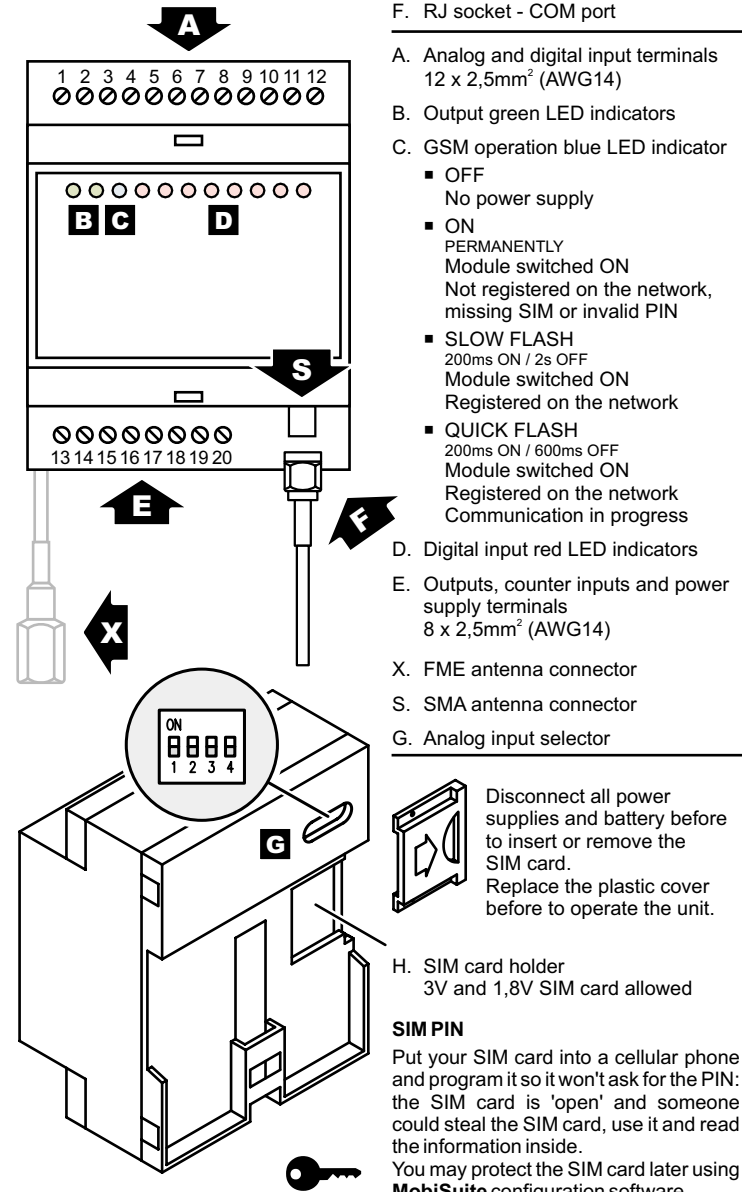


INSTALLATION

This unit can be installed on any standard EN-50022 rail by simple snap-in. For safe operation, the unit must be installed only by qualified personnel in an enclosure which prevents accidental contact with hazardous voltages. Protection degree IP40 must be guaranteed, raised to IP54 for open air application.



- F. RJ socket - COM port
- A. Analog and digital input terminals
12 x 2,5mm² (AWG14)
- B. Output green LED indicators
- C. GSM operation blue LED indicator
- D. Digital input red LED indicators
- E. Outputs, counter inputs and power supply terminals
8 x 2,5mm² (AWG14)
- X. FME antenna connector
- S. SMA antenna connector
- G. Analog input selector
- H. SIM card holder
3V and 1,8V SIM card allowed

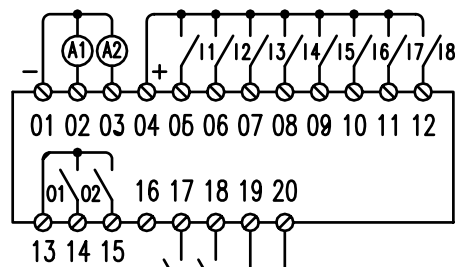
SIM PIN
Put your SIM card into a cellular phone and program it so it won't ask for the PIN: the SIM card is 'open' and someone could steal the SIM card, use it and read the information inside. You may protect the SIM card later using **MobiSuite** configuration software.

WARNING

If you insert a SIM card that asks for a PIN number different from that stored into **Mobi.Control**, the device will not operate. If you enter the PIN 3 times incorrectly, SIM card will lock up and you must provide the PUK (PIN Unblocking Key).

