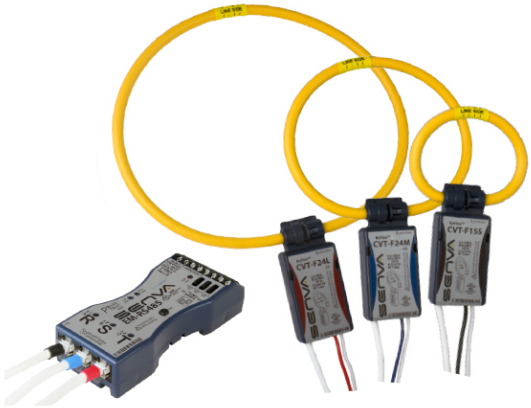
EM-RS485 Series

Multi-channel Energy Meters

Note: CVTs are sold separately

ANSI C12.20 0.2% Meter Accuracy
BACnet & Modbus
Auto enrolls on network
Flexible Split-core Rogowski CVT™ Sensors
Monitor loads from 30-6000A & 90-600V



DESCRIPTION

The EM Series is the safest and fastest meter to install on the market. The unique design makes the meter entirely low-voltage. Ideal for retrofits as the high-voltage components are embedded in the Current/Voltage Transducer (CVT). Experience high-accuracy data-rich power metering in a compact, easy-to-use package. Meter recognizes CVTs automatically, eliminating time-consuming scaling. Each CVT uses digital communication with the meter for superior noise immunity The CVT are individually calibrated and can be mixed or matched as independent meter channels--1% total accuracy! Features both Modbus and self-configuring plug-and-play BACnet MS/TP for seamless integration.

APPLICATIONS

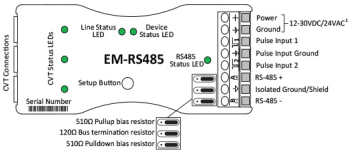
- Energy Management & performance contracting
- Monitoring for commercial tenants
- Activity-based costing in commercial & industrial facilities
- Real-time power monitoring & load shedding
- Audits/temporary monitoring
- Distributed generation
- Great for data center automation power meter



Flexible split-core CVT sensors are easy to install with plug and play high accuracy



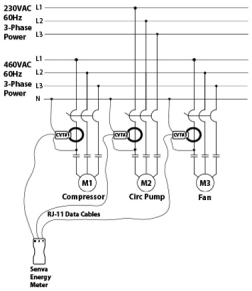
Super compact, low voltage meter base fits in or outside panel. Screw, DIN, and magnetic mounting.



Typical connections - accepts additional pulse inputs!



Fusing is NOT required for most applications



Monitor different voltages and currents with a single meter! Ideal for HVAC equipment.



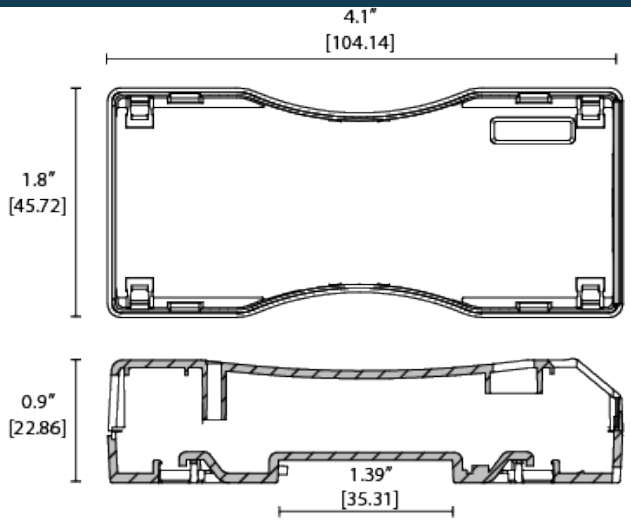
The safest/fastest meter install on the market

FEATURES

- Split-core Rogowski CVT™ senses both voltage and current, communicating with the meter through a low voltage data cable
- Easy to install Rogowski CVT™ is lightweight and compact
- True 3 channel meter--mix and match different voltages and currents per phase on HVAC equipment
- EM-RS485 self-configures baud rate, serial formal, protocol type and address - eliminating additional configuration steps
- No scaling required--easy set up
- Meter base is entirely low voltage--locate external to panel if desired
- 2 pulse inputs can connect to a variety of pulse output meters (water, gas, steam, etc.)
- Versatile DIN, screw, and magnetic mount

ORDERING

DIMENSIONS



Warning: The datasheet is designed for reference only. Refer to installation instructions that accompany the product and heed all safety instructions. Product improvement is a continuing process at Senva. Changes may occur to products without prior notice.

SPECIFICATIONS

Power Supply Input		12-30VDC/24VAC(1), 1.5W max, 100mA max.
Output	RS-485	2-wire, BACnet MS/TP, Modbus RTU, Modbus ASCII
	Baud Rates	9600, 19200, 38400, 57600, 76800, 115200
	RS-485 Loading	1/4 unit
Wiring Requirements	Conductor gauge	14-26 AWG
	Terminal torque rating	0.5 min, 0.6 max
Pulse Inputs	Dual Inputs	3.5 +/- 0.5 VDC, short circuit current is 10mA max
	Pulse Rate	50 Hz (default), configurable up to 500 Hz
	Pulse active	<100 ohms
	Pulse Undefined	100-1000 ohms
	Pulse Idle	>1000 ohms
Service Types	Configurations	1Ph, 2Ph, 3Ph Wye (4-Wire), 3Ph Delta (3-Wire)
	Voltages	90VL-N through 600VL-L
	Frequency	45-65 Hz
Performance	Meter Accuracy	0.2% (ANSI C12.20 Class 0.2 standards)
	System Accuracy	1% for V, A, kW, kVAR, kVA
Operating Environment	Temperature	-4 to 140F (-20 to 60C)
	Humidity	0-95% non-condensing
Dimensions	Meter	4.1”h x 1.8”w x 0.9”d
	CVT	3.5”h x 1.6”w x 0.8”d
	Material	Polycarbonate/ABS
Compliance	Agency	UL Listed, File E501430, RoHS
	USA	Meets ANSI C12.20 Class 0.2 Standards (Revenue Grade)
	State	Meets WA State Clean Building bill

Fusing is typically NOT required! Under UL 240.21, Senva CVTs may tap conductors without overcurrent protection under certain guidelines. Senva's unique architecture keeps the high voltage connections contained within the CVT enclosure and in consideration to the tap rule, Senva does not ship EM Series meters with more than 10 feet of voltage reference wire on any CVT. If your voltage reference must be longer than 20 feet, proper use of over current protection is required (i.e. appropriate fusing or circuit breakers)

** Product improvement is a continual process at Senva and product features and specification may change without prior notice. Refer to instructions that accompany the product for installation and wiring.*