

E650 **S4e**

## Enhanced metering for Commercial and Industrial Applications

Built on the time-tested platform of the S4, the S4e extends the “build-a-meter concept” into the realm of open-architecture protocol, fully supporting the ANSI C12.18, C12.19, and C12.21 communication protocol standards.

### A changing meter for a changing market:

The S4e maintains its flexibility with a FLASH technology programmable microprocessor. Field re-programmability via the ANSI standard type II optical port preserves your investment with the evolving requirements of the ANSI protocol, and changing demands of the market.

The S4e incorporates 128k of on-board memory storage for load profile, self-reads, and event logs providing an easy upgrade path without the need for an additional option board. Load profile can be configured for up to 15 channels of information from a choice of 24 different storage metrics.

The build-a-meter concept provides modular growth in the S4e with software upgrades for time of use, reactive energy metering, transformer loss compensation, load profile as well as the flexibility of adding any combination of communication and relay option boards.

The S4e is an ‘AMI friendly’ meter with the largest space under the cover for AMI integration. A wide range of modular and integrated communication options are currently available, either factory installed or for retrofit. Technologies include power line carrier, mesh network, digital cellular, RS-232, RS-485 and the advanced modem.



### Load Profile

- 128K on-board option available
- Up to 15 channels from choice of 24 metrics available in S4e meter

### Key Benefits

- KYZ with Programmable Pulse Output Value
- EOI
- Demand Threshold Alert
- Voltage Threshold Alert
- Diagnostics
- Load Control
- Up to two inputs from external devices
- Pulses input to load profile
- Activate real-time rate
- Optional transformer loss compensation
- AMI friendly

## Specifications

General Specifications	Active Energy “kWh-kW” and optional Reactive kVAh-kVA kVARh-kVAR	
	Digital Multiplication Measurement Technique	
	Non-Volatile Memory	
	Designed for 20+ years life	
	Meets ANSI standards for performance	
	Utilizes ANSI protocol (between meter and AMI device)	
	9-Digit LCD	
	Display scroll sequence programmable (factory or end user)	
Operating Temperature	-40C to +85C under cover	
Nominal Voltage	120–480V Auto Ranging Power Supply	
Operating Voltage	60% to 115% of Vn	
Frequency	50 or 60Hz ± 5%	
Humidity	Less than or equal to 95% relative humidity, non condensing	
Accuracy Class	Class 20, 120, 200 & 320 Meters ± 0.2%	
	Class 480 Meters and Forms 36S, 29S, 36A ± 0.5%	
	Exception: Form 29 and 36	
	Over Voltage Withstand	
	Temporary (.5 sec) 150% rated voltage	
	Continuous (5 hours) 120% rated voltage	
Starting Load (Watts)	Class 20	0.005 Amp (0.6W)
	Class 150	0.050 Amp (6.0W)
	Class 200	0.050 Amp (6.0W)
	Class 320	0.080 Amp (9.6W)
	Class 480	0.120 Amp (14.4W)
Available Forms	Self-Contained	S-Base – 2S, 12S, 14/15/16S, 25S, 1S, 2SE, 12SE, 14SE/15SE/16SE, 25SE
		K-Base – 12K, 16K/15K, 27K
		A-Base – 16A
	Transformer Rated	S-Base – 3S, 4S, 9S/8S, 45S, 36S, 29S, 56S
A-Base – 10A/8A, 45A, 36A		
Applicable Standards	ANSI C12.1 for electric meters	
	ANSI C12.10 for physical aspects of watt hour meters	
	ANSI C12.20 for electricity meters, 0.2 and 0.5 accuracy classes	
	CAN3-C12-M84 Canadian Specs for approval of electrical meters	
	CAN3-Z234.4-79 Canadian Specs for all numeric dates and times	
Voltage Burden	≤ 2.5W	

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