WIRING

- 01. Negative
- 02. Analog Input 1
- 03. Analog Input 2
- 04. Positive 3,3VDC
- 05. Digital Input 1
- 06. Digital Input 2
- 07. Digital Input 3
- 08. Digital Input 4
- 09. Digital Input 5
- 10. Digital Input 6
- 11. Digital Input 7
- 12. Digital Input 8
- 13. Output common
- 14. Relay output 1
- 15. Relay output 2
- 16. —
- 17. Counter input 1
- 18. Counter input 2
- 19. Power supply
- 20. Power supply

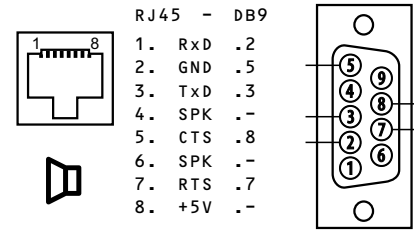


POWER SUPPLY, INPUTS AND COM PORT MUST MEET THE DEMANDS PLACED ON SELV (SAFETY EXTREMELY LOW VOLTAGE) CIRCUITS ACCORDING TO EN60950 / IEC950

Regulated 3,3V – 50 mA MAX available at terminal 04 respect to negative terminal 01. On battery equipped units such power supply is provided also when main power supply is missing; to prevent permanent damage to battery external loads must be disconnected when voltage drops below 3Vdc.

COM PORT

Easy configuration, local control, tracing and other advanced features are available through serial communication link. Configuration software **MobiSuite** for PC running Microsoft® Windows® is available for free download at www.contrive.it.



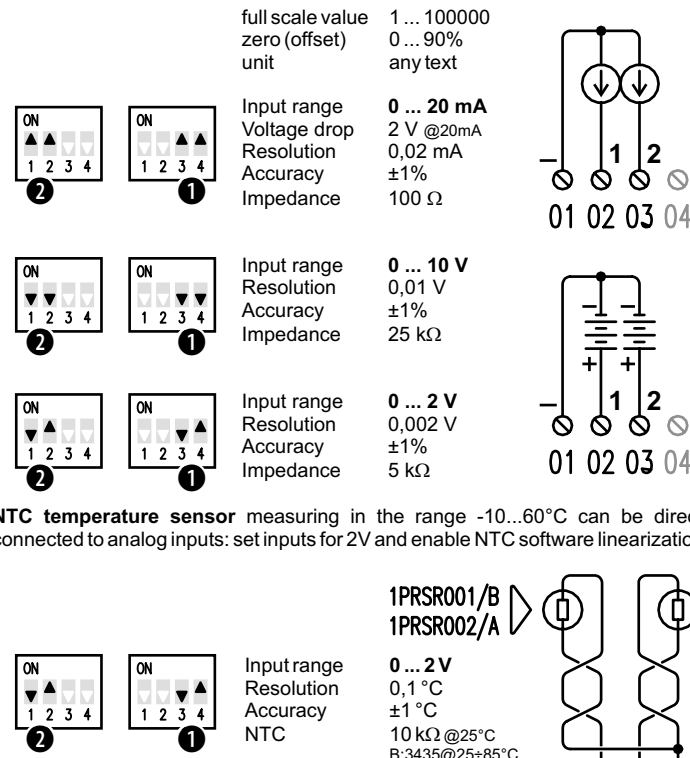
- RJ45 - DB9
- 1. RxD - .2
 - 2. GND - .5
 - 3. TxD - .3
 - 4. SPK - -
 - 5. CTS - .8
 - 6. SPK - -
 - 7. RTS - .7
 - 8. +5V - -

RS-232
300 ... 115200 bit/s
8N1
Hardware handshake
MobiLink RS232 cable:
2505.00.01
MobiLink USB cable:
2505.00.03
CAN BE USED TO POWER THE UNIT

ANALOG INPUTS

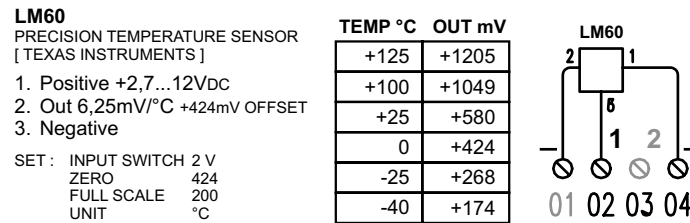
Up to 2 analog signal can be connected at terminals 02 – 03 respect to negative terminal 01. Select input mode by means of dipswitch [G] before to operate the unit.

