



Distribution Grid Sensing and Monitoring for Low Voltage Applications

LineWatch L

For Low Voltage Applications

LineWatch[®] L provides real-time, near revenue-grade electric power distribution grid sensing and monitoring system for low voltage applications. Its robust and versatile design allows for installation in both overhead and underground locations and can support any communications network.

Market applications include:

Grid Automation: Remote monitoring and operation of utility infrastructure for more efficient grid management

Voltage and Power Measurements: Voltage, current, real and reactive power monitoring improves grid efficiency

Fault Detection and Outage Management: Identifies location of fault for quicker power restoration

Asset Management: Asset monitoring for improved management and allocation of capital

Theft Detection/Anomalous Usage: Energy balancing to identify, reduce and eliminate power theft

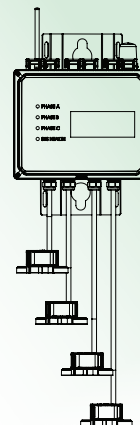
Green Energy/Renewables Integration: Distributed generation interconnection permitting and ongoing monitoring

Features

- Delivers near revenue-grade (0.5%) current and voltage accuracy
- User configurable alarms/events
- Integrated reporting tools
- Data storage up to 30 days
- Browser based user interface
- Simple installation; clamps fit a wide variety of conductors and bus bars
- Integrated voltage and current sensors
- Supports any utility communications platform

Benefits

- Improves grid awareness for better operational efficiencies
- Enables fault detection and location
- Facilitates energy balancing to identify and reduce power theft
- Reduces service interruptions



For Low Voltage Applications (up to 600 volts)

Technical Specifications

Sensing System Capabilities

Available Configurations	Single Phase 3 Wire or Three Phase 4 Wire
Electrical Frequency	50 and 60 Hz
Rated Voltage	120V (line-to-neutral) / 208V (line-to-line) to 347V (line-to-neutral) / 600V (line-to-line)
Voltage Accuracy	± 0.5%
Power & Energy Accuracy	± 1%
Power Factor Accuracy	± 24 arc minutes
Fault Detection	Waveform capture of faulted voltage, 4 cycles before fault, 28 after event starts
Reporting Interval	60 seconds
Rated Current	1200 Arms
Maximum Current	1400 Arms
Current Accuracy	± 0.5%
Power Quality	Computes amplitude of voltage/current up to the 13th harmonic; total harmonic distortion
Sampling Rate	4kHz
Data Storage	30 days of data; downloadable CSV or .XLSX file

LineWatch L tested to ANSI C12.20 Standard

Physical and Environmental

Weight	11.5 lbs.
Operating Temperature	-40°C to 50°C
Humidity	0 - 100% RH
Pad Mounted Transformer Bus Bar Dimensions	Thickness: Minimum of 0.25" / Maximum of 0.75" Width At Neck: Maximum of 2" Bushing Diameter: Maximum of 2.75"
Enclosure Dimensions	10" x 14" x 5" (W x H x D)
Storage Temperature	-40°C to 85°C
NEMA Rating	4X; 6 available upon request
Conductor Dimensions	Maximum conductor diameter of 1.625 inches Minimum conductor diameter of 0.375 inches

Communications and Security

	Wired Ethernet Port
	WiFi 802.11 b/g/n
Communication Options	Cellular Modem Communications Supports 4G LTE Networks and CDMA/GSM
	WiMAX via Ethernet/Serial Ports
	Serial Port for NIC integration
System Logs	30 days of storage of 1 minute intervals of measurement, system and status data
DNP3 Communications	DNP3 Level 4+ Subset Definitions
Communications Protocols	On demand reporting to a central monitoring or SCADA system compatible via DNP3 Support also includes TCP/IPv4/v6, UART, HTTP GET
LED Indicators	External visual indication of system health and phase outages

