TEST & MEASUREMENT PRODUCTS


# PS01A

## Accelerometer Verification Meter
## Product Manual

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# Introduction

This document contains information on the operation 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.

### PS01A Overview

The PS01A displays the DC bias voltage of the connected IEPE accelerometer. This reading is intended as a basic diagnostic of sensor power and wiring integrity and does not represent dynamic signal performance.

# Specifications

| Specifications | Standard | Metric |
|---|---|---|
| **Electrical** | | |
| Input | 9 V Battery | |
| Battery Life | 14 Hours* | |
| Input Connector | BNC Jack | |
| Sensor Supply Current | 2 mA | |
| **Environmental** | | |
| Temperature Range (Operating) | 14 °F to 130 °F | -10 °C to 54 °C |
| Temperature Range (Storage) | -4 °F to 140 °F | -20 °C to 60 °C |
| **Enclosure** | | |
| Dimensions | 6.44 x 3.27 x 1.51 in. | 164 x 83 x 39 mm |
| Weight (Battery Included) | 7.8 oz | 220 g |
| Enclosure Rating | IP40 | |
| **Voltage Indicators** | | |
| Green | 3-17 V - Normal | |
| Red | <3 V - Short | |
| Yellow | >17 V - Open | |

**Estimated battery life from an alkaline battery while a sensor is connected to the unit.*

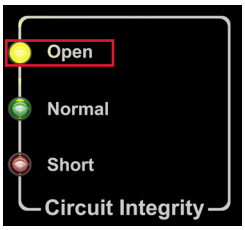
# Operation

### Turning on the PS01A

Turn on the PS01A Verification Meter by moving the switch to the ON position.

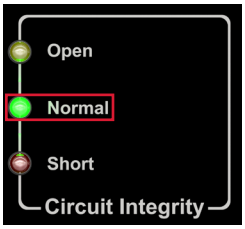

### Circuit Integrity (LED Readout) – Diagnostic Check List

**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.

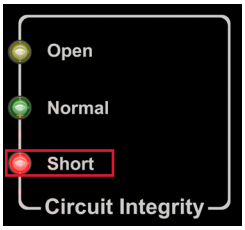
**Normal:**
**Green Light**




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**

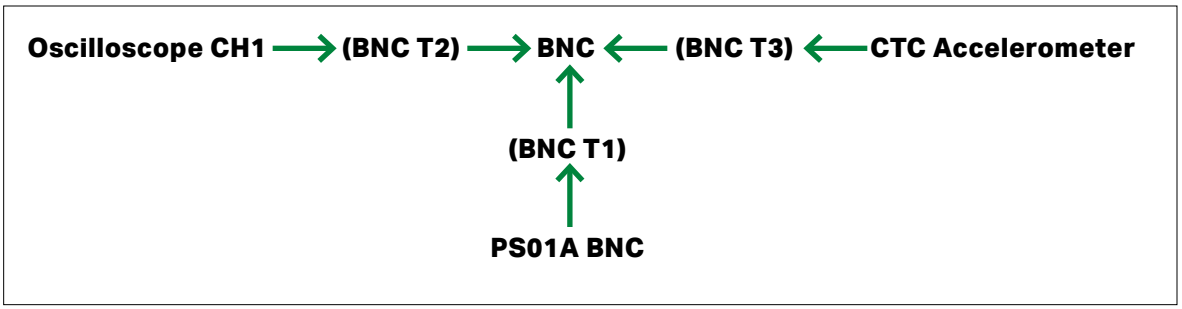



**A)** Wires in the switch box or cable connector are touching.
**B)** Contamination in the connector

Typical voltage for a short circuit will be below 3 volts.

### Power Supply Functionality

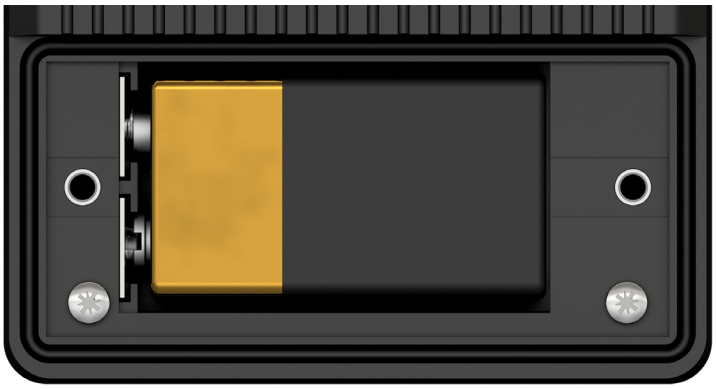
The PS01A provides a constant 2 mA current source to the connected accelerometer. Using a BNC 'T' adapter allows connection of external high-impedance monitoring equipment, such as an oscilloscope, to observe both the DC bias voltage and the AC signal output of the accelerometer. Any connected measurement device must be configured for high-impedance input to avoid loading the sensor.




## Maintenance

### Battery Life

The PS01A 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 PS01A is factory calibrated prior to shipment. This calibration verifies the supplied current, the maximum excitation voltage, and the accuracy of the displayed DC bias voltage using calibrated test equipment. If a new calibration is desired, please submit an RMA request prior to shipping the unit to CTC.

## Warranty & Refund

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

## Contact Information

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