

# PARTIAL HOME INSTALLATION INSTRUCTIONS

## INTRODUCTION

This manual describes how to install this Ground Fault Monitor (CurrentLeak™) in a single phase grounded service entrance combination panel. These instructions do not cover all details or variations of service entrances, if you require more information regarding a particular application that is not covered in this manual, please contact a licensed/qualified electrical contractor.

**WHEN INSTALLED ACCORDING TO THIS MANUAL**, this product will provide a visual display of the ground fault level in your electrical system. This product will not prevent ground faults from occurring or prevent electrical fires related to ground faults. In order to prevent electrical fires related to ground faults, it is the sole responsibility of the end user to ensure their electrical system is and remains free of all ground faults at all times.

**THIS PRODUCT WILL NOT** monitor and display ground fault levels in electrical systems that are not grounded and/or do not have grounded branch circuits and/or is not installed in accordance to the instructions in this manual. If you have questions or require assistance, contact a licensed/qualified electrical contractor.

**THIS MANUAL PROVIDES PROCEDURES** to isolate branch circuits that contain ground faults, a licensed/qualified electrician shall repair all ground faults.

## IMPORTANT !

**THIS PRODUCT SHALL BE INSTALLED** by a licensed/qualified electrician in accordance to the instructions in this manual, Canadian Electrical Code (CEC) or National Electrical Code (NEC) or other applicable county codes, and any applicable local codes. All applicable electrical codes supersede these instructions. If you have questions or require assistance, contact a licensed/qualified electrical contractor.

## ⚠ WARNING! SHOCK HAZARDS

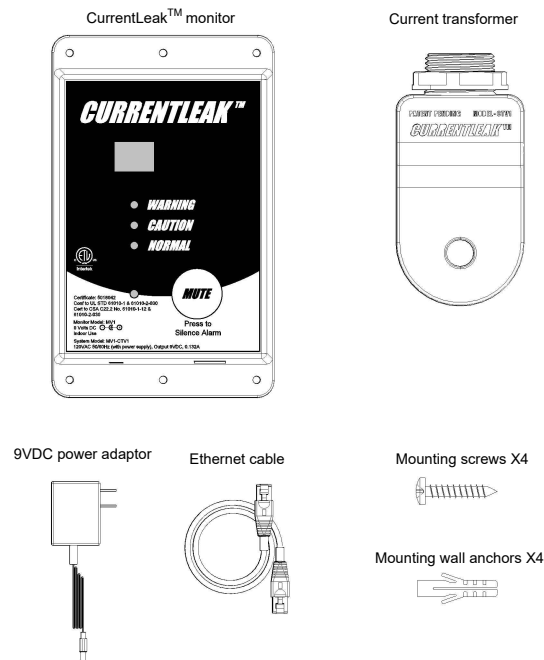
**Improper installation and/or wiring can cause death, injury and/or equipment damage.**

Follow warnings and cautions. Completely read and understand the information in this manual before attempting to install or operate this product. Only licensed/qualified electricians who are trained in the installation and service of electrical devices shall install and/or service this equipment.

## KEEP THESE INSTRUCTIONS FOR FUTURE USE



## PARTS DESCRIPTION



## SPECIFICATIONS

Model number	MV1	CTV1
Description	CurrentLeak monitor	Current transformer
Intended use	Indoor use, Max 400A service entrance panel	
Operating conditions	5-40°C, 80% max RH at 5-31°C, decreasing linearly to 50% max RH at 40°C	
Altitude	Max 2,000m	
Input supply voltage	120v, 60Hz	9vDC
Output Voltage	9VDC	N/A
Input current	0.132A	0-99mA
Max rated current	0.67A	70.995A
Dimensions	W x H x D (mm) W x H x D (in)	83.8 x 136.4 x 27.9 3.3 x 5.37 x 1.1
Certifications	Conf to UL STD 61010-1 & 61010-2-030 Cert to CSA C22.2 No.61010-1 & 61010-2-030	

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## WARRANTY AND EXCLUSIONS

Pivotal Product Developments Ltd warrants this product for a period of 1 year from the date of delivery to the purchaser to be free from defects in both workmanship and material. Pivotal Product Developments Ltd assumes no risk or liability for the results of the use of the product purchased from it, including but without limiting the generality of the foregoing: (1) The use in combination with any electrical or electronic components, circuits, systems, assemblies, or any other materials or substances; (2) Unsuitability of any product for use in any circuit or assembly. Purchaser's rights under the warranty shall consist solely of requiring Pivotal Product Developments Ltd to repair, or at Pivotal Product Developments Ltd's sole discretion, replace, free of charge, F.O.B factory, and defective items received at said factory within said term determined by Pivotal Product Developments Ltd to be defective. The giving of or failure to give any advice or recommendations by Pivotal Product Developments Ltd shall not constitute any warranty by or impose any liability upon Pivotal Product Developments Ltd.

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## RETURN POLICY

The purchaser may return the product in it's original packaging, prepaid, within thirty (30) days of the original purchase date for a full refund of the purchase price, not including freight or shipping charges that may have been paid by the purchaser as part of the original purchase. A copy of the original invoice must be included with the returned product. Pivotal Product Developments will promptly issue a refund providing that the product is not damaged or in non re-sellable condition. Pivotal Product Developments is under no obligation to provide a refund if it finds, at it's sole discretion, that the product is damaged or in non re-sellable condition.

