

Electronic polyphase meter *alpha* A1500

Electronic three-phase meter for commercial and industrial 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 A1500, the conditions to match these new requirements were created.

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

Features

- wide voltage range power supply
→ same meter can be used at all voltage levels
- one meter for 3-wire and 4-wire applications
- high accuracy and stability
- display according to the VDEW-specification
- Efficient certification mode → reduction of the test and certification time
- 4-quadrant measurement (+P, -P, +Q, -Q, Q1..Q4)
- 4 energy and 4 demand tariffs, independently controllable
- measurement of active, reactive and apparent demand
- integrated tariff clock (option)
- integrated ripple control receiver (option)
- time back-up with internal super-cap or battery
- time synchronization by connection of a DCF77 antenna
- log file for registration of all events with time stamps
- registration of instrumentation values
- settable service list
- improved load profile storage ability
 - 13 months of 15minute intervals
 - selectable up to 8 channels
 - different storage modes (demand, energy/interval, register data)
 - load profile for pulse inputs
- readout of load profile data according to VDEW specification by use the EN62056-21 protocol
- 4 control inputs
- 6 electronic pulse/control outputs
- 1 mechanical relay output (option)
- auxiliary power supply (option)
- up to 4 pulse inputs (option)
- user friendly reading, setting and programming tool *alphaSET*



Nominal voltage	4-wire meter	3x58/100V...3x240/415V
	3-wire meter	3x100V...3x240V
	2-wire meter	1x100V...1x240V
		Wide range power supply (-20%...+15% Un)
Nominal frequency		50 / 60Hz or 16.7Hz
Nominal (max) current		5(60)A, 5(80)A, 5(100)A 5//1, 1(2)A, 5(6)A, 5(15)A
Accuracy	Class 2,1,0.5S,0.2S, A,B,C	acc.EN62053-21,EN62053-22, EN50470-3, MID-app. MI-003
4 control inputs	Control voltage Threshold	Max. 276V AC „OFF“ at $\leq 47V/AC$; $\leq 66V/DC$ „ON“ at $\leq 65V/AC$; $\leq 91V/DC$
6 electronic outputs - pulse output or - control output	AC and DC voltage Voltage range Maximum current	5V to $< 276V AC/DC$ $< 100mA AC/DC$
4 pulse inputs	Pulse input or synchronisation input	S0-standard, according to DIN 43864 or connection to ext. DCF77-aerial
1 mech. relay output	Life expectancy Max. switching voltage Max. current	10^7 operations 265V AC/DC 1Amp
Interfaces	Optical interface Electrical interface CL0 / RS232 / RS485	Protocol according to EN62056-21 second electr. Interface optinal 300...19,200 Baud
Time backup for RTC	Supercap Battery	> 10 days > 10 years
Auxiliary power supply	Wide range power supply	42V...265 AC/DC
Integrated ripple receiver		All ripple systems including VERSACOM and frequencies from 150Hz to 1350Hz
Temperature condition	Operating temperature Storage temperature Humidity	$-30^{\circ}...+60^{\circ}C$ $-40^{\circ}...+70^{\circ}C$ acc. EN62052-11
EMC-compatibility	Surge (1,2/50 μ s) EMC environmental conditions	6kV, $R_{source}= 2 \text{ Ohm}$, 12kV, $R_{source}=40 \text{ Ohm} \text{ *)}$ 4kV AC, 1min, 50Hz MID E2
Power consumption	Voltage circuit Current circuit Auxiliary power supply	$< 0,8W$, $<1,2VA$ per phase $<0,01W$, $<0,01VA$ per phase $< 2,3W$, $< 5,3VA$
Connections	CT connected meter Direct connected meter Auxiliary connections	Terminals $\varnothing = 5mm$ Terminals $\varnothing = 8,5mm$ Terminals $\varnothing = 3mm$
Housing	Dimensions Protection class Material Mechanical environmental conditions	DIN 43857 part 2, DIN 43859 Housing: IP51, terminal block: IP31 Polycarbonate, non-inflammable, self-extinguishing synthetic material, recyclable MID M1
Weight		$< 1,5kg$

*) only between main terminals

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