PROTECTION & RELIABILITY
OPTIMIZATION INSTRUMENTS
A CTC COMPANY

Product Manual

MNX10013 REV C

MODEL TM1018

Accelerometer Verification Meter

Contents

Section I
Overview

Introduction

This document contains information on the operation, installation and maintenance of accelerometers and hardware. This manual is an overview of the system and references the specific component manuals. User manuals are provided with the system for all configurable internal components.

Description

The TM1018 meter indicates if your accelerometer, cable and/or switch box is in working condition. It will also display the exact voltage of your accelerometer.

Section II
Installation

Connecting the TM1018

Your TM1018 Test Meter comes supplied with 3 cables for connection. Each cable has a BNC plug to connect to the top of the Test Meter. The other end of the cable terminates as follows:

- A 2 socket connector with a seal tight boot- Use this cable for connecting directly to your sensor or to the output of a CTC Switch Box (Model SB102 or SB202).
- A BNC plug - Use this connector when connecting to a CTC Junction or Cable Termination Box.
- Two tinned leads - Use this connector when connecting to a terminal strip on a CTC Junction Box.

Section III
Operation

Turning on the TM1018

Turn on the TM1018 Verification Meter by moving the switch to the 'I' position.

Circuit Integrity (LED Readout) – Diagnostic Check List

Normal:
Green Light

Indicates that the accelerometer is connected properly and that the accelerometer is within operating specifications. Typical voltage display will be between 4 and 16 volts. Operating voltage for most sensors is between 10-14 volts.

NOTE: A displayed voltage lower than 10 volts, but still displaying a Green Light, may mean that the sensor connectors have been exposed to water or other contaminents. Check the sensor connections.

Open Circuit:
Yellow Light

A) The cable connector is not connected properly
B) The cable is open circuit (cable is broken or not connected)
C) The accelerometer is non functioning properly
D) The polarity is reversed. Check your wiring in your junction box or the wire leads of the cable.
Typical voltage display for an open circuit will be above 16 volts.

Short Circuit:
Red Light

A) Wires in the switch box or cable connector are touching.
B) Contamination in the connector
Typical voltage for a short circuit will be below 4 volts.

Bias Voltage LCD Readout

The displayed readout is the exact bias voltage value that the accelerometer is using to operate. In the event that the LED lights indicate an open or short condition, the bias voltage may be useful in determining the failure mode.

CTC Technical Assistance will be able to use the information from the bias meter readout to provide failure mode indications. If the accelerometer is in suspect of proper operating condition, this portion of the meter may be used to track the bias voltage of the accelerometer over time. If the voltage is consistently rising or falling, this is the leading indicator of accelerometer failure and you should call CTC at 1-585-924-5900 for assistance.

Section IV
Maintenance

Battery Life

The TM1018 uses a standard 9 volt battery (Type IEC 6CR61) and is installed in the battery compartment in the bottom of the case.

Typical life for a fresh alkaline battery will be 90 hours with no sensor attached and 36 hours with a sensor attached.

The LED will display ‘LOBAT’ for a low battery warning and will operate for approximately 1 hour before the end of battery life.

General

Aside from battery replacement, there are no customer replaceable parts. The device should provide trouble-free continuous service under normal operating conditions.

Warranty

If any PRO product should ever fail, we will repair or replace it at no charge, as long as the product was not subjected to misuse, natural disasters, improper installation or modification which caused the defect.

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