

External communication module for integration of electricity meters into AMI system



CM23E is an external communication module designed to integrate meters which communicate by IEC 62056-21 mode C protocol into AMI system. The module provides data exchange between meters and AMI center via GPRS network. CM23E is mounted aside a meter array and simply connects to RS485 bus. In communication terms, CM23E is fully transparent.

### Technical data

#### Automatic recovery

- Hardware reset (watchdog function) is automatically activated in case of an irregular state of the module, which provides module recovery and restoring of normal operation.

#### RS485 port for communication with meter

- Module connects to the meter via RS485 port (optionally RS232)

#### Additional port for connecting to RS485 bus

- Modules are equipped with additional RS485 connector which provides connection of multiple meters to a local RS485 bus

#### Communication options

- Two-Way, half-duplex channel
- Supports GPRS connection
- Support for static and dynamic IP addresses, depending on GPRS parameters settings
- IEC 62056-21 mode C communication protocol

#### Visual indication

Module is equipped with two LED indicators:

- Operation mode, GPRS and signal level

#### Data protection

- Protection from unauthorized communication is achieved by:
  - SIM card PIN code
  - Access from the same APN
  - APN access credentials

#### Independent power supply

- Modules are powered directly from power line voltage

#### Plug-in mounting and connection

- Designed for external installation
- Easy plug-in connection to communication ports and power line
- Resistant to overvoltage and reverse power connection

#### Case and protection

- High-quality, reinforced case made of self-extinguishing polycarbonate
- IP54 protection level against water and dust (in accordance with IEC 60529)

Nominal voltage $U_n$	58 V - 230 V
Voltage range	80% - 115% $U_n$
Frequency	50 Hz
Self-consumption	1.5 W; 2.8 VA
Output power	2 W, class 4 (GSM 850/900) 1 W, class 1 (DCS 1800/PCS 1900)
RFI suppression	CISPR 22, class B
Communication frequency range	Quad-band GPRS: 850/900/1800/1900 MHz
GPRS modem	GPRS multi slot class: 10 GPRS mobile station class: B
Communication ports and channels	RS485 port (IEC 62056-21)
Accuracy class	2, according to IEC 6050-131
Insulation voltage	4 kV, 50 Hz, 1 min
Shock voltage	6 kV, 1.2/50 $\mu$ S
Burst	4 kV
Electrostatic discharge	8 kV contact 15 kV air
LED indicators	Operation mode GPRS communication / signal level
Antenna connector	SMA
Operational temperature range	-40 °C - +70 °C
Storage temperature range	-40 °C - +80 °C
IP protection	IP54
Dimensions	128 x 77 x 33 mm
Weight	0.17 kg

