# LineTracker<sub>systems</sub>

**Pole Mounted Fault Monitoring Solution** 

- Reliable Fault Indication
- Time Stamped Fault Records
- Wireless Downloading
- Solar & Battery Powered
- Remote Notification

The self-powered LineTracker Pole Mount System (PMS) detects, classifies, logs and visually identifies faults on overhead distribution networks and assists electricity utilities with:

- Rapid line restoration through accurate fault detection indication
- Post event analysis with fault description and time stamp data reports
- Troubleshooting momentary interruptions, finding the cause of the fault
- Outage Management support with a real-time SCADA alarm interface
- Improvement of network reliability and power quality



# LineTrackersystems Pole Mounted Fault Monitoring Solution

The intelligent line fault indicator accurately detects, logs and visually indicates disturbances to the line crew for quick fault isolation and line restoration.

The LineTracker Pole Mounted System incorporates adaptive fault triggering algorithms that compare changes in both the electromagnetic and electric fields from the distribution line to accurately detect a variety of faults.

Under a faulted condition the PMS provides visual fault indication and logs the fault signature which includes event time stamping, fault ratios, protection activity, device and line status information. The fault history records are downloaded wirelessly on-site to assist in troubleshooting poor performing circuits by identifying the fault path and finding the cause of the fault.

#### System Architecture & Components

- 1. Sensing & Detection: Fault detection, logging and indication
- 2. On-site Wireless Communications:
  - a. LT30PMS, Infra-red handheld used to configure, download and view events.b. LT40PMS, LT-DataLINK radio transceiver used to configure and download events.
- **3. Remote Monitoring:** Fault contact relay output (RS232) for connection to a Remote Terminal Unit (RTU) or cellular modem.

#### 4. LineView Viewing and Analysis Software:

- a. LT30PMS, Export event data to excel for post event and analysis
- LT40PMS, LineView analysis software provides graphical and tabular viewing of LT40 download files.

### ECHNICAL SPECIFICATION

Network Installation	Overhead 3 Wire , single or 3 phase radial distribution lines
Line Voltage	Up to 69kV Phase-to-Phase
Fault Detection Range	Phase-Ground and Phase-Phase faults from 10amps to 25,000 amps
Fault Trigger Principle	Algorithms based on electromagnetic current and electric field ratios with adaptive sensing filters that auto adjust to the line signature (load and voltage history) with fault and inrush discrimination
Visual Indication Xenon Strobe Red LED Amber LED	Xenon Strobe, high intensity Red and Amber LED Permanent fault indication, flash every 4 (day) or 8 (night) seconds Transient & Self-Clearing fault indication, flash every 10 seconds Device & Line Status indication, flash every 30 seconds
Fault Indication Reset	On successful line restoration and / or timed reset programmable from 1 hour to 4 weeks
Event Record Data	Event Type (Permanent, Transient and Self-Clearing), date/time, fault ratios, duration, cycles to trip, number of trips, and device health data

	LT30PMS	LT40PMS
Event Log Memory (Total)	15 events	100+ events
Fault Events	10 events	50+ events
Outage Events	5 events	50+ events
Local On-Site Communications	Infra Red, range 35ft	Radio Frequency, range 150ft
Remote Communications	RS232 contact relay output	RS232 contact relay output
Fault Alarm	Contact Relay	Contact Relay
Health Check	N/A	Contact Relay
Energy Storage	1x2v 8Ah rechargeable Sealed Lead Acid Battery	2x2V 2.5Ah rechargeable Sealed Lead Acid Battery
Typical Battery Life	7 years	5 years

## **ENVIRONMENTA**

Power Source Operating Temperature Range Housing Material Dimensions Weight

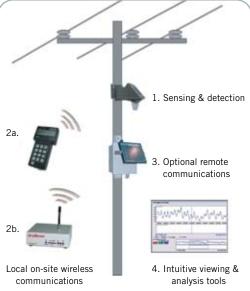


0.5W solar cell -20°C (-4°F) to +80°C (+176°F) Foam Luran S, IP68 weatherproof rating 280x200x240mm, 11"x8"x9" (LxWxH) 3kg (6.6lbs) shipped weight

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Device Configuration Screen

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