)	Telit module in error: Reset procedure incoming

figure 1: Jumper JP1
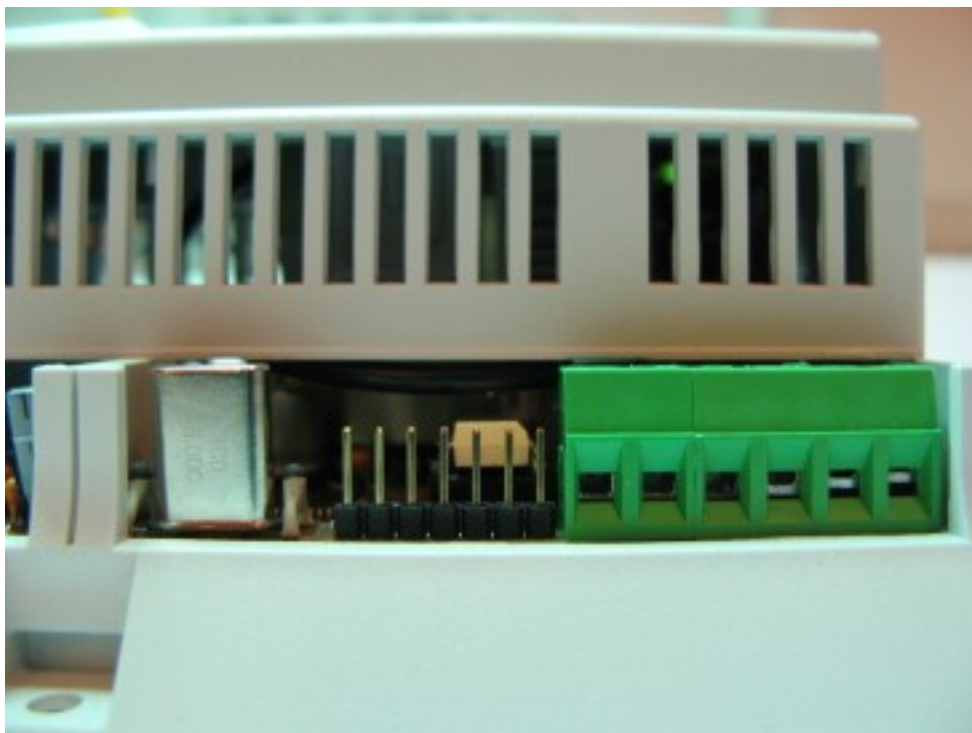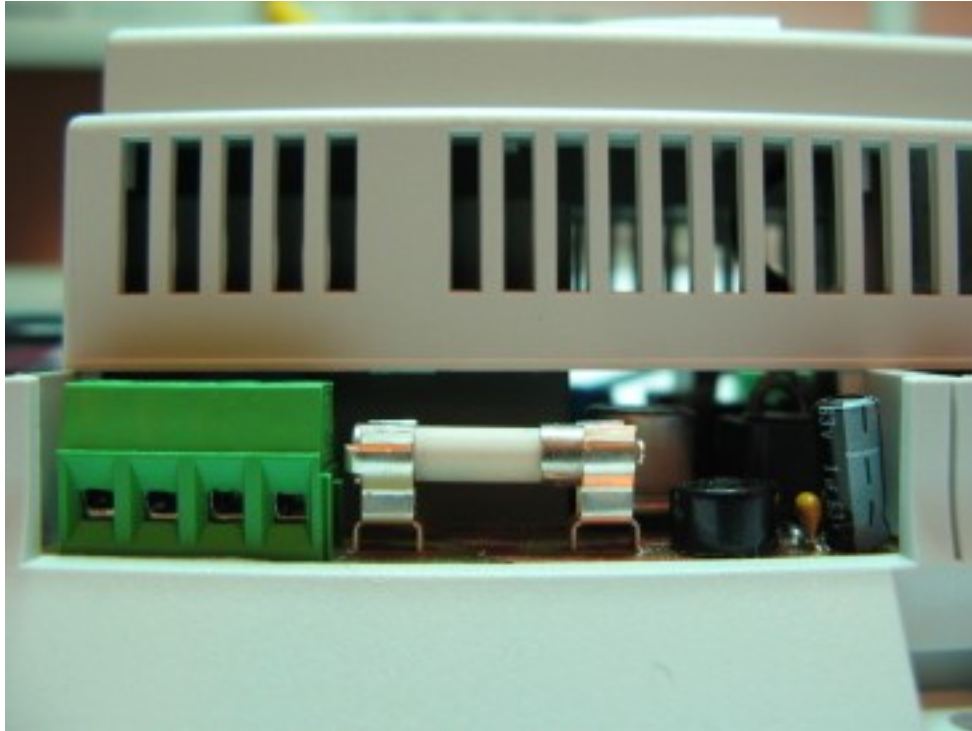
figure 2: Fuse and power supply connector

figure 3: Connettor CN3 (digital Input) e J1 (JTAG connector)