

ControlLogixR

1756-RMS-SC

Power Monitoring Input Module



Extend the life of critical components within your manufacturing processes with our 1756-RMS-SC power monitoring input module. The RMS module simultaneously measures single-phase volts AC RMS and amps AC RMS and calculates real power, apparent power, reactive power, and leading or lagging power factor. When these modules are used as part of a system monitoring power consumption of dedicated equipment, your controller can respond in real time to power variances outside of your predetermined envelope of proper operation. The RMS module easily mounts into a standard ControlLogix® rack.

- Eight isolated input channel pairs; one current and one voltage.
- Easily configured using RSLogix software.
- Features 250 VAC channel-to-chassis ground isolation.
- Features 250 VAC channel pair to channel pair isolation
- Non-typical AC waveforms supported
- Minimal power consumption.

1756-RMS-SC

Specifications



Input Types	8-channels voltage and current. For each channel (inputs from CT dropping resistor and PT) the module provides real power, apparent power, reactive power, power factor, RMS voltage and RMS current.
Input Ranges	Voltage: Channel voltage provided by customer Potential Transformer Current: Current input is converted to voltage and provided by a load resistor across secondary of customer Current Transformer. Range 1 7.071 V peak Range 2 3.535 V peak Range 3 1.414 V peak Range 4 0.707 V peak
Resolution	16 bits
Accuracy (AC and DC)	0.25% of full scale typical at 25 °C, 0.5% full-scale maximum (AC: 47 to 63 Hz) Temperature coefficient: ± 50 ppm
Update Rate	C: 50 scans/second at 50 Hz; 60 scans/second at 60 Hz DC: Depends on RPI and filter constant.
Scaled Input Range	Scaled at PLC input (current and voltage)
Electrical Isolation	250 VAC channel-pair-to-channel-pair isolation; 250 VAC channel-to-chassis ground
Input Impedance (resistance)	40 M Ω , single-ended. Both channels share the same reference terminal, polarity must be observed when connecting the current channel
Over range detection	Protected to 50 VDC or 50 VAC continuous
Backplane Current Required	160 mA at 5 V maximum, 100 mA at 24 V maximum
Environmental Conditions	Operational Temperature 0 °C - 60 °C (32 °F - 140 °F) Storage Temperature -40 °C - 85 °C (-40 °F - 185 °F) Relative Humidity 5% - 95% (non-condensing)
Thermal Dissipation	4.0 Watts, maximum
Recommended Conductor Cable	Shielded, twisted-pair 22 to 14 AWG (2.0 mm) stranded maximum 3/64-inch (1.2 mm) insulation maximum
Conformal Coating	ANSI/ISA 71.04.2013 G3 Environment Standard
Certifications	UL/cUL Listed ANSI ISA 12.12.01 (Class I, Div 2, Groups ABCD), CE, UKCA, ATEX, CCC, CMIM