

Electronic polyphase meter *alpha* A1350

Electronic three-phase meter for residential and light commercial customers

With the deregulation of the energy market, in combination with a changing cost situation, new flexible tariff structures and a modern energy management are required. Remote metering and the standardization process become more and more important. With the adaptation of the *alpha* meter A1350, the conditions to match these new requirements were created.

The *alpha* meter is available either for direct or CT/VT connection. The meter is in accordance with the relevant EN, IEC and MID standards.



Features

- High accuracy and stability
- Efficient certification mode → reduction of the test and certification time
- 4-Quadrant measurement
- 4 energy and 2 demand tariffs, independently controllable
- measurement of active, reactive and apparent demand
- integrated tariff clock
- time back-up with internal battery
- readout of meter data according to VDEW specification by use of the EN 62056-21 protocol
- readout of meter data without main power
- Anti-Tampering features, like
 - terminal and main cover removal detection
 - absolute value measurement
 - hardware lock against reprogramming
- installation support features
- optical interface acc. EN 62056-21
- electrical interfaces (CL0, RS232, RS485) 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 (up to 8 channels)
- measuring of instantaneous values (U, I, f, ...)
- profile of instrumentation values
- 3 electronic S0 outputs
- 1 control input
- user friendly reading, setting and programming tool *alpha*SET

Technical Data

Modifications or deviations are reserved R 1.4

Nominal voltage	4-wire meter, 3 systems	3x58/100V, 3x63/110V, 3x220/380V, 3x230/400V
	3-wire meter, 2 systems	3x100 .. 110V, 3x220..3x230V
Nominal frequency		50 / 60Hz, +/-5%
Nominal / maximum current	Continuous current	DC: 5(60)A, 5(80)A, 5(100)A CT: 5//1, 1(2)A, 1.5(6)A, 5(6)A, 5(10)A, 5(15)A
	Short duration	DC: 7000A for 2 cycles, CT: 300A for 0,5s
Starting current		DC: < 16mA CT: < 1mA
Accuracy	Class 2 or 1, A or B	acc. EN62053-21, EN50470-3, MID-app. MI-003
Control input	Control voltage	Max. 265V AC
	Threshold	„O FF“ at <40V, „ON“ at >60V
Electronic outputs	Only S0 standard	acc. IEC 62053-31
Interfaces	Optical interface	Protocol acc. EN62056-21, max 9600 Baud
	Electrical interface: CL0 or RS232 or RS485	
Internal tariff source	4 tariffs, 4 seasons weekday dependent tariff scheme	acc. EN 62054-21
Time backup for RTC	Battery	> 5 years continuous operation at 25°C shelf life of 10+ years
	Accuracy	< 5ppm
Time backup for readout without main power	Supercap	> 1 day
Temperature conditions	Operating temperature	-40°...+70 °C
	Storage temperature	-40°...+80 °C
	Humidity	acc. EN62052-11
	Temperature coefficient	0,01% per °C (PF=1), <0,04% (PF=0,5)
EMC compatibility	Surge withstand (1,2/50µs)	6kV, R _{source} = 2 Ohm 12kV, R _{source} = 40 Ohm *)
	Dielectric test	4kV, 1min, 50Hz
	EMC environmental conditions	MID E2
Power consumption	DC:	< 1,5W, <2,2VA per phase
	CT: Voltage circuit	< 1,5W, <2,2VA per phase
	Current circuit	< 0,01W, <0,01VA per phase
Connections	CT connected meter	Terminals: 6mm x 5mm
	Direct connected meter	Terminals: 10,3mm x 8,3mm
	Auxiliary connections	Terminals: 2,5mm ²
Housing	Dimensions	DIN 43857 part 2, DIN 43859
	Protection class	Housing: IP52, terminal block: IP31
	Material	Polycarbonate, non-inflammable, self-extinguishing synthetic material, recyclable
	Mechanical environmental conditions	MID M1
Weight		approx. 1,3 kg

*) only between main terminals

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