

Elster A3 ALPHA[®] meter with Sensus[®] FlexNet[™] SmartPoint[®] module



Advanced electricity metering

As a component of the Sensus FlexNet communications network, the A3 ALPHA brings advanced metering capabilities to commercial and industrial metering applications.

To function as a component of the FlexNet communications network, the A3 ALPHA meter is supplied with an internal SmartPoint module with two-way communications capability. The SmartPoint module mounts under the cover of the A3 ALPHA meter, allowing the network deployment to be as simple as installing a meter. No special equipment is necessary because the SmartPoint module automatically establishes the communication path to the Sensus Base Station.

The data you need

Utilities today rely on big data to help make intelligent decisions about their energy needs. Through features like the Enhanced Supervisory Message (ESM), meters can now collect four channels of load profile information (for example, kWh or kVARh) and up to six configurable snapshot registers delivering even more information. The SmartPoint module retrieves the data directly from the A3 ALPHA meter tables and transmits it over the FlexNet communications. The A3 ALPHA meter with the SmartPoint module can be configured to support the following:

- kWh, kVARh, and kVAh bidirectional energy
- demand
- time of use (TOU)
- power factor
- instrumentation values (such as per phase voltage)
- 4 channels load profile
- 6 snapshot registers

No guessing required

The A3 ALPHA meter features a wide range voltage input. The meter may be used with any distribution voltage from 120 V to 480 V. The installer always has the meter with the correct voltage rating. The wide voltage range feature detects and operates accurately on the voltage applied.

Available meter types

The Sensus SmartPoint module can be installed on an A3 ALPHA timekeeping meter (A3TL), an apparent power meter (A3KL), and a reactive meter (A3RL).

Available S-base form factors

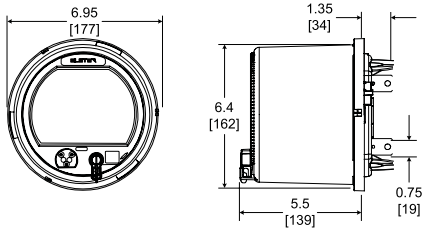
The Sensus SmartPoint module for the A3 ALPHA meter is available in the following form factors:

- Form 1S, Class 200
- Form 2S, Class 200 and Form 2SE, Class 320¹
- Form 3S
- Form 4S
- Form 9S
- Form 12S, Class 200 and Class 320¹
- Form 16S, Class 200 and Class 320¹
- Form 35S
- Form 36S
- Form 45S

Relay outputs

The A3 ALPHA meter with the SmartPoint module can support 2-relay or 4-relay outputs. As with the standard A3 ALPHA meter, the relays are fully programmable using Elster's meter support software.

¹ Class 320 meter not approved by Measurement Canada



Approximate dimensions in inches (millimeters)

Technical specifications

Maximum voltage	Continuous 528 VAC
Maximum current	Continuous at Class amperes; temporary (1 second) at 200 % of meter maximum current
Surge voltage withstand	ANSI C62.41 6 kV at 1.2/50 μ s, 10 strikes
	IEC 61000-4-4 4 kV, 2.5 kHz repetitive burst for 1 minute
	ANSI C12.1 insulation 2.5 kV, 60 Hz for 1 minute
Voltage range	Nameplate nominal range 120 V to 480 V
	Operating range 96 V to 528 V
Current range	0 to Class amperes
Frequency range	Nominal 50 Hz or 60 Hz \pm 5 %
Temperature range	-40 °C to +85 °C inside meter cover
Humidity range	0 % to 100 % noncondensing
Power supply burden	Less than 4 W
Per phase current burden	0.1 milliohms typical at 25 °C
Per phase voltage burden	0.008 W at 120 V; 0.03 W at 240 V; 0.04 W at 480 V
Accuracy	Meets ANSI C12.20 accuracy for accuracy Class 0.2 %
Starting current	Forms 1S and 3S 10 mA for Class 20 100 mA for Class 200 160 mA for Class 320
	All other forms 5 mA for Class 20 50 mA for Class 200 80 mA for Class 320
Primary time base	Power line frequency (50 Hz or 60 Hz) with selectable crystal oscillator
Secondary time base	Meets the ANSI limit of 0.02 % using the 32.768 kHz crystal. Initial performance is expected to be equal to or better than \pm 55 seconds per month at room temperature.
Outage carryover	6 hours at 25 °C. Super capacitor rated at 0.1 Farads, 5.5 V. Battery included on all but A3D meters for additional carryover.
Communications rates	Optical port: 300 bps to 28,800 bps
	Remote port: 1200 bps to 19,200 bps
ANSI standards	C12.1; C12.10; C12.18; C12.19; C12.20; C12.21

For more information about the FlexNet communications network, visit the Sensus Web site at www.sensus.com/flexnet



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