VOLTSENSE™

Voltage Signature Sensor for Electric Power Distribution

Fast Fault Location, Analytics, and Power Quality Monitoring

Key Benefits

- *Fast **FD&L** for more rapid power restoration*
- ***FD&L** supports **Foliage Management** by adding fault prediction and pre-fault signature analysis*
- *Improved **CAIDI/SAIDI** performance metrics*
- ***Equipment Operation Confirmation:** Verify operation of Capacitor Switching*
- ***Power Quality Monitoring** enhances knowledge assuring proper field asset functionality*
- ***Distributed Energy Resource** Monitoring*
- ***Assessment of non-technical loss** supports theft detection and alerts responsible parties*

Affordable **Power Monitoring** Solutions

The TAV Networks VoltSense is a comprehensive hardware/software solution applicable to multiple use cases, where data is captured, sent to an Analytics Head-End and processed to support specific applications. These include fault detection and location, early detection of problems due to foliage incursion on powerlines, and power quality monitoring. Other applications are distributed energy asset monitoring and assessment of non-technical loss.

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VOLTSENSE™

Key Features

Easy and inexpensive installation

- Monitors and captures (1 to 3) 120/240VAC voltage waveforms
- Constant monitoring of configurable trigger events and transmission of event related data
- Transmits scheduled data health packet every 24 hours
- Transmission of an unscheduled data packet upon detection of a trigger event
- Retention of up to 300 cycles of data (5 seconds)
- Events can be voltage threshold or preprogrammed time values
- Data Logger Function: Pre and Post-Trigger data capture is configurable with a wide range
- Analytics head end software delivered either as a hosted web server, or as an in-house integrated solution

Product Specifications

Parameter	Parameter Value
Measurement Channels	Single Phase (3-wire) or Three Phase (4-wire); "Wye" / Delta
Line Voltage	120/240VAC
Protection	Line Isolation, MOV and 600V rated fuses
Data Sampling Rate	1 KHz per channel (approximately 16 samples per cycle for 60Hz)
Data Transmission	Scheduled transmission at 24 hr interval; unscheduled transmission following trigger event or in response to poll from Head End
Data Retention	Typically 5 seconds, including samples immediately preceding and Immediately following a trigger event or voltage sag
Trigger Event	Based on true RMS calculation over 50 milliseconds (3 cycles at 60 Hz)
Data Packet Contents: Default Configuration	ID, Time Stamp, Trigger RMS Voltage, Waveform Data, Battery Voltage, Enclosure temperature
Analytics Head End Software	User management, Notification, Alerts, Device Configuration and Health, Data Storage and Removal
Communication Backhaul	CDMA, LTE & Satellite
Ultra-Capacitor Battery Backup	5 to 15 minutes over operational temperature range
Battery Recharge	Typically 1 hr while system in operation
Dimensions	Size reduction currently in progress
Weight	8 lbs
Operating Temperature	-40 C to +85 C
Product Life Cycle	8 years

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