Instructions Sheet

SR2 MOD02

Reference: EG_SR2MOD02_1002_IS_000_UK
Revision: 000
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Author: FLB

Download User Guide document from web-site www.telemecanique.com

The SR2 MOD02 complies with the ETSI EN 301 489-7, EN 301 419-1 and EN 301 511 standards (electromagnetic compatibility), IC and FCC part 15 standards and PTCRB standard.

The SR2 MOD02 complies with the EN 60950, UL60950-1 and CAN/CSA 60950-1 standards (electrical safety).

The SR2 MOD02 complies with the standards relating to GSM Phase 2.

The SR2 MOD02 complies with directive R&TTE 1999/5/EC.

The SR2 MOD02 complies with the IEC60068-2 standard (Parts 1, 2, 6, 14, 27, 29, 30 and 32).

The SR2 MOD02 is ROHS Compliant: Directive 2002/95/CE.

The SR2 MOD02 is CE Compliant: Low Voltage Directive 2006/65/EEC and EMC Directive 2004/108/EC.

The corresponding markings appear under the appliance.

CE

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DISCLAIMER and WARNING

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this manual.

⚠ WARNING

LOSS OF CONTROL

- The designer of any control scheme must consider the potential failure modes of control paths and, for certain critical control functions, provide a means to achieve a safe state during and after a path failure. Examples of critical control functions are emergency stop and overtravel stop.
- Separate or redundant control paths must be provided for critical control functions.
- System control paths may include communication links. Consideration must be given to the implications of unanticipated transmission delays or failures of the link.[1]
- Each implementation of a SR2 MOD02 modem must be individually and thoroughly tested for proper operation before being placed into service.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

[1] For additional information, refer to NEMA ICS 1.1 (latest edition), "Safety Guidlines for the Application, Installation, and Maintenance of Solid State Control"

⚠ WARNING

HAZARD OF ELECTRIC SHOCK OR BURNS

- Do not open the modem
- Modem must be powered using a 5 to 32 Vdc power supply in GSM/DCS Class 2 (5.5 to 32 Vdc in GPRS Class 10) using the supplied power cable.
- No internal user serviceable parts.
- Modem must be returned to the factory for any repairs.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

1 - General

The SR2 MOD02 is a GSM/GPRS modem designed for transmitting asynchronous binary data, fax Group3 (Class 2), SMS and voice, operating in automatic call and answer mode according to the AT commands (as per Standards GSM 07.07 and 07.05).

The SR2 MOD02 RF performances comply with the ETSI GSM 05.05 guidelines.
Network Frequency Bands Detection: Europe Bands: 900/1800MHz and US Bands: 850/1900MHz

By default, the SR2 MOD02 is configured to first automatically check the European network bands.
After insertion of the SIM card, the device is switched on. An embedded application automatically checks the presence of a network. In case of absence, it switches to the US network bands and continues its search. This cycle is repeated until a valid network is found.
After detection of a GSM network, this one is saved in the modem.
In the case of use of new SIM card, a new attachment procedure to the network is automatically initialized.

NOTE: In the case of a modem configured with a SIM card for use in a specific area (European area for instance) that is then to be used in a different area (US for instance), the SIM card must be removed while modem is switched on. This is because a new attachment procedure to the network is automatically initialized after the removal (or change) of the SIM card whilst the device is switched on.

The main receiver parameters are:
- With GSM850 and E-GSM900, the sensitivity is -104 dBm
- With DCS1800 and PCS1900, the sensitivity is -102 dBm

The main transmitter parameters are (at ambient temperature):
- With GSM850 and E-GSM900, the maximum output power is 33 dBm +/-2 dB
- With DCS1800 and PCS1900, the maximum output power is 30 dBm +/-2 dB

2 - Description

Modem dimensions:
- Length: 73mm Width: 54mm Depth: 25mm

On the left side:
- Micro-Fit 3.0™ female 4-pin connector for the electrical supply.
- Female 9-point connector for the V24 and phone connections.

On the right side:
- SMA-F connector for connecting directly the GSM antenna.
- GSM modem 'Activity' LED.
- SIM card access.

On the sides of the modem:
- The CE label and the IMEI number,
- The "ROHS" mark, the "CSA" mark, the "UL" mark, the IC, FCC and PTCRB agreements on the label.

