

Electronic single phase meter AS220

Electronic single phase meter for Smart Metering Applications

New requirements dependant from legislation and EU energy saving directives are dominating the European meter market. Smart Metering stands not only for the reading of electricity meters. With this approach the frequently reading of gas and water meters is included.

With the remote metering the standardization process becomes more and more important. With the adaptation of the well proven AS220 meter to the specific Smart Metering requirements, like modular communication, remote connection/disconnection, etc. the new AS220 meter match these new requirements respectively.

The meter is in accordance with the relevant DIN / IEC and MID standards.

Features

- High accuracy and stability
- DIN or BS version available
- 4-Quadrant measurement
- 4 energy and 4 demand tariffs, independently controllable
- Measurement of active, reactive and apparent demand
- Integrated tariff clock
- Time back-up with internal battery, exchangeable battery optional
- Readout of meter data according to VDEW specification by use of the EN 62056-21
- Readout of meter data without main power
- Integrated connect / disconnect relay up to 100A
- Anti-Tampering features, like
 - main and terminal cover removal detection
 - magnetic field detection
 - reverse run detection
 - always run positive measurement
- Communication module
 - WAN communication using GSM/GPRS
 - HAN communication for gas & water meter reading using wireless M-Bus, 868MHz
- Installation support features
- Optical interface acc. EN62056-21
- Use of OBIS identifier system (EN62056-61)
- Log file for registration of all events with time and date stamps
- Load profile for billing data
- Measuring of instantaneous values
- Power quality measurement
- Installation support features
- 1 electronic S0 output (optional)
- User friendly reading, setting and programming tool *alphaSET*



Technical Data

Modifications or deviations are reserved R 1.3

Nominal voltage	2-wire, 1 system	220 .. 240V (-20% .. 15%)
Nominal frequency		50 / 60Hz, +/-5%
Nominal / maximum current	Continuous current Short duration	DC: 5(60)A, 5(80)A, 5(100)A DC: 7000A for 2 cycles
Starting current		DC: < 16mA
Accuracy	EN 62053-21 EN 50470-1 and 3	Class 2 or 1 Class A or B acc. MID
Power supply	Nominal voltage	220 ... 240V (-20%..+15%)
1 electronic output	S0 standard	Acc. EN 62053-21
Interfaces	Optical interface	max 9600 Baud, EN62056-21 max. 9600 Baud, EN62056-21
Comms module	Electrical interface to E-meter WAN communication LAN communication	EN 62056-21 protocol, 9600 Baud AM100 - GSM/GPRS Transparent mode, EN62056-21 DLMS/COSEM protocol Wireless M-Bus or wired M-Bus acc. EN 13757-4
Internal tariff source	4 tariffs 4 seasons weekday dependent tariff scheme	Acc. EN 62054-21
Integrated connect/disconnect relay		Up to 100A Up to 10.000 switching cycles
Time backup for RTC	Battery Accuracy	> 10 years continuous operation at 25°C shelf life of 5 years < 5ppm
Time backup for readout without main power	Supercap Internal battery Additional exchangeable battery	0,5 days 5 years, depending on number of readouts 10 years, depending on number of readouts
Temperature condition	Operating temperature Storage temperature Humidity Temperature coefficient	-40°C...+70°C -40°C...+80°C 0 to 100% rel. humidity, non-condensing 0,01% per °C (PF=1 and PF=0,5)
EMC compatibility	Surge withstand (1,2/50µs) Dielectric test	6kV, R _{source} = 20Ohm 12kV, R _{source} = 400Ohm *) 4kV, 1min, 50Hz, MID E2
Power consumption	Without module Including module	< 0,7W, < 8VA
Connections	Direct connected meter Auxiliary connections	Terminals: Ø=9,0mm Terminals: Ø=4,0mm
Housing	Dimensions Protection class Material	DIN 43857 part 1, BS 7856 Housing: IP54, terminal block: IP31 Polycarbonate, non-inflammable, self-extinguishing synthetic material, recyclable, MID M1
Weight		<0,6 kg

*) only between main terminals

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