

# E850 MAXsys Elite

## Grid Metering for Today Built on a Solid Foundation of Proven Technology

The MAXsys Elite Power and Energy Revenue Meter is designed to provide unparalleled flexibility in meeting the dynamic requirements of high-end, precision metering used for Generation, Transmission and Industrial applications.

The Elite meter is designed around the most time-proven metering platform in its class, the highly successful MAXsys 2510 and the Quad 4+ metering platforms. While originating from a rich energy metering history, the Elite meter has evolved into an intelligent, multi-faceted device loaded with new enhancements in the areas of power quality, communications, customization and ease of use.

## Advanced Power Quality

The Elite's advanced power quality features enable the utility to collect more power quality information at the point of delivery and provide that information to the end customer. The meter features waveform capture, individual harmonic capture, multiple levels of sags and swells, site diagnostics and much more. These new tools allow the utility to monitor their own service, improve the class of service provided to the end customer, and provide notifications of PQ events to the utility and directly to the end customer. Sharing power quality data is simplified with the addition of a PQDIF file format export feature.

## Versatile Communications

In order to address the sophisticated demands of today's "smart grid" environment, a grid meter must be versatile in its ability to distribute information and communicate to other intelligent devices. Elite meters support two industry standard protocols simultaneously from the same meter: DNP 3.0 level 2 and Modbus RTU. The Elite features a total of eight high speed communications ports. An Ethernet port under glass, internal 56K modem, and peer to peer communication using a 20 mA current loop round out the Elite's extensive communications options.

## Flexible, Yet Easy to Use

The Elite allows you to customize each meter to fit the exact needs of your end customers by providing soft key upgrade functionality. Soft keys provide flexibility to enable or disable functionality in the meter, including only those features desired for a specific application. The Elite meter is also designed for very easy set up without compromising flexibility. The large graphical LCD and front panel navigation allow the user to diagnose wiring and service issues from the front panel display.



## Optional Features:

- Internal 56K baud modems
- 8 auxiliary inputs available
- An additional 8 KYZ outputs are available (for total of 12)
- On-board SCADA protocols (assign to any communication port)
- Up to eight independent Analog Output channels are available
- Instrument transformer (IT) corrections
- IIRIG-B port for GPS time synch
- Ethernet port under glass
- Advanced Power Quality features
- Real time peer to peer communications
- Dual 16 channel data recorders

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**Specifications**

Accuracy	Class 0.2%, ANSI C12.20
Communications	Two RS232 ports and two RS232/RS485 software configurable ports (Up to 115K baud). Optical port, 20mA current loop port for peer to peer communications, internal modem (56K or 1200 baud), Ethernet port under glass, and IRIG-B port for GPS time synchronization
Communications Protocols	Proprietary Type 7, DNP 3.0 level 2, Modbus
Burden	<b>Current Circuit Burden:</b> Less than 0.015 VA at test current <b>Voltage Circuit Burden:</b> Meter electronics less than 10VA max on one phase or aux power input. Less than 0.18VA per phase; 6VA aux power burden (for display); 7.2VA when charging battery
Power Supply	<b>Low Range</b> —AC line from 40 to 160 Vac; Aux power DC voltage from 40 to 160 Vdc <b>High Range</b> —AC line from 85 to 330 Vac; Aux power DC voltage from 90 to 300 Vdc
Frequency	60 Hz operation; optional 50 Hz
ANSI Forms	Socket base forms: 9/8, 35, 36, 26, and 10; Short switchboard style meters are available in 3 element configurations only (type 9)
Current Class	20 (5A), 10 (5A), and 2 (1A)
Starting Load	0.002 amps for class 20 meters; 0.001 amps for class 10 meters; 0.00025 amps for class 2 meters
Operating Temperature	Temperature Coefficient: +/-25ppm per C° Temperature Range: -40 to +85 C° (-40 to +185 F°) inside meter; LCD operational from -20 to +70 C° (-4 to +158 F°)
Relative Humidity Range	≤95% relative humidity, non-condensing
Time Base	Synchronized to 60Hz line frequency in U.S., stable to +/-0.002% per month to insure +/- 1 minute per month accuracy. Crystal time base is accurate to ±1 minute/year from 0 to 40°C and ±4 minutes/year from -40 to +85°C. GPS time synchronization is also available through an IRIG-B port
Graphical Display	320x240 graphical LCD module; Viewing area 78.78 x 59.58mm; operating temperature: -20 to +70 C°; Graphical representations of power quality data, vector diagrams, communication ports and various other information is available on the graphical display
Outputs	Up to (12) form C solid state outputs; 200VAC or DC; 100mA
Inputs	(8) opto isolated form A auxiliary (status/pulse) inputs; 10-15VDC
Massive Memory	512KB storage for each (2) load profile recorder; 28MB available for PQ event storage; 4 MB of SRAM

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