

BeamIt™ Fault Distance Monitor

Why pay for more than one installation per circuit?

Why hunt transformers?

The New Fault Distance Monitor Can Significantly Reduce Customer Minutes of Service Interruption Caused by Underground Cable Faults.

Don't get caught in the dark ages or with your lights out, when the latest technology is available today that saves time and money while increasing reliability.

- **High Tech at Low-Tech Price** – The latest technology industry has to offer is now available at prices that are very affordable.
- **Reduces Installation Costs** – One installation required for an entire circuit (loop or radial). **12 times faster** on average than outfitting circuits with FCIs.
- **Quicker Installation** – Larger number of circuits can be outfitted compared to FCIs.
- **Reduces Operating Costs** – Retrieve fault location information from single location, rather than hunting down transformers along a circuit path.
- **Reduces Inventory** – One size fits all. Fewer units need to be purchased and installed compared to FCIs.
- **Improve Power Quality** – Shorter outage time lowers standard outage indices and creates happier customers. A necessity for any rate increase consideration.
- **Locate Faults Faster** – Drive to normal open-point transformer, interrogate unit and plan switching. Perform switch and restore power. Up to **75% time and labor savings** can be realized, compared to other methods.



Figure 1. BeamIt™ Fault Distance Monitor

Standard Features

- **Information Concentration** – Go to single transformer to read fault location. No need to hunt down each transformer, or access multiple rear lots, buried transformers, etc.
- **Remote Interrogation** – Reading is performed without opening transformer, using wireless infrared interface with standard handheld device.
- **True Peer-To-Peer Network** – Simple peer-to-peer communications, no network infrastructure required.
- **Microprocessor Based System** – Smart system with communications interface. Readily adaptable to distribution automation equipment.
- **Virtually Independent of Fault Current** – One size fits all. Even works with very low fault currents.
- **No False Tripping** – In-rush restrain and capacitive discharge problems inherent to FCIs is eliminated.
- **No Reset Required** – Unit captures, time stamps, and stores data in memory queue. Another benefit to microprocessor based intelligent systems.

Overview

Remote Monitoring Systems, Inc. designs, manufactures, and markets a family of Fault Distance Monitors that fit your underground fault locating needs. Fault Distance Monitors combine advanced microprocessor based digital signal processing technology into affordable solutions.

A single Fault Distance Monitor is installed at the normal open-point of an underground residential distribution circuit. The single unit monitors the entire circuit from the normal open-point to the source fuse, eliminating the need to install FCIs in every transformer. Significant time and cost savings are achieved up front by having only a single installation. The savings continue through operations. Fault information is concentrated at a single location, eliminating the need to access every transformer. This significantly reduces the customer minutes of electrical service interruption, resulting in happier customers and improved reliability. The Fault Distance Monitor delivers up to 90% time savings during installation, 75% time savings during operation, and 40% material savings per.

The BeamIt™ Fault Distance Monitor is interrogated through a wireless infrared interface using a standard handheld device, such as a Palm Pilot. The handheld device is used to download fault information and display the distance to the fault. The reported fault distance is compared to your circuit map to plan switching operations.

Remote Monitoring Systems provides software for the handheld device used to interrogate the BeamIt™ Fault Distance Monitor. This simple to use software is operated by pointing the handheld device at the BeamIt™ Fault Distance Monitor's Infrared Interface, and pressing a single "Read" button. The fault information is automatically transferred, and the distance to the fault is displayed. Figure 2 illustrates interrogation of a BeamIt™ Fault Distance Monitor using a Palm Pilot, and Figure 3 illustrates the fault report it provides.

Configurations

BeamIt™ Fault Distance Monitor can be ordered with either one or two Voltage Probes. A unit with one Voltage Probe is used to monitor a complete radial-type circuit. A unit with two Voltage Probes is ideally suited for installation at a normal open-point, where the single unit monitors both halves of a loop-type circuit. BeamIt™ Fault Distance Monitors replace 12 or more FCIs, on average.