Software configuration available for each input:



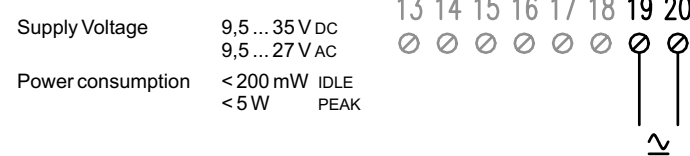
SHIELDED CABLE COULD BE USED FOR LONG LINES
SHIELD CONNECTED TO NEGATIVE TERMINAL 01 ONLY
LEAVE OTHER SIDE UNCONNECTED

Active devices could be powered directly from **Mobi.Control** when voltage and output are compatible and total current consumption remains within 50 mA.



POWER SUPPLY

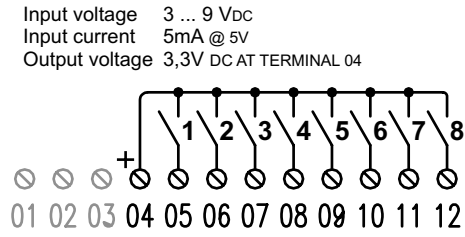
This unit can be supplied either by alternating or direct current, polarity independent, in a wide voltage range. Power supply connection terminals 19 and 20. The power supply must not be shared with other equipment: suggested power supply source is a simple 12VAC / 10VA transformer.



An automatic 2-pole circuit breaker or equivalent protection capable of disconnecting circuit in the event of short circuit or over-current condition should be placed on the AC mains side of power supply unit. Maximum permissible connection length between device and low voltage supply source is 3 m.

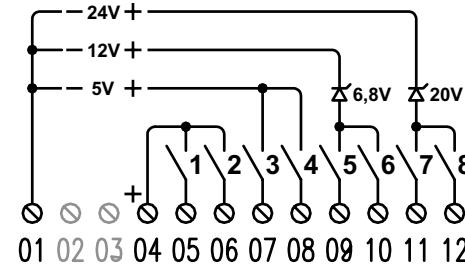
DIGITAL INPUTS

Up to 8 SPST contacts can be wired to terminals 05 – 12, status reported on LED indicators [D]. Internal power supply is available at terminal 04. Independent debounce time setting for each input in the range 1... 300 seconds.



When inputs are supplied by external source, negative must be connected to terminal 01. Insert a zener diode to keep inputs voltage within 9Vdc. Multiple options can be used, see example below:

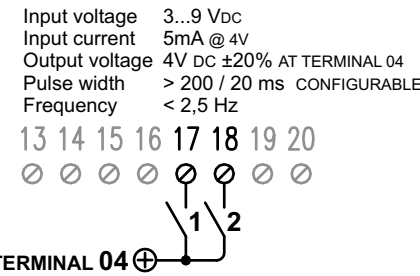
- inputs 1 and 2 using internal supply
- inputs 3 and 4 using external 5Vdc supply
- inputs 5 and 6 using external 12Vdc supply reduced by zener diode 6,8V
- inputs 7 and 8 using external 24Vdc supply reduce by zener diode 20V



External power supply for inputs must meet SELV circuits requirements according to EN60950 / IEC950: maximum allowed voltage is 60Vdc.

COUNTER INPUTS

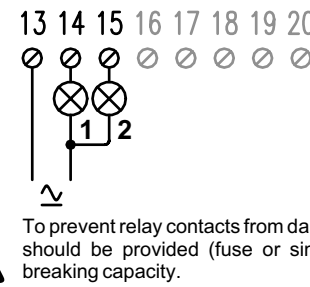
Two special digital inputs are available at terminals 17 – 18. Inputs can be used as a standard digital input in addition to 8 channels already available (without LED indication). Independent debounce time setting for each input in the range 1... 300 seconds. Inputs can operate also as a pulse or time counter. SPST contacts, magnetic reed or hall sensor and electronic switches can be used. Internal power supply is available at terminal 04, using electronic switches this is the positive leg.



