REMOTE CONTROL AND MONITORING GSM MODEM VIA SMS

Lovato electric

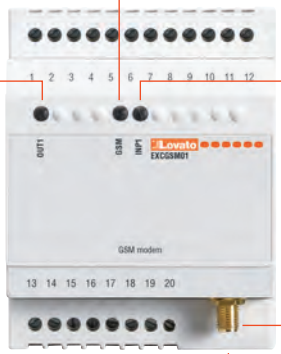
ENERGY AND AUTOMATION

Remore control and monitoring GSM modem via SMS

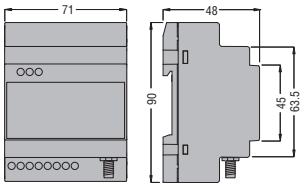
Compliant with Italian CEI 0-16 Standard, paragraph 8.8.6.5 and annex M, resolution 421/2014 of the ARERA

Order code	Description
GSM Modem (modular - 4U). IP69K exterior aerial with 2.5 m cable. RJ45-USB programming cable (included).	
EXC GSM 01	100...240VAC, 1 digital input, 1 analogic input (0...10V, 0...20mA, NTC), 1 relay output

EXC GSM 01



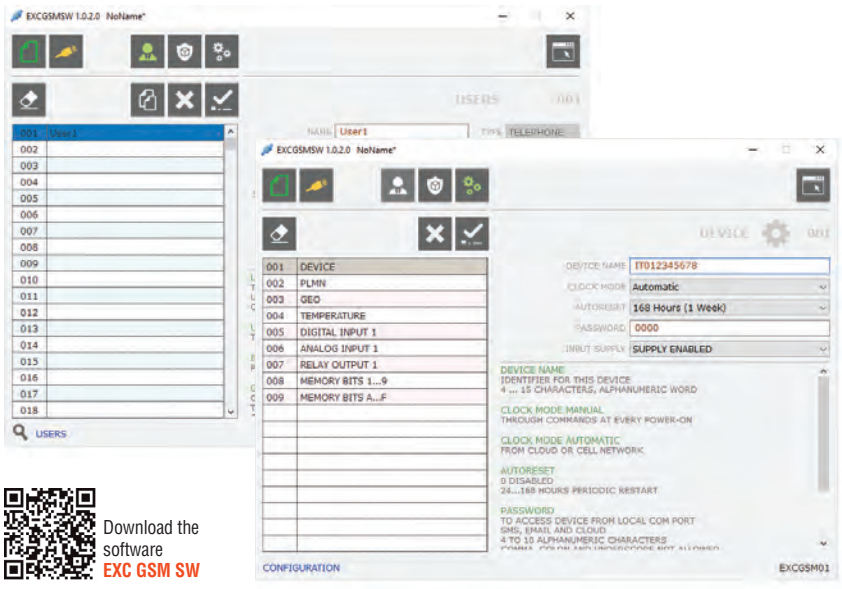
DIMENSIONS [mm]



Software

To configure the EXC GSM 01 modem (using the RJ45-USB programming cable included), the EXC GSM SW software must be used. This can be downloaded for free from the **www.LovatoElectric.com** website.
The software allows you to set:
- the users enabled to exchange messages with the modem
- the identifier of the modem, for example the active customer code (POD) in CEI 0-16 applications;
- the functions assigned to the digital output and input and to analogic input;
- the texts of the SMS associated with the commands
- the logic of the actions taken following the SMS arrival, change of input status, alarm situations.

Configuration is also possible off-line, creating a file to transfer to the modem at another time.



Download the software **EXC GSM SW**

Application requirements
With EXC GSM 01 is possible to remotely operate a relay output and obtain information on the system by sending programmable SMS.
Using the configuration software (available for download free of charge from www.lovatoelectric.com) the user can control the relay output and both the digital and analogic inputs.
The logic is based on events (for example, the activation of the digital input or the arrival of an SMS with specific text), to which the user can decide specific actions (reply either by SMS or voice message, or by switching the relay output).
The analogic input can be connected to physical size detectors like pressure, fluid tank level or temperature to allow remote reading of values or sending text messages via SMS or alarms.
The EXC GSM 01 modem interfaces with the cellular network to regularly update its internal clock and dawn/dusk settings, so that it can manage time-scheduled events properly.
Information can be retrieved from phone network cells relative to the position of the modem (reading position information e sending alarms via SMS).
Applications:
- Detection of boiler temperature thresholds;
- Fluid tank level alarms;
- Time and date based load management;
- Remote lighting and air conditioning system control;
- Hire equipment motion alarms.

