SENECA

EN

MyALARM2

Advanced GSM/GPRS device for the telecontrol

Installation Manual

Contents:

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For manual and configuration softwares, see www.seneca.it

GENERAL FEATURES

- GSM/GPRS module for civil and industrial applications for domotics and safety: alarm management system, datalogger
- Display LCD 128 x 32 Dots
- Lithium-ion rechargeable battery, autonomy up to: 30 h GSM, 10 h GPS
- Nr.4 digital inputs (available on the internal s)
- Nr.2 analog inputs V / mA (available on the internal terminals)
- Nr.1 GSM antenna, replaceable on SMA connector
- Button for power on / off and button for display scrolling
- LED for displaying: power supply / device status, GSM status
- SIM plug in (for SIM card with dimensions: 15 x 25 mm)
- Mini USB plug in, to recharge the internal battery and to configure the module
- Micro SD card input
- Internal GPS module (optional board)
- Nr.2 relay digital outputs (optional board)

TECHNICAL SPECIFICATIONS

Board base

Digital inputs	Number: 4 Max frequency: 30 Hz Type: Reed, contact, PNP, Pulscap Threshold OFF: 0 - 2 Vdc, I < 1 mA Threshold ON: 12 - 24 Vdc, I > 3 mA
Analog inputs	Number: 2 Type: voltage (0..30V) / current (0..20 mA), programmable; accuracy: 0.1% of end scale
Voltage output	+12 Vdc @ 50 mA (max)
Internal temperature sensor	Number: 1 Type: NTC
USB	USB 2.0 mini B, for configuration and battery charge
Display	LCD 128 x 32 Dots Visible area 39 mm x 8.6 mm
Micro SD	Type: push-push For SD card and SD HC card Memory SD CARD: max 32 Gb
SIM	Type push-push
GSM features	Quad band (850 / 900 / 1800 / 1900 MHz)

GPS board (optional)

GPS features	Number of channels: 42 Sensitivity - tracking: -160 dBm; -autonomous acquisition: -143 dBm Time to first fix - hot start: 5 s; -cold start: 30 s (at -130 dBm)

Relay board (optional)

Digital outputs	Number: 2 Type: relay 3 A max (for common) - 240 V SPST

CPU & memories

Microprocessor	ARM @ 100 MHz, 32 bit
Internal memories	128 kByte RAM 512 kByte + 2 Mbyte (log) FLASH
Input for external memories	Micro SD card: max 32 Gbyte (for micro SD and micro SD HC card)

Power supply

Power supply	5..15 V_{DC} @ 500 mA
Comsumption	Max 3.5 W
Internal battery	lithium ions 3.7 V - 1000 mAh, rechargeable Dimensions: 53 mm x 34 mm x 6 mm Autonomy (up to): 30 h GSM, 10 h GPS

Environmental condition

Temperature	-10 ..+55°C
Humidity	30 ..90% at 40°C without condensing
Storage Temperature	-20 ..+85°C
Degree protection	IP20

Connections

Connections	Terminals, pitch 3,5 mm Push-push plug in for SIM card Mini USB plug in Push-push plug in for micro SD card SMA connector for GSM antenna

Box / Dimensions

Dimensions	L: 80 mm; H: 108 mm; W: 32 mm
Case	Polycarbonate/ABS
Weight	150 g (about)

Included elements

12 Vdc-power supply (connection via terminals), GSM antenna, installation manual, USB cable, Nr.2 screws, Nr.2 dowels, support.

Standards

The module complies with the following standards:

CE

ETSI EN 301 489-7 (electromagnetic compatibility and radio spectrum matters ERM; electromagnetic compatibility EMC standard for radio equipment and services)
EN 301 511
EN 301 489-1
IEC/EN 60950

Symbols on case

	Power button (PWR)	SIM	SIM CARD plug-in
	GSM antenna	SD	Micro SD CARD plug-in
	Scroll display button (SCR)	GPS	Internal GPS antenna (optional board)
			Mini USB plug-in

INSTALLATION

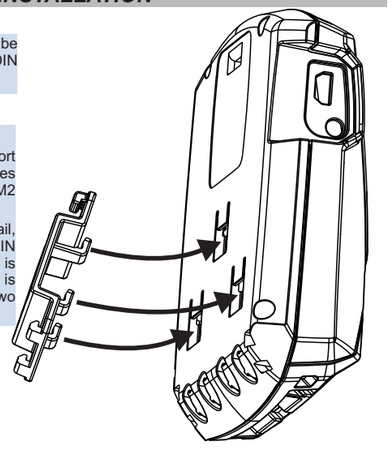
The module is designed to be installed, in vertical position, on DIN 46277 rail too.

Inserting in the DIN rail

How the picture shows:

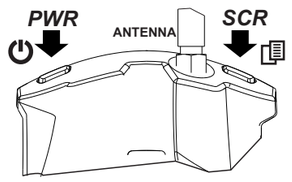
1) Insert the three hooks of support into the corresponding three holes in the bottom side of MyALARM2 case;

2) To fix the module in the DIN rail, hook the omega support in the DIN rail. Alternatively, the support is provided with two holes: it is possible the wall fixing using two screws.



