

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 μ 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 (mm)	128 x 77 x 33
Weight	0.17 kg

