

A1200 ALPHA® Meter



Building on the ALPHA Tradition

Elster Electricity's A1200 ALPHA meter builds on the A1000 ALPHA platform by offering an integrated real time clock, current transformer connection, and RS-232 or RS-485 communication. All of these features make the A1200 ALPHA meter a cost-effective choice for 3-phase commercial and light industrial applications.

Energy, Maximum Demand, and Time-of-Use

- Records up to 4 energy tariffs with 3 day types and 8 seasons
- Economically measures active (kWh) and reactive (kVARh) or apparent (kVAh) energy in as many as four tariffs
- Records kWh over a certain kW threshold in a separate register with the A1200 ALPHA meter's optional overload energy registration feature
- Measures kW, kVAR, or kVA demand, depending on the meter's configuration
- Measures maximum demand for kW, kVAR, or kVA (arithmetic or vectorial)

Security Features

- Total operation time register
- Phase absent elapsed timer
- Reverse energy flow detection
- Service error registers
- Optional hardware lock which protects the meter from unauthorized configuration changes
- Meter can be ordered with theft-resistant measurement of kWh or kVARh which measures negative energy flow on any phase as positive flow
- Optional daily verification of proper meter connections provides ongoing tamper detection

Installation and Instrumentation

- Installation tools help to ensure proper connections that reduce installation and maintenance labor
- Instrumentation tools display instantaneous per phase values of voltage, current, system kW, kVAR, and kVA (delivered and received)

Interfaces

- One pulse output for kWh
- Option for second pulse output on any configured meter quantity, including bidirectional kWh
- Optical port complies with IEC 61107
- Optional RS-232 port complies with IEC 61107
- Optional RS-485 port complies with IEC 61107

Wide Current and Voltage Range

Like the A1000 ALPHA, the A1200 ALPHA meter can be used for various current and voltage ratings, significantly reducing your inventory cost. The A1200 ALPHA meter will accurately meter at system voltages from 100 V line-to-neutral through 415 V line-to-line. Direct connected (to 100 A) and CT-connected (to 10 A) system connections are supported.

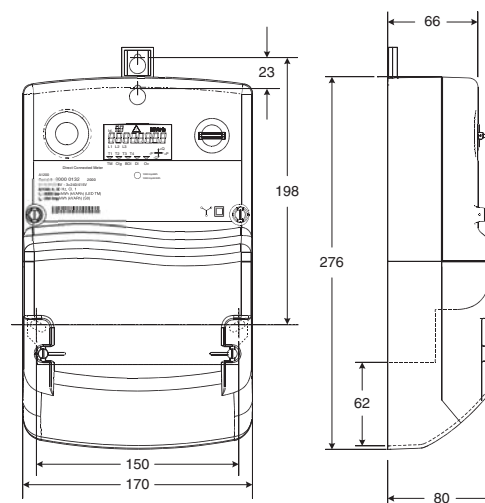
Discover the value of the diamond

ELSTER 

Accuracy	Class 0.5S (IEC 60687)	Class 1.0 or 2.0 (IEC 61036)
Maximum current	DC ¹ : 100 A continuous	CT ¹ : 10 A continuous
Current ranges	DC ¹ : 5/40 A; 5/60 A; 5/80 A; 5/100 A; 10/40 A; 10/60 A; 10/80 A; 10/100 A	CT ¹ : /1 /5 (6) A (Class 1.0) /5 (6) A (Class 0.5) (10 A continuous)
Starting current	DC ¹ : < 40 mA for meters with I _b = 5 A (Class 1.0) DC ¹ : < 50 mA for meters with I _b = 5 A (Class 2.0)	CT ¹ : < 2 mA (Class 1.0 and 0.5S) CT ¹ : < 3 mA (Class 2.0)
Maximum continuous voltage	3-element: 500 VAC (line-to-line); 288 VAC (line-to-neutral) 2-element: 288 VAC	
Operating voltage range		
3-phase, 3-wire service	3 × 100 to 240 VAC ± 20 % L1-to-L2 or L3-to-L2, delta or network	
3-phase, 4-wire service	3 × 120/208 VAC to 3 × 240/415 VAC ± 20 % wye	
Frequency	50 Hz or 60 Hz ± 5 %	
I/O		
Standard LED pulse output	DC ¹ : 1,000 pulses/kWh(kVAh)(kVARh)	CT ¹ : 5,000 pulses/kWh(kVAh)(kVARh)
Relay output	DC ¹ : 500 pulses/kWh(kVAh)(kVARh)	CT ¹ : 5,000 pulses/kWh(kVAh)(kVARh)
	T _i = 40 ms; V < 27 VDC, IEC 62053-31	T _i = 40 ms; V < 27 VDC, IEC 62053-31
Tariff inputs	Nominal line voltage	
Optical port	4800 bps (nominal) IEC 61107 compliant	
RS-232/RS-485	Configurable 300 bps to 9600 bps. IEC 61107 compliant, optionally suppressing the baud rate negotiation	
Accuracy of internal real time clock	Typically < 5 ppm while the meter is powered at 23 °C.	
Battery	LiSOCl ₂ battery rated 800 mAh, 3.6 V and shelf life of 20+ years. 5 years continuous duty at 25 °C	
Temperature range	-40 °C to +55 °C (ambient)	-40 °C to +85 °C (at electronics)
Power supply burden (multiphase)	< 2 W and 10 VA across voltage range	
Surge voltage withstand	Test performed	Test levels
	Disturbance voltage test (EFT fast transient)	2 kV with current 4 kV with no current
	Impulse dielectric test 1.2 x 50 μs waveform	12 kV, R _{source} ≥ 40 ohms ² ; 6 kV, R _{source} ≥ 2 ohms
	AC voltage dielectric test (1 minute)	4000 V at 50 Hz
Start up delay	< 5 seconds from power application to pulse accumulation	

¹DC: direct connected meter; CT: current transformer connected meter

²For the main terminals, tested per IEC 61036



Dimensions in millimeters. For reference only.



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