Pivotal Product Developments Ltd.  
Att: Quality Assurance Department, 244 Brockport Drive, Unit 12 Toronto, Ontario M9W 6X9



**WARNING! SHOCK HAZARDS.** Turn off main breaker/fuse and test to ensure there is no voltage present before performing these installation steps. Only licensed/qualified electricians shall perform this installation in accordance to the instructions in this manual, Canadian Electrical Code (CEC) or National Electrical Code (NEC) or other applicable county codes, and any applicable local codes. All applicable electrical codes supersede these instructions.

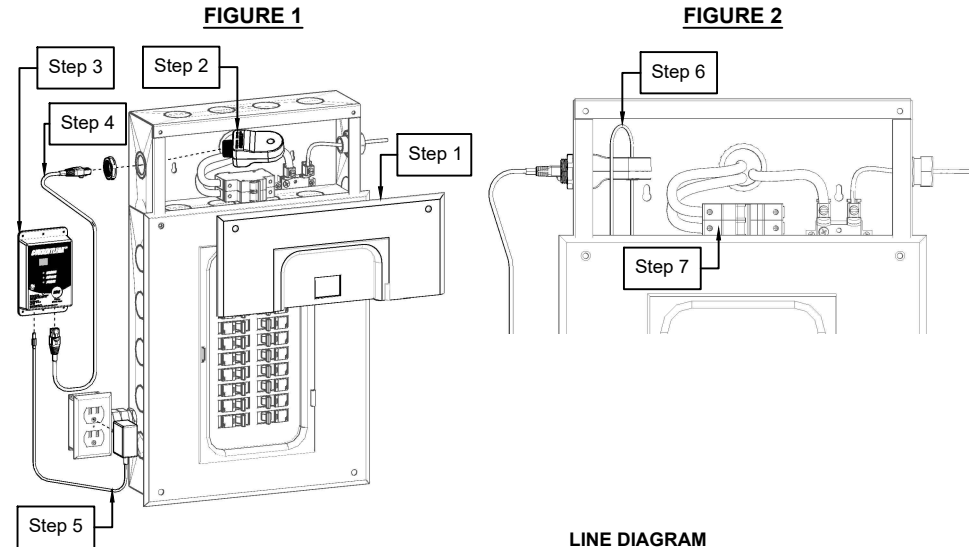
## INSTALLATION

### Refer to Figure 1

- 1) Turn off main breaker/fuse, remove panel cover and test to ensure no voltage is present.
- 2) Install the current transformer in a 3/4" panel knock out with the ethernet port located on the exterior of the electrical panel.
- 3) Fasten CurrentLeak™ monitor to wall within 18" of current transformer.
- 4) Connect ethernet cable to current transformer and CurrentLeak™ monitor ethernet ports.
- 5) Connect 9VDC power adaptor to CurrentLeak™ power port and a 120VAC wall outlet.

### Refer to Figure 2

- 6) Determine which circuits you would like to monitor, then route the ground cables from these circuits through the current transformer and terminate to the factory grounding terminals on the electrical panel.
- 7) Re-install panel cover and turn main breaker/fuse back on.



## OPERATION

CurrentLeak™ monitor will power up when the 9VDC power adaptor is connected and electricity is available.

### GREEN LED - Normal

A green light indicates that the ground fault level is 5mAmps or less. **NO ACTION REQUIRED.**

### YELLOW LED - Caution

A yellow light indicates that the ground fault level is between 6-30 mAmps. **REPAIRS BY AN ELECTRICAL CONTRACTOR ARE OPTIONAL.**

### RED LED - Warning

A red light indicates that the ground fault level is between 31-80 mAmps. **REPAIRS BY AN ELECTRICAL CONTRACTOR ARE RECOMMENDED.**

### MUTE BUTTON

Pushing the mute button will silence the audible signal.

Pushing the mute button again will un-silence the audible signal.

### AUDIBLE SIGNAL

The audible signal will sound when a ground fault level has exceeded and remains above 30mAmps for more than 2 minutes.

### LED SCREEN

- Numerical value indicates the ground fault level, displayed in mAmps.
- "CHK Cable" indicates that the ethernet cable between the current transformer and CurrentLeak™ monitor is disconnected.
- "M" indicates the audible signal has been silenced.
- "Danger" indicates that the ground fault level is 80 mAmps or greater. **REPAIRS BY AN ELECTRICAL CONTRACTOR ARE HIGHLY RECOMMENDED.**

## ISOLATING A GROUND FAULT

- 1) Turn off all the branch breakers/fuses except for the circuit which provides power to CurrentLeak™. The Green Normal LED should now be illuminated. If the Yellow Caution LED or Red Warning LED is illuminated, this indicates that the ground fault exists on the circuit that CurrentLeak™ is powered from. In this case, power CurrentLeak™ from an alternate circuit and repeat step one.
- 2) Turn on one breaker/fuse at a time, each time observing the Normal/Caution/Warning LED lights. The Normal/Caution/Warning LED's will illuminate when a ground fault, in accordance to the thresholds indicated above in the operation information, exists on the energized circuit. Note: The audible signal is time delayed for 2 minutes for intermittent ground faults and therefore should not be relied upon for isolating a ground fault.
- 3) Repair the ground fault, a licensed/qualified electrician shall repair all ground faults.

NOTE : More than one branch circuit may contain a ground fault, repeating these steps may be necessary.

### LINE DIAGRAM

