

ELECTRONIC POLYPHASE METER AS3500

Electronic polyphase meter for light commercial and industrial applications

With the deregulation of the energy market, in combination with a changing cost situation, new flexible tariff structures and modern energy management are required. Remote metering and the standardization process become more and more important. The AS3500 offers these advanced features required along with an optional disconnect block.

The CT connected AS3500 is approved according to MID and PTB (Germany). A variety of communications modules is available to ensure that it can be adapted to meet the market requirements for remote meter reading.



AS3500 front view

FEATURES AND BENEFITS

- High accuracy and stability.
- Comprehensive large figure display.
- 4 quadrant measurement (+P, -P, +Q, -Q, Q1 ... Q4).
- 8 energy tariffs and 4 demand tariffs, independently controllable.
- Active, reactive and apparent energy measurement.
- Integrated tariff clock.
- RTC time back-up with an internal battery and an external exchangeable battery (optional).
- Local readout without mains power.
- Optical interface acc. to EN 62056-21.
- OBIS identifier system acc. to EN62056-61.
- Optical display stepping.
- Advanced anti-tampering features:
 - terminal and main cover removal detection;
 - rotation field detection;
 - magnetic field detection;
 - phase failure detection;
 - power failure detection;
 - hardware lock against reprogramming;
 - no voltage links;
- Load profile for billing data:
 - up to 8 channels;
 - different modes of storage;
- AMI prepared, hot swap communication modules:
 - AM122 – GSM/GPRS or LTE;
 - AM322 – Ethernet (coming soon);
 - AM540 – PLC/OFDM and wired M-Bus;
- Electrical interface RS485.
- Supported meter protocols:
 - EN62056-21;
 - DLMS/COSEM;
- Log file for event registration with time and date stamps.
- Measuring instantaneous values (U, I, f...).
- Profile of instrumentation values (up to 8 channels).
- Up to 3 electronic SO outputs (optional).
- Up to 2 control inputs (optional).
- Up to 4 electronic 230V, 100mA outputs or 2 mechanical relay outputs, 4A (optional).
- User-friendly reading, setting and programming tool *alphaSET*.

AS3500 TECHNICAL SPECIFICATIONS

Nominal voltage	4-wires, 3-systems	3x220/380V ... 3x240/415V (-20% ... +15%) 3x58/100V ... 3x63/110V (-20% ... +15%)
	3-wires, 2-systems	3x100V ... 3x110V (-20% ... +15%) 3x220V ... 3x240V (-20% ... +15%)
Nominal frequency		50/60Hz, ±5%
Nominal (maximum) current	Continuous current for CT connection	1(6)A*, 1,5(6)A, 5(6)A, 5(10)A, 5(15)A
	Short duration for CT connection	300A for 0,5s
Starting current	CT	1mA
Accuracy	Active energy: class 1, 2, 0,5S or class A, B, C (MID)	EN62053-21, EN50470-3, MID-app. MI-003
	Reactive energy: class 1	EN62053-23
Power supply	Nominal voltage	Still operates even with the failure of two phases or one phase and the neutral
2 control inputs (optional)	Control voltage	maximum 265V AC
	Threshold	OFF: <40V ON: >60V
3 electronic outputs	S0 standard	Acc. to IEC 62053-31 Class A (maximum 27V DC)
Electronic/mechanical outputs (optional)	Up to 4 electronic outputs or Up to 2 mechanical relay outputs	27V ... 265V, 100mA 230V, 4A
Interfaces	Optical interface	maximum 9.600 Baud (acc. to EN 62056-21)
	RS485 interface for communication module	maximum 19.200 Baud (acc. to EN 62056-21)
Internal tariff source	4 tariffs, 4 seasons weekday dependent tariff scheme	Acc. to EN 62052-21
Real-time clock time backup for RTC	Accuracy	< 5ppm or <0,5s/day
	Internal battery or exchangeable battery (optional)	> 5 years continuous operation without power, with shelf-life of 10+ years
Time backup for readout without mains power	Exchangeable battery	4-5 years
Temperature condition	Operating temperature	-40°C ... +70°C
	Storage temperature	-40°C ... +80°C
	Humidity	0 to 95% rel. humidity, non-condensing
	Temperature coefficient	<0,01% per °C (PF=1), <0,04% (PF=0,5)
EMC compatibility	Surge withstand (1,2/50 µs)	6kV, R _{source} =2Ω, 12kV, R _{source} =40Ω **
	Dielectric test	4kV, 1minute/50Hz
	EMC environmental conditions	MID E2
Power consumption	Voltage circuit	< 0,7W <0,8VA per phase
	Current circuit	< 0,01W <0,01VA per phase
Connections	Main terminals	Terminals: 6mm x 5mm
	Auxiliary connections	Terminals: 2,5mm ²
Housing	Dimensions	Acc. to DIN 43857 part 2, DIN 43859
	Protection class	Housing: IP54 Terminal block: IP31
	Material	Polycarbonate, non-flammable, self-extinguishing synthetic material, recyclable
	Mechanical environmental conditions	MID M1
Weight		< 1,5 kg

* - on request

** - only between main terminals

For more information

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