

ECO LOGGER

INTEGRATED SYSTEM FOR REMOTE MEASUREMENT, RECORDING AND TRANSMISSION OF ELECTRIC ENERGY DEMAND PROFILES

- Class 2 built-in energy measurement engine
- 60 days active and reactive demand profiling
- Maximum installation economy
- Remote GSM/GPRS data retrieval

DESCRIPTION

The ECOLOGGER is the ideal solution for demand profiling in small to large industrial premises and for periodical data retrieval from a central control centre.

The unit is made of a plastic enclosure suitable for outdoor application containing the terminal connection board, the electronics and the GSM(GPRS) module. The electronics encompass three main functional blocks:

- Measurement engine converting the three voltage and current signals into a measurement of energies with a class 2 accuracy complying with IEC EN 61036 standards
- Power supply feeding all the electronics.
- Compact Plus Industrial modem integrating the access functions to the GSM (GPRS) networks as well as the data storage memory and the intelligence controlling the entire system. It is complete with the antenna connector and the plug-in SIM card reader.



TECHNICAL SPECIFICATION

Power supply: self powered from the voltage input (230 Vac Ph-N)

Consumption: 2 VA in stand-by, 6.6 VA with GSM operating at full power.

Working temperature range: -10+55°C

Relative humidity max. 95% non-condensing

IP54 protection degree

Internal led indicators: power on indicator and modem state indicator.

Internal terminal board suitable for cables up to 4 mm²

Internal circuit protection plate for the operator when the unit is open

Enclosure in self-extinguishing (V0 class) plastic material complete with 2 cable glands PG13.

Cover complete with rubber gasket, fixing by means of 4 plastic screws

Lead sealing facility on all the 4 closing screws

Wall mounting by means of rear fixing bracket included.

Size: 200x150x80 mm.

Weight: approx. 850 gr.

MEASUREMENT, HANDLING AND STORAGE OF DATA

- Built-in high-stability high-reliability microprocessor measurement system suitable for operation in industrial environments.
- RMS measurement up to the 16th harmonic
- Voltage inputs: direct 80-264 V phase neutral (140-460 V phase phase). 4 wire connection
- Current input: via external 5...4.000/5 A CTs (programmable ratio)
- Active and Reactive energy (demand) measurement with programmable 5...60 min. integration time.
- Accuracy: class 2 on energies according to IEC EN 61036 standards
- Local connector for system check-up
- Set-up: remote configuration of all the working parameters like CT ratio and integration time
- Automatic data storage into a 60 days FIFO register with date-time stamping
- The data are structured as daily Active and Reactive energy profiles (demand) in ASCII characters.
- Non-volatile memory type Flash (permanent retention also when powered off).
- Lithium -battery backed clock/calendar ensuring a 5 years duration when powered off and 10 years duration when powered on.
- GMT + time zone based clock. Remote clock synchronisation from PC.
- Possibility of automatic day light time change (upon calendar uploading)
- Possibility of "time of use" handling (upon schedule uploading)

TRANSMISSION

- Wireless connection via GSM technology (GPRS on request).
- Internal approved GSM modem (GPRS modem on request)
- External antenna connector with stilo antenna included (other types of antenna on request)
- Remote checking of the RF field strength.
- Remote programming of the set-up parameters (MODBUS-ASCII).
- Selective access to the data stored by means of two distinct access profiles.
 - *User Profile* for ECOLOGGER remote configuration and for selective retrieval of the data stored in memory.
 - *Maintainer Profile* for remote uploading of upgrades and new firmware with additional functions
- Dual safety against undesired access by means of calling number(s) identification and passwords distinct for each access profile.
- Selective retrieval of Active and/or Reactive profile data in daily files exploited by means of Xmodem protocol and AT commands.
- Real time transmission (available only during the remote connection) of the instantaneous readings of U, I, P (single and three phase values) and the readings of PF and energies (three phase values).
- Automatic modem wake-up program preventing the disabling of dormant SIM cards.
- Possibility of remote assistance by the manufacturer (if specifically required and authorised by the user)

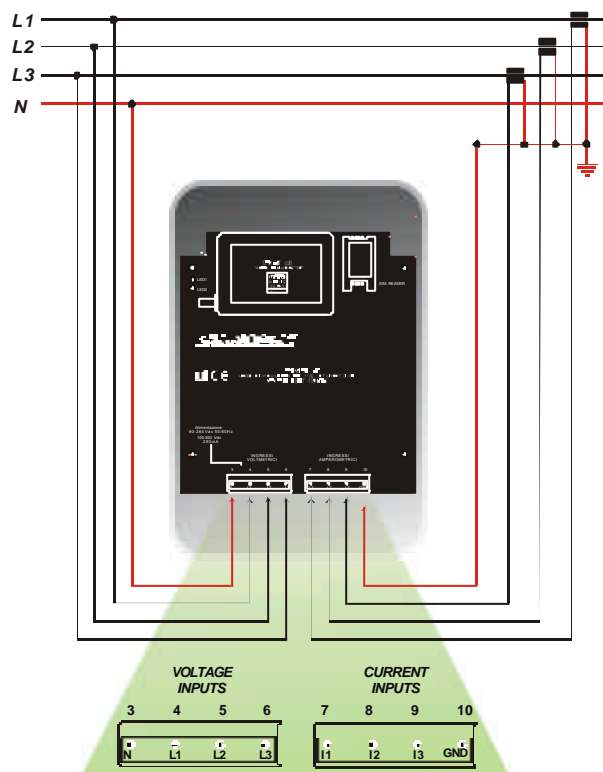
REFERENCE STANDARDS

ECOLOGGER: 89/336/CE directive. In particular: EN60950:2000 (Health and Safety), EN 55022, EN 55024 (E.M.C.) :
 MODEM: Type Compact Plus GSM complying with directive R&TTE 1999/5/EC. In particular:
 Radio : 3GPP TS 51.010-1 v. 5.1.0 (12/2002); : EN 301 511 V9.0.2 (final draft)
 EMC : EN 301 489-7 V1.2.1 (08/2002)
 Safety : EN 60950:2000

OPTIONS

- GPRS modem
- Local programming and set-up by PC.

WIRING DIAGRAM



Open unit



Internal circuit

Technical specifications are subject to modification without prior notice