

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

- high accuracy and stability
- wide voltage range power supply → same meter can be used at all voltage levels
- Efficient certification mode → reduction of the test and certification time
- meter available for 3-wire and 4-wire applications
- 4-quadrant measurement (+P, -P, +Q, -Q, Q1..Q4)
- 4 energy and 4 demand tariffs, independently controllable
- measurement of active, reactive and apparent demand
- display according to the VDEW-specification
- integrated tariff clock (option)
- time back-up with internal supercap or battery
- time synchronization by connection of a DCF77 antenna
- integrated ripple control receiver (option)
- log file for registration of all events with time stamp
- load profile storage
 - 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
- electrical interfaces CL0 / RS485 / RS232
- registration of instrumentation values (U, I, f, ...)
- profile of instrumentation values (up to 8 channels)
- settable service list
- 4 electronic 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 3-wire meter 2-wire meter	3x58/100V...3x240/415V 3x100V...3x240V 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
Starting current		< 1mA
Accuracy	Class 2, 1, 0.5S, 0.2S, Class A or B or C (MID)	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 (option)	Pulse input or synchronisation input	S0-standard, according to DIN 43864 or connection to ext. DCF77-aerial
1 mech. relay output (option)	Life expectancy Max. switching voltage Max. current	10^7 operations 265V AC/DC 1Amp
Interfaces	Optical interface CL0 / RS485 / RS232	acc. IEC 62056-21, max 9'600 Baud acc. IEC 62056-21, max. 19'200 Baud
Real Time Clock - Time backup for RTC	Accuracy Supercap Battery	< 5ppm or <0,5s/day > 10 days > 10 years
Auxiliary power supply (option)	Wide range power supply	42V...265V AC/DC
Integrated ripple receiver (option)		All ripple systems including VERSACOM and frequencies from 150Hz to 1350Hz
Temperature condition	Operating temperature Storage temperature Humidity	-30°...+60 °C -40°...+70 °C acc. EN62052-11
EMC-compatibility	Surge (1,2/50µs) EMC environmental conditions	6kV, $R_{source}=2\text{ Ohm}$, 12kV, $R_{source}=40\text{ Ohm}$ *) 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 $\varnothing = 5\text{mm}$ Terminals $\varnothing = 8,5\text{mm}$ Terminals $\varnothing = 3\text{mm}$
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		Approx. 1,5 kg

*) only between main terminals

Elster Solutions GmbH

Steinern Straße 19-21

55252 Mainz-Kastel

Germany

Phone +49 (0) 6134 / 605-777

Fax +49 (0) 6134 / 605-750

e-info@elster.com

www.elstersolutions.com