Use with CEI 0-16
The CEI 0-16 standard in paragraph 8.8.6.5 and in attachment M prescribes that the electricity production plants powered by wind or solar photovoltaic sources with power greater than or equal to 100kW, connected or to be connected to medium voltage grids, are equipped with GSM modem.
Thanks to this modem it is possible to manage the disconnection of the generation through the messages sent by the energy distributor.

Functional characteristics
- Connection to the GSM network for sending and receiving SMS messages
- Programmable message texts
- Command output piloted by SMS or internal logic, for example to send the remote disconnection command to the interface device CEI 0-16
- Programmable digital input, for example to detect the status of the Interface Device (DDI) and sending of successful DDI opening and closing SMSs
- POD management (active user code)
- Management of the list of caller IDs (CLI) up to 5000 callers enabled
- Detection of mobile network coverage
- Full compatibility with medium-voltage PI LOVATO Electric PMVF 30: no software/hardware updates or programming required
- **Compatibility with third-party PIs where the remote disconnection signal is transmitted via digital input (dry contact)**
  For additional information contact our Technical support
  Tel. + 39 035 4282422; E-mail: service@LovatoElectric.com.

Operational characteristics
MODEM
- 35mm DIN (IEC/EN 60715) rail fixing
- 4 modules
- Supply: 100...240VAC
- Consumption: 5VAC
- 1 digital output 3A 250VAC
- 1 self-supplied digital input
- 1 analogic input 0...10V, 0...20mA, NTC
- Housing for 3V and 1.8V SIM card
- SIM PIN management
- Temperature sensor
- Update time, sunrise and sunset via GSM network
- Position update via GSM
- Certified according to FCC rules, part 15B
- Operating temperature: -20...+60°C
- Protection rating: IP40 on front; IP20 on terminals.

AERIAL
- Quad band 850/900/1800/1900MHz
- Exterior IP69K
- 2.5m cable
- Fixing via M10 hole:
  - with adhesive seal
  - with threaded pin and nut.

Compliance
Compliant with electrical safety standards: EN62368, EN62311.

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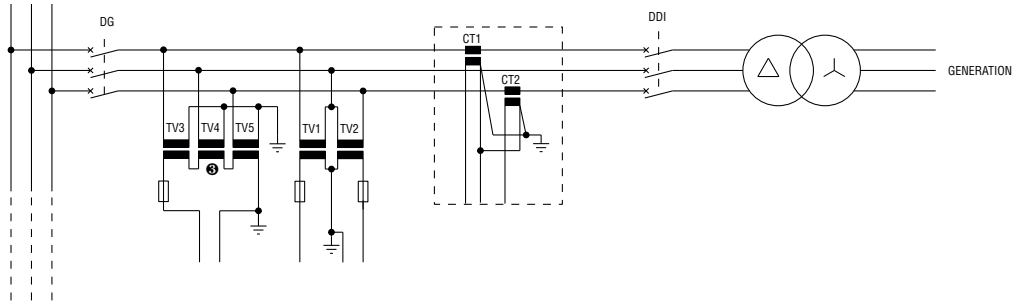
Wiring diagrams

