VIBRATION ANALYSIS HARDWARE

TM1223 Accelerometer Verification Meter Product Manual

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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.

TM1223 Overview

The TM1223 meter will display the exact voltage of your accelerometer. This can be used to extrapolate whether your overall monitoring system is in working condition.

Installation

Connecting the TM1223

Your TM1223 Test Meter comes supplied with 3 cables for connection. Each cable has an F-type 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 with a 2 pin MIL connector.

F Connector B2A Connector

- A BNC plug - Use this connector when connecting to a CTC Junction or Cable Termination Box.

F Connector F Connector

- Two tinned leads - Use this connector when connecting to a terminal strip on a CTC Junction Box.

F Connector L Type Connector with shield drain wire exposed

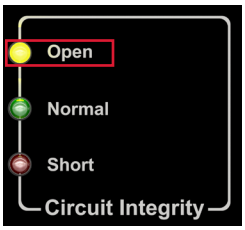
Operation

Turning on the TM1223

Turn on the TM1223 Verification Meter by moving the switch to the ON position.

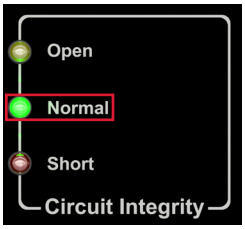
Circuit Integrity (LED Readout) – Diagnostic Check List

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 17 volts.

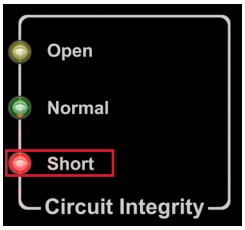
Normal:
Green Light



Indicates that the accelerometer is connected properly and that the accelerometer is within operating specifications. Typical voltage display will be between 3 and 17 volts. Operating voltage for most sensors is between 10-14 volts.

NOTE: If the unit is showing a green light but the displayed voltage is below the expected threshold, it may mean that the sensor connectors have been exposed to water or other contaminants. For CTC sensors, this threshold is 10 V. For sensors from other manufacturers, this threshold may be 8V and below. In this event, it is recommended to check the sensor connections.

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 3 volts.

Bias Voltage LCD Readout

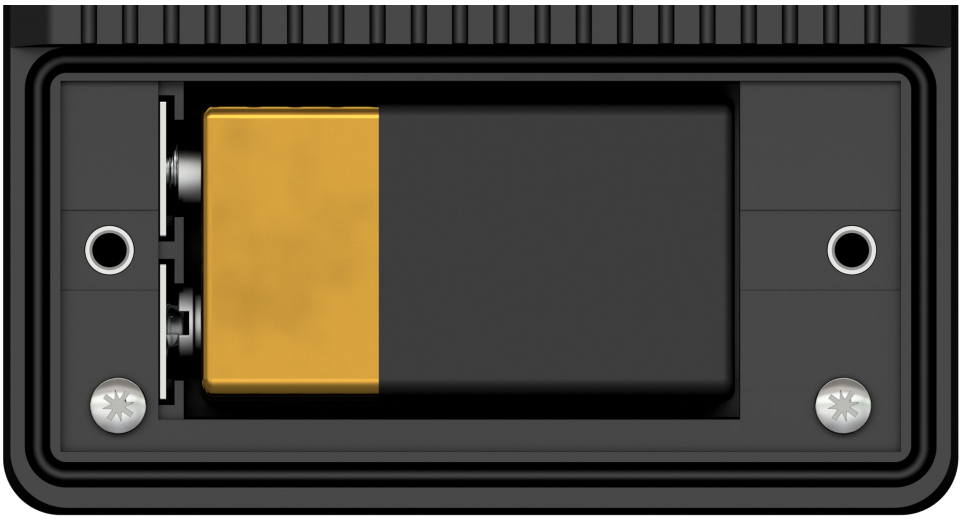
The displayed readout is the exact bias voltage value that the accelerometer is using to operate. In the event that the LED lights indicate an open or short condition, the bias voltage may be useful in determining the failure mode.

CTC Technical Assistance will be able to use the information from the bias meter readout to provide failure mode indications. If the accelerometer is 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 contact CTC for assistance.

Maintenance

Battery Life

The TM1223 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 27 hours with no sensor attached and 14 hours with a sensor attached.

General

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

Calibration

The TM1223 ships with a factory calibration certificate. CTC takes the time to perform an array of tests, including current supply, voltage supply, and voltage displayed before a meter may qualify for shipment. If you wish to send your TM1223 back for recalibration, please submit an RMA prior to returning it.

Warranty & Refund

Please visit www.ctconline.com to view a complete recapitulation of our warranty and refund policies.

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