

A1882 ALPHA® Modbus meter



Elster is making meter point data directly available to SCADA systems at the substation.

Instant information – better decisions.

Using the economical A1800 meter family design as the base metering device, Elster has incorporated the important SCADA connectivity without unnecessary extra costly features. This makes the A1882 ALPHA meter just as easy to configure and operate as your other installed meters C&I meters.

The A1882 ALPHA meter offers a 2-port design: one port dedicated to SCADA communications using the Modbus protocol, the second port dedicated to revenue billing readable using the ANSI C12.19/21 protocol. Both ports can be read simultaneously – one by the billing department and one by the distribution automation department, for instance.

Elster is bridging the gap between stand-alone revenue metering and SCADA connected point metering.

Advanced features and functions

- Bi-directional, 4 quadrant metering
- Class 0.2 Accuracy class metering
- Conforms to IEC 62052-11 & IEC 62053-21 metering standards
- Auxiliary power supply
- Data logging and event recording
- Circuit diagnostics
- ALPHA meter energy measurement technology
- Four fully programmable relays (for alarm, load control, TrueQ tests, pulse or rate indication)
- Wide operating voltage range, 49 V to 528 V
- Up to 8 channels of load profile data
- Up to 32 channels of instrumentation profiling data
- Standard ½ MB extended memory

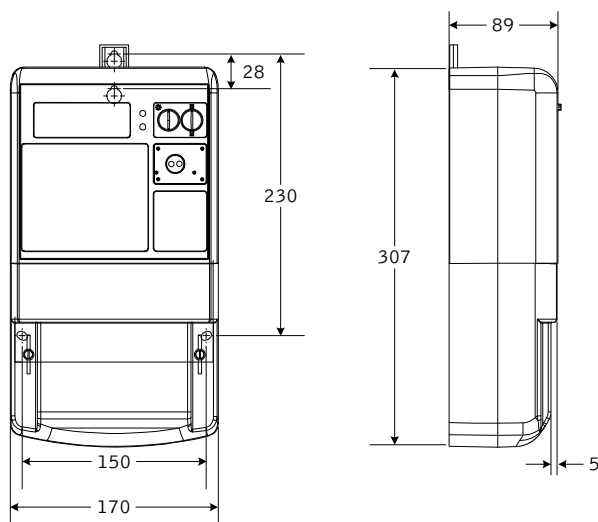
SCADA connectivity

- Modbus protocol support using RS-232 or RS-485 connection (or direct Ethernet 10Base T*)
- Additional independent serial connection ANSI C12.21 (RS-232/RS-485 combo port)



Built on the patented strengths of the ALPHA, the A1882 ALPHA meter is a highly accurate, robust, system-ready meter. All the important substation metering features are included at an economical price – without the expensive bells and whistles.

Accuracy	Active energy	Reactive energy
	0.2 % (IEC 62053-22)	2.0 % (IEC62053-23) Actual accuracy is better than 0.5 %
Maximum current	Continuous at 10 A Temporary (0.5 second) at 2000 % of maximum meter current	
Current range	0 A to 10 A	
Starting current	CT-connected: 1 mA	
Maximum voltage	Continuous 528 VAC	
Voltage range	Nominal range	Operating range
	58 V to 415 V	46 V to 528 V
Frequency	Nominal 50 Hz or 60 Hz \pm 5 %	
Temperature range	-40 °C to +85 °C inside meter cover	
	-40 °C to +60 °C outside	
Humidity range	0 % to 100 % noncondensing	
Power supply burden	Less than 3 W	
Surge voltage withstand	Test performed	Results
	Oscillatory (IEC 61000-4-12)	2.5 kV, 60 sec
	Fast transient (IEC 61000-4-4)	4 kV
	Impulse voltage test (IEC 60060-1)	12 kV @ 1.2/50 μ s, \geq 450 Ω (8 kV with option boards)
	AC Voltage (Insulation) test	4kV, 50 Hz for 1 minute
Creep 0.000 A (no current)	No more than 1 pulse per quantity, conforming to IEC 62053 requirements	
Internal clock accuracy	Better than 0.5 seconds/day (while powered)	
Communications		
Optical port	1200 bps to 28,800 bps	Physical components meet IEC 62056-21 or ANSI C12.18
Optical port protocol	ANSI C12.18 and C12.19	
Serial ports	1200 bps to 19,200 bps	
	Modbus (first serial port protocol)	
	ANSI C12.21 and C12.19 (second serial port protocol)	



Dimensions listed are approximate.

About Elster Group

Elster Group is the world's leading manufacturer and supplier of highly accurate, high quality, integrated metering and utilization solutions to the gas, electricity, and water industries. In addition, through its subsidiary Ipsen International, it is the leading global manufacturer of high-level thermo-chemical treatment equipment.

The group has over 8,500 staff and operations in 38 countries, focused in North and South America, Europe, and Asia. Elster's high quality products and systems reflect the wealth of knowledge and experience gained from over 170 years of dedication to measuring energy and scarce natural resources.

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