3 - Supply Consumption and Operating Conditions

The SR2 MOD02 may be powered with 5 to 32V DC in GSM/DCS Class 2. (5.5 to 32V DC in GPRS Cl10).
The SR2 MOD02 is delivered and must be powered with a power cable fitted with a fuse F 2.5A/ L250V (5x20mm).

If the modem is powered with a power supply higher than 32VDC, the security risk to the operator is minimized by means of the fuse and circuit protection components used in the modem.
Nevertheless, we highly recommend returning the product to the support center, in order for us to check it.

- SR2 MOD02 average power consumptions:
- 12mA @ 12VDC and 8mA @ 24VDC in Idle mode
- 96mA @ 12VDC and 50mA @ 24VDC - GSM Class 2
- 72mA @ 12VDC and 37mA @ 24VDC - DCS Class 2
- 165mA @ 12VDC and 87mA @ 24VDC - GSM / GPRS Class 10
- 120mA @ 12VDC and 64mA @ 24VDC - DCS / GPRS Class 10

Please refer to the full documentation on how to have exact consumption.

- Operating conditions:

Temperatures:	- Operating range: -20°C to +55°C
	- Storage range: -40°C to +70°C
Humidity with no condensation:	- Operating range: RH < 95% @ 55°C
	- Storage range: 30% < RH < 95 %max
Atmospheric pressure:	- Normal.
Weight :	- 95g.

- RF power: Class 4 (2W @ 850/900 MHz) and Class 1 (1W @ 1800/1900 MHz)

- SIM card: 3V or 1.8V DC.

4 - Using the modem

4.1 - Introduction

Before doing anything else, it is prudent to check that the modem is correctly cabled and that all the necessary operating components are present.
The modem is delivered in its own packaging, together with the present documentation, a 2 conductor cable (power), two mounting brackets, a GSM antenna and a DIN Rail mounting Clip mounted on the modem.

4.2 - Connection

It is recommended to make all the connections with the unit un-powered.

Connection to the supply

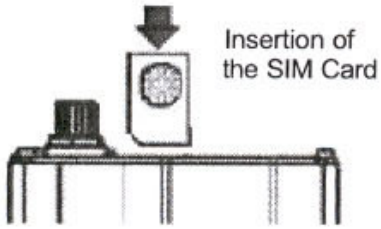
The modem must be connected to a DC supply by the supplied power cable.

Network connection

A GSM antenna must be connected to the SMA connector.

SIM card

Remove the SIM card cover.
Insert the SIM card.
Put the SIM card cover back.
Note : Push it to extract



4.3 - Switching on

Switch the modem on and control GSM LED status after initialization.

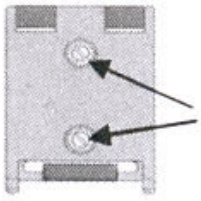
Status Modem LED (Orange)		⊗	⊗ ⊗	⊗
1	Not ready	⊗	–	–
2	Ready but not connected to network	–	–	⊗
3	Ready and connected to network	–	⎍⎍⎍⎍⎍	–
4	Transmission mode	–	⎍⎍⎍⎍⎍⎍⎍	–

Data Terminal Equipment (DTE) configuration:
115200 bauds, 7 bits, even parity, 1 stop bit, hardware flow control, DSR=1, S0=0.
The modem is now ready to receive incoming calls or to make calls.

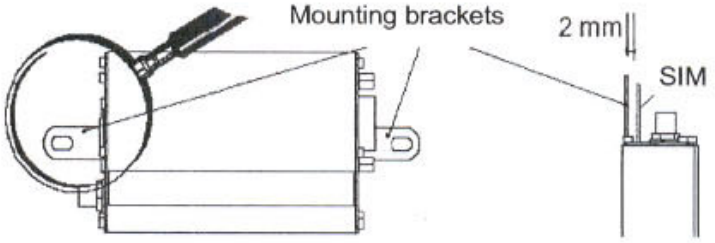
Documentation describing the AT commands for GSM is available from our User Guide.

4.4 – Mounting System

To remove the DIN Rail mounting clip, you have to unscrew the 2 screws located at the back of the modem and then slide the clip off.



Behind the modem: Screws of DIN Rail mounting clip



Note: - To be attached to a plain surface
- Screw head max. Height: 2mm