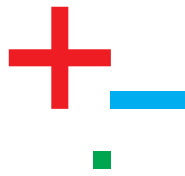


# ISKRAEMECO



# Energy Measurement and Management

## P2S

### AMR Communicator



**P2S** communicator is a part of the Iskraemeco SEP2W system for remote meter reading and billing energy consumption. It is designed for acquisition, storing, processing and displaying of data acquired from electricity, heat or gas meters equipped with a pulse output or serial interface. Data from P2S can be transferred via different communication media to a central station for monitoring and billing energy consumption. The communicator is compatible with different SCADA systems.

**Communicator design**

P2S is based on a powerful micro-computer that processes the input pulse data, data received via a CS or RS485 serial interface, performs all calculations and stores data in a non-volatile memory, registers load profile data and drives LCD. A crystal controlled real-time clock complies with the IEC 1038 recommendation. It enables timing for time-of-use and load profile registration. A super capacitor backups the RTC and SRAM. An infrared optical port (in compliance with the IEC 1107) is used for local communicator programming and data down-loading. Data are displayed locally on a LCD 2x16 alphanumeric character. Data are scrolled with a pushbutton on the communicator front side.

The communicator is equipped with 4 inputs. Each of them can be programmed as a pulse input - S0 (DIN 43864) or relay type - or input for CS 20-mA interface (DIN 66348).

P2S can be equipped with an internal DLC and V.22bis modem, RS232 and RS485 serial interfaces. The following configurations are available:

- internal V.22bis and DLC modems
- an internal V.22bis modem and RS 485 serial interface
- an internal DLC modem and RS232 serial interface
- RS232 and RS485 serial interfaces

Either an external modem or a printer can be connected to the RS232 serial interface. Up to 8 electricity meters with SDT\* communication feature can be connected via the RS485 interface.

\* Serial Data Transmission is Iskraemeco trade name for serial transmission of original meter data

P2S is equipped with an OPTOMOS relay pulse output and a bi-stable relay for external reset of maximum demand meters at the end of billing periods. If more outputs is required, a number of inputs should be reduced.

P2S modular design, built-in components and manufacturing in compliance with the ISO 9001 standard assure its versatility and reliability.

**Memory capacity for load profile**

The communicator memory capacity is 128 kByte and enables storing 4 load profiles based on a 15-minute period for 54 days. The memory is organised as a ring buffer.

**Programmable parameters**

The user can program which data will be registered in the P2S as well as their quantity. A metering period can be programmed in a range from 1 minute to 1 day with resolution 1 second. Up to three different metering periods can run at the same time in the P2S. Time-of-use registration can be programmed based on up to 32 daily and 16 weekly change-over schedules for energy and demand, 16 seasons a year, daylight saving period and 32 holidays, including holidays based on a lunar calendar. Each daily tariff change-over schedule has up to 4 periods, and up to 4 different tariffs a day can be defined.

**TECHNICAL DATA**

Main power supply:	
Voltage	.3 x 90 to 3 x 265 V AC,
Frequency	.45 to 65 Hz
Back-up power supply	super capacitor 1 F
Number of inputs	.up to 4
Number of meters connected via RS485	.up to 8
Communication protocols	.IEC 870-5 (DIN 19244), IEEE 802.3 IEC 1107, Mode A, B, C and D
Number of pulse outputs	.1
OptoMOS relay ratings	.25 VA (100 mA, 250 V)
Bi-stable relay	.1 (for external reset max. demand meters)
Data transmission rate:	
Internal modem	.V.22bis
Optical port	.2400 Baud
RS232	.150 to 57600 Baud
RS485	.150 to 57600 Baud
Real-time clock	.32 kHz
RTC accuracy	.±10 ppm
Central processor unit	.MC 68332 (32 bit)
Internal memory	.128 kB EPROM + 8 kB EEPROM + 128 kB RAM
Electromagnetic compatibility	.EN 50082/2
RF protection	.EN 50081/2
Operating temperature range	.0 °C to +50 °C
Storage temperature range	.-20 °C to +65 °C
Relative humidity	.90% without condense
Overall dimensions	.179 x 104 x 65 mm
Mass	.1.3 kg

**Housing**

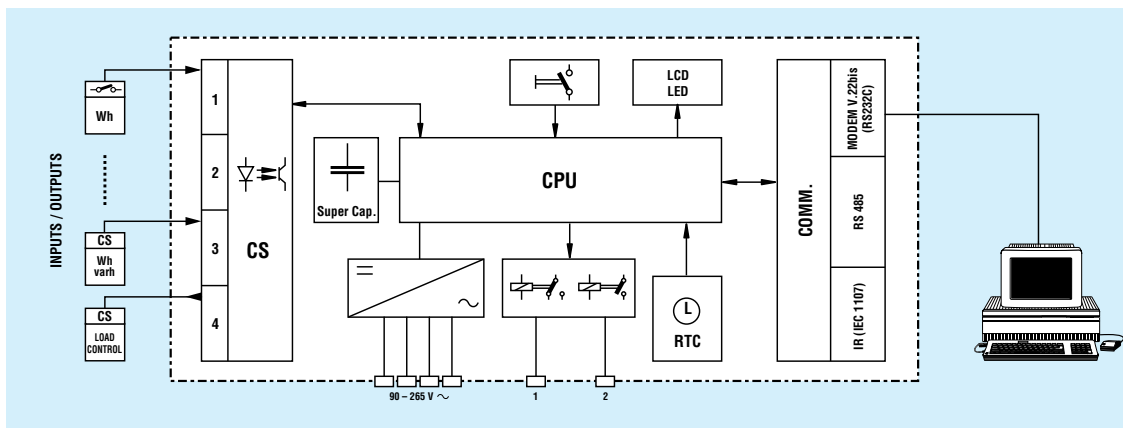
P2S communicator is built into a housing for either wall type mounting or mounting on an electricity meter terminal block (DIN53857). It assures IP 50 protection level against dust and water penetration. The housing is made of self-extinguishing polycarbonate that can be recycled at the end of the communicator life.

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**Accessories**

POREG2View software for the communicator programming and data down-loading as well as an IR optical probe with 9-pin connector are available on request.

**BLOCK DIAGRAM**



Owing to periodical improvements of our products the supplied products can differ in some details from the data stated in the prospectus material.