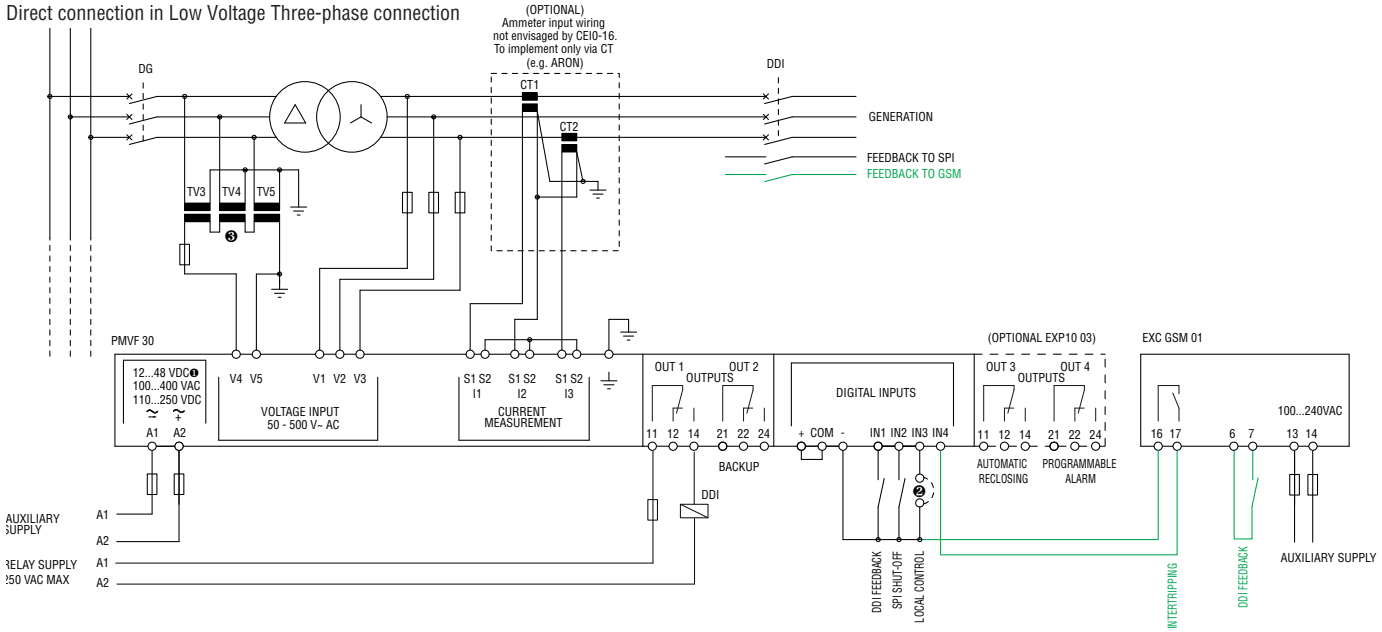
Interface protection system units compliant with Italian CEI 0-16 standard - For medium voltage
PMVF 30... with **EXC GSM 01**

MEDIUM-VOLTAGE DISTRIBUTION NETWORK
L1 L2 L3

Connection through VTs in Medium Voltage



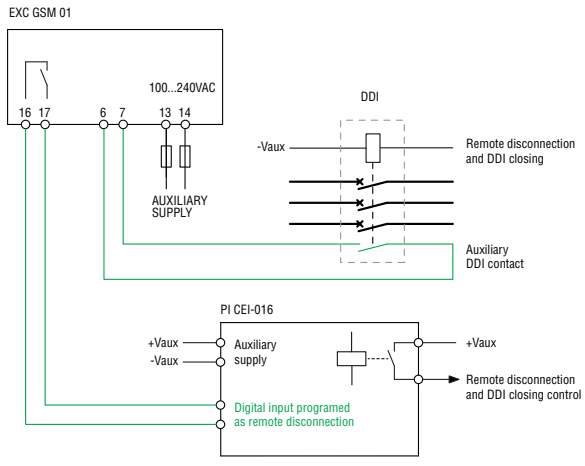
Direct connection in Low Voltage Three-phase connection



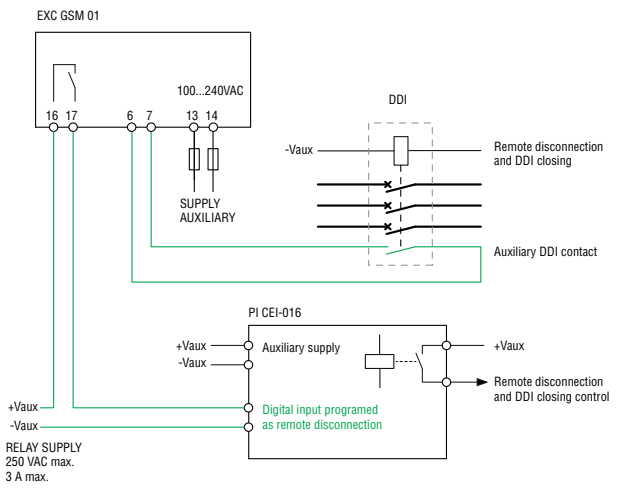
❶ Only for PMVF 30 D048. ❷ Local control choice.. ❸ VT in MV for residual voltage measurements.

The connections coloured in GREEN, in addition to the GSM Modem, represent the only wiring necessary for the adaptation.

EXC GSM 01 modem wiring diagram with other interface protections (PI) with self-supplied remote disconnection input



EXC GSM 01modem wiring diagram with other interface protections (PI) with remote disconnection input to be supplied.



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