

# SensEnable™

## 56WM

WirelessHART™ Power Meter

## Monitor Electrical Equipment and Infrastructure That Was Previously Out of Reach



## Overview

Emerson's SensEnable 56WM powered by Smart Wireless is designed to monitor voltage, current, power, energy, and other electrical parameters on single and three phase electrical systems with revenue-grade accuracy.

The 56WM Wireless Power Meter provides continuous monitoring of energy data to avoid equipment downtime and increase efficiency.

## Primary Benefits

- Provide real-time energy consumption and demand data at the equipment level
- WirelessHART™ communication technology ensures highly secure and reliable data transmission
- Highly secure network communication via data encryption, critical key management, and end-to-end security features
- "Easy to install" design and mounting features support plug-and-play deployment in new or existing WirelessHART™ mesh networks.
- Diverse number of variables available to meet users' needs

## Benefits Detail

### Multiple Variables to Meet Users' Needs

- Single phase or 3-phase line voltage, current, and power factor
- kWh, kVAh, and KVARh to understand energy consumption
- Instantaneous and averaged variables

### Ease of Setup and Options Available

- Full range of UL 2808 listed current transformers (CTs) available
- Phase Check LEDs to ensure proper configuration
- Passively powered to eliminate unexpected power loss
- Compact design and DIN rail channel mounting

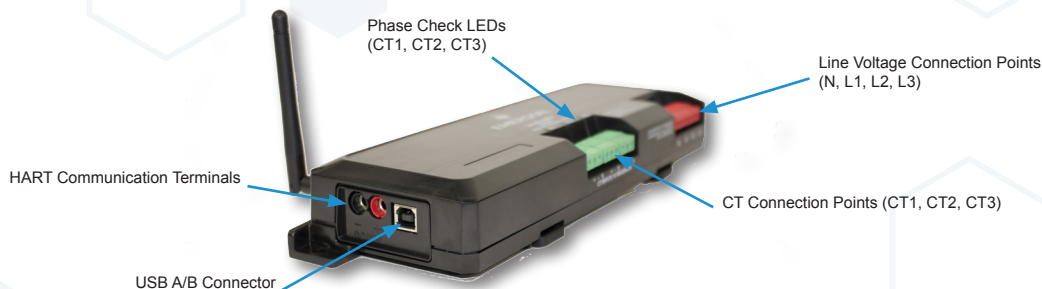
### Proven Reliability

- Designed using WirelessHART technology employed in tens of thousands of critical application networks exceeding four billion operating hours
- Self-organizing, self-healing, mesh network ensures optimized connectivity for 99.999% data reliability
- Superior interference tolerance obtained through Time Slotted Channel Hopping (TSCH) providing seamless coexistence with other wireless networks

### Secure Network Communications

- Always ON built-in AES 128-bit encryption for confident and secure data protection
- Data and Network Level Security provides critical key management, end-to-end security, and message based integrity checks
- Complies with the open WirelessHART (IEC 62591) International Standard providing connectivity options with existing WirelessHART sensors
- Simple Network ID and Join Key provisioning for rapid connection to the Gateway





## Device Specifications

Power Source	From L1 Phase to L2 Phase or USB
Connection Points	<ul style="list-style-type: none"> <li>• USB A/B Connector - Computer connection using a USB A/B cable</li> <li>• N, L1, L2, and L3 - Line voltage connection points</li> <li>• CT1, CT2, and CT3 - Current Transformers connection points</li> <li>• HART Communication Terminals</li> </ul>
Phase Check LEDs	<ul style="list-style-type: none"> <li>• LEDs CT1, CT2, and CT3 - Phase connection check and health of unit</li> </ul>
WirelessHART Mesh Features	<ul style="list-style-type: none"> <li>• Remotely adjustable reporting interval</li> <li>• Received Signal Strength Indication (RSSI) available for radio signal monitoring</li> <li>• Automatic self healing mesh network</li> <li>• Ease of adding and removing sensors</li> </ul>
Gateway	Any WirelessHART Gateway
Approximate Dimensions (L x W x H)	26.7 x 9.1 x 4.0 cm (10.5" x 3.6" x 1.6" in)
Operational Environment	Temperature: -20°C to +55°C [20°F to +131°F] / Humidity: 5% to 90% (non-condensing)
Regulatory	<ul style="list-style-type: none"> <li>• Compliant with FCC, UL Listed, and CE Mark</li> <li>• Conforms to UL Std. 61010-1</li> <li>• Certified to CSA Std C22.2 No. 61010-1, 3rd Edition</li> </ul>
Electrical Details	<ul style="list-style-type: none"> <li>• Service Type - Single Phase, 3 Phase-4 Wire (WYE), 3 Phase-3 Wire (Delta)</li> <li>• Voltage channels - 80-346 Volts AC Line-to-Neutral, 600V Line-to-Line, CAT III</li> <li>• Line frequency - 50/60 Hz.</li> </ul>
Measurement Details	<ul style="list-style-type: none"> <li>• Measurement type - True RMS using high-speed digital signal processing (DSP)</li> <li>• Measurement variables - Volts, Amps, kW, kWh, kVAR, kVARh, kVA, kVAh, Apparent Power Factor, Displacement Power Factor</li> <li>• Averaged variables - Volts, Amps, kW, kVA, kVAR, Apparent Power Factor, Displacement Power Factor</li> <li>• All parameters for each phase and system total</li> <li>• Resolution - 0.01 Amp, 0.1 Volt, 0.01 Watt, 0.01 VAR, 0.01 VA, 0.01 Power Factor depending on scalar setting</li> <li>• Accuracy - 0.2% (&lt;0.1% typical) ANSI C12 .20-2010 class 0.2</li> </ul>
Current Channels	3 channels, 0.52 VAC max, 333 mV CTs, 0-4000A
Waveform Frequency	12 kHz (200 Samples/60Hz, 240 Samples/50Hz)
Ingress Protection Rating	20
Enclosure	ABS Plastic, 94-VO Flammability Rating

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