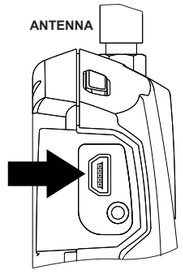
CONSTRUCTIVE ELEMENTS OF MYALARM2

Button for power on / power off and button for settings



The MyALARM2 has the PWR button, placed in the upper left side (front view). Pressing of this button allows to power on / off the module. To power off the module, keep pressed the PWR button for a few seconds.
Moreover the MyALARM2 has the SCR button, placed in the upper right side (front view). Pressing of this button allows to scroll the display parameters.

USB port and power supply



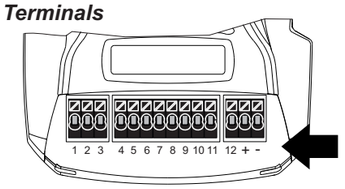
The MyALARM2 has a mini USB plug in, placed on the left side of case: it can be used to configure the MyALARM2, to perform the firmware upgrading and to recharge the internal battery from PC.
In alternative, it is possible to recharge the internal battery, using:
- the power supply (an accessory, no supplied with MyALARM2) using USB plug in or, in alternative
- the 12 V - power supply (supplied with MyALARM2), connecting wires with terminals + and - (GND).

Note about the MyALARM2 functioning

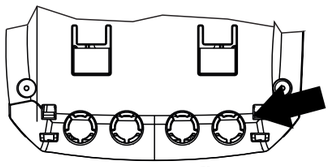
AUTO POWER-OFF. If the MyALARM2 displays «LOW BATT», its internal battery is running low: after 60 seconds, the MyALARM2 turns off automatically. To recharge the battery to an appropriate value, power on the MyALARM2 using one of the recommended cables.

POWER SUPPLY BY USB CABLE. The MyALARM2 power supply that uses USB port is not suitable for permanent installations, or installations in which are used relays and/or digital inputs. In these cases, supply the MyALARM2 using the 12 Vdc-power supply (it is an included element).

Terminals

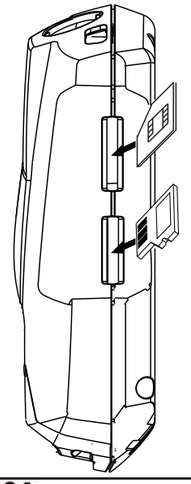


The MyALARM2 has 14 terminals in the internal part of case. To use these terminals, lift and remove the cover placed in the inferior part of MyALARM2.
In the figure on the side, the cover has been removed.



IMPORTANT: it is forbidden the mobile cabling; conveying the cables correctly. To place with order and safety the cables outwards from the terminals, use the four **removable cable runways** at the rear of the case. When wiring is completed, replace the cover to protect cables from accidental contact.

SIM card



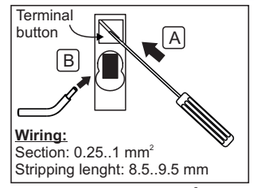
The MyALARM2 has a SIM plug in, placed in the lateral right side of the case.
To insert the SIM card in the corresponding connector, ensure that the card is oriented with metal contacts towards the left (with reference to the figure).

Micro SD card

The MyALARM2 has a SD card plug in that can be used for data logging and updating MyALARM2 firmware. The micro SD card plug in is placed in the lateral right side of the case.
To insert the SD card in the corresponding connector, ensure that the card is oriented with metal contacts towards the left (with reference to the figure).

TERMINALS CONNECTIONS

The MyALARM2 has digital inputs, analog inputs, relay outputs (optional) and a +12 Vdc output available from the terminals. The terminal block is inside the case, can be used by raising the cover placed in the lower part. To insert a cable in a terminal, plug into the hole the stripped end of the cable directly (exerting a sufficient pressure); in alternative, for thin wires, use a flatblade screwdriver (figure in the lower left):
1) insert the tip of screwdriver in the diagonal fissure of the terminal button;
2) press the screwdriver downwards (A);
3) while pressing the screwdriver, insert the cable into the hole (B);
4) release the screwdriver.
To remove a cable is necessary to press downwards the screwdriver into the diagonal fissure while pulling out the cable itself.



Wiring:
Section: 0.25..1 mm^2
Stripping lenght: 8.5..9.5 mm

(*) The outputs are available only with optional board with relais

LEGEND
Digital signal — Digital contact
Analog signal, voltage / current:
-P=passive, supplied from MyALARM2: **only current tx, not voltage**
-A=active, no supplied from MyALARM2

(**) Recommended: Connect a protection fuse by 1 A

LED signallings

LED	STATUS	*Meaning of LEDs*
GSM (yellow)	Blinking (slow)	The MyALARM2 is connected to GSM network
	Blinking (quick)	The MyALARM2 isn't connected to GSM network
PWR (green)	ON	The MyALARM2 is power on (using cable)
	Blinking (quick)	The MyALARM2 isn't power on (by cable)
	Blinking (slow)	Data-logging is on

FRONT VIEW AND LATERAL LEFT SIDE VIEW

OPTIONS

MY2 - 0 R - 0 G - 0 W - SC RC - B G

RELAIS	GPS	RADIO	CONNECTIONS	COLOUR
0=No R=Yes	0=No G=Yes	0=No W=Yes	SC=Spring clamps RC=Removable connectors	B=Blue G=Grey

EXAMPLE:
«MY2-R-0-0-SC-B» code for MyALARM2 unit with two relay outputs, without GPS module, without radio module, connections based on spring clamps, case colour is blue.