OUTPUTS

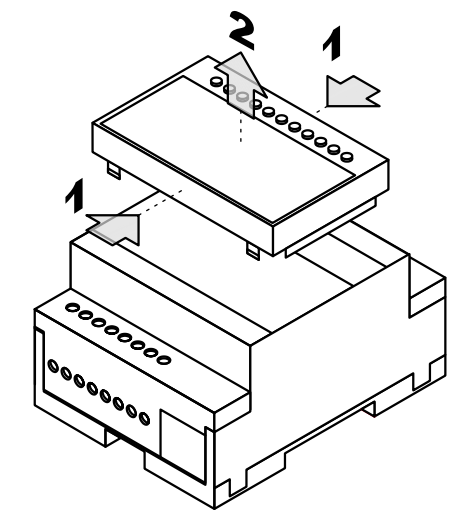
Two SPST relay contacts are available for process or appliance control at terminals 14 – 15, status reported on LED [B]. Common return at terminal 13.

Rated current 3 A
Rated voltage 250 VAC
Breaking voltage 277 VAC
Max breaking capacity 750 VA
Minimum contact load 1 mA, 5 VDC
Cadmium free contacts
Insulation to IEC60664
Voltage rating 277 V
Pollution degree 2
category as basic insulation III
category as reinforced insulation II
Surge voltage coil contacts: 5000VRMS
Dielectric strength
coil-contacts 3000VRMS
open contact circuit 750VRMS



BATTERY

This unit could be equipped with an high efficiency Lithium-Ion Polymer battery having a long life, that largely depends on temperature and frequency of main power failures, used in normal condition can last several years. If the battery is already connected, you just need to provide power supply to operate **Mobi.Control**. The battery charging process will start. If the battery is not connected, proceed as follows:



- Push with two fingers on top and bottom sides of front cover to release it.
 - Pull the front cover and keep it in a safe place.
 - Unplug battery connector from the socket [K].
 - Replace the front cover to close the unit.
- Disconnect the battery if the device is put out of service.

BATTERY SPECIFICATIONS

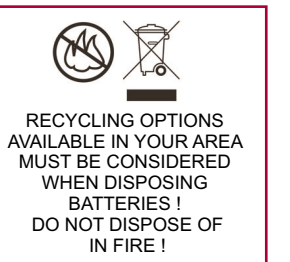
Voltage 3,7V 4,2V FULL CHARGE
Capacity > 320 mAh 1,26 Wh
Temperature -20...60°C 0...45°C CHARGING

Before a long period of inactivity switch off the unit to prevent deep discharge of the battery.

This operation can be accomplished using **Mobi.Suite** terminal or from the console by issuing the command **AT+CPOF**

Battery status is reported at any time by the LED located near the connector:

OFF	OFF	Charge OFF
RED	OFF	Charge in progress
OFF	GREEN	Charge completed
RED	GREEN	Bad or NO battery



ANTENNA

The external antenna must be connected to the RF interface, implemented as a 50Ω connector available in 2 different options:

- FME male coaxial jack at the end of a short RG178 cable stub exiting from the bottom left side of the unit.
- SMA female coaxial jack at bottom right of the unit.

The antenna must fulfil the requirements given below:

Frequency TX	880 to 915 MHz	1710 to 1785 MHz	824 to 849 MHz	1850 to 1910 MHz
Frequency RX	925 to 960 MHz	1805 to 1880 MHz	869 to 894 MHz	1930 to 1990 MHz
Impedance	50 ohms			
VSWR	RX max	1.5 : 1		
	TX max	1.5 : 1		
Polarization	Linear			
Typical gain	0 dBi in one direction at Least			

The gain must not exceed 8,4dBi @ 850MHz and 3,5dBi @ 1900MHz. We recommend a VSWR max of 1.5:1 although a VSWR max of 2:1 can be accepted without affecting performance and certification. The DC impedance is floating but there is no problem when using antennas that present a short to ground.

© COPYRIGHT 2012 CONTRIVE SRL ITALY. SOME RIGHTS RESERVED.

INFORMATION CONTAINED IN THIS DOCUMENT ARE SUBJECT TO CHANGE WITHOUT NOTICE. PRODUCT NAMES, CORPORATE NAMES OR TITLES USED WITHIN THIS DOCUMENT MAY BE TRADEMARKS OR REGISTERED TRADEMARKS OF OTHER COMPANIES AND ARE MENTIONED ONLY IN AN EXPLANATORY MANNER TO THE READERS' BENEFIT, AND WITHOUT INTENTION TO INFRINGE.

WHILE EVERY EFFORT HAS BEEN MADE TO MAKE SURE THE INFORMATION IN THIS DOCUMENT IS CORRECT, CONTRIVE CAN NOT BE LIABLE FOR ANY DAMAGES