Figure 2. BeamIt™ Fault Distance Monitor Interrogation



Figure 3. BeamIt™ Fault Distance Monitor Report

Installation

BeamIt™ Fault Distance Monitors consist of three component parts; a Control Module, Voltage Probe(s), and an Infrared Interface Module. The Control Module can be mounted in any orientation, and is provided with convenient mounting ears. The Voltage Probe attaches to a test point elbow as shown in Figure 4. The Infrared Interface Module is attached to a Lexan plate that mounts in standard transformer knockouts. Figure 5 illustrates a standard Infrared Interface Module mounting.

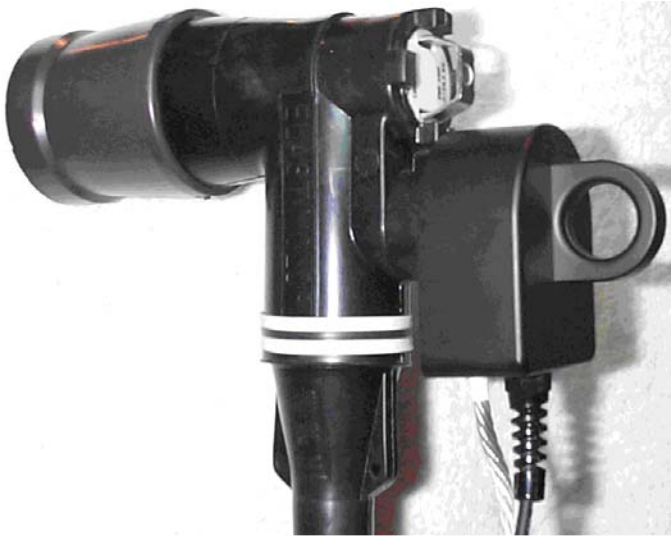


Figure 4. Voltage Probe Attached to Test-Point Elbow

Specifications

Operating Temperature	-40°C to +85°C
Power Requirements	120VAC, 60Hz
Backup Battery Type	Long-Life Lithium
Monitor Cable Lengths (each channel)	Up to 10,000 Ft (3048m)
Accuracy	+/- 2% Full Range
Elbow Ratings	200 Amp & 600 Amp @ 15, 25 & 35 KV Class

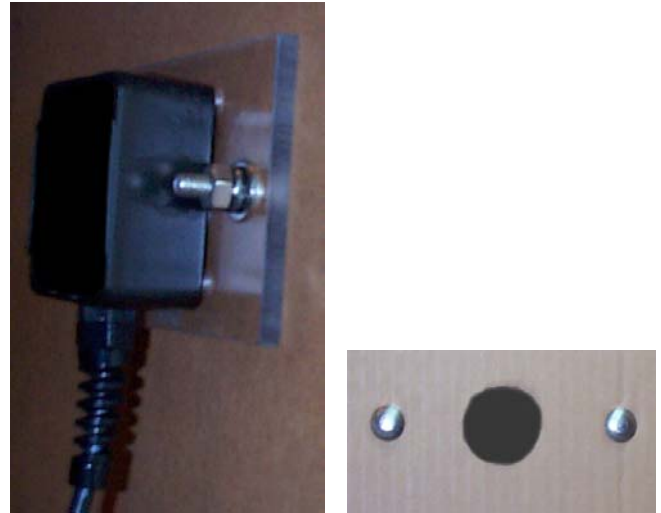
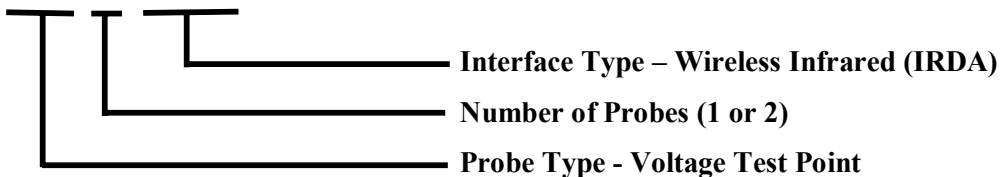


Figure 5. Infrared Interface Module Installed and Viewed from Inside and Outside of Field Equipment

Ordering Information

FDM-VTP2-IRDA



Available Part Numbers

FDM-VTP1-IRDA – BeamIt™ FDM with one Voltage Probe and Infrared Interface Module
FDM-VTP2-IRDA – BeamIt™ FDM with two Voltage Probes and Infrared Interface Module

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