

## CONTINUOUS MONITOR FOR WRIST STRAP ONLY Installation, Operation and Maintenance



Figure 1. 225215 Continuous Monitor .

### Description

The 225215 unit receives the dual-lead wrist strap and monitors its connection to the operator and to ground. The wrist strap is monitored continuously and will alarm if the resistance of the connection drifts outside the range specified in EN 61340-5-1.

Leading companies use continuous monitors as a cost effective component in satisfying some of the audit and check requirements of EN 61340-5-1. Wrist strap testing "Where continuous monitoring is used, no additional testing is required." (EN 61340-1, per A.5.2)

"The wrist band will normally be worn for several hours at a time so it needs to be comfortable while making good contact with the skin. It is a good idea to check the wrist strap every time it is applied. Constant on line monitors can be used to that any breaks will be immediately found." (EN 61340-5-2 section 5.2.7)

### Inspection

Remove the test unit from the carton and inspect for shipping damages.

Each 225215 unit should include the following:

- 1 Wrist Strap Monitor, item #225213
- 1 Power Supply
- 1 Fabric Dual Wrist Band
- 1 Dual Coiled Cord, 1.8m long

### Installation

1. This instrument is to be used as a grounding point for wrist straps and will provide a continuous test facility. Therefore, it should be positioned to allow ease of use for the operator.
2. Wire the instrument ground cord to the nearest reliable ground point or to an ESD earth facility. Should the cord be too long, it can be shortened and the spare M5 ring terminal can be crimped on to the new end.
3. Fix the instrument on the bench with the two self-tapping screws.
4. Connect the 12 volt power supply to power up the tester. The LEDs will light up in yellow.

### Procedure

1. Make sure the LED lights are yellow.
2. Adjust and wear the wrist band snugly around the wrist, connect to the coil cord and connect the cord to the monitor as shown in the above photo.
3. The left LED should change colour from yellow to green when connecting the coil cord thereby indicating that the monitor is functioning.
4. The right LED indicates the status of the operator to ground connection.
5. If green, the connection of the operator to ground is as specified in EN 61340-5
6. A red LED lights and a buzzer sounds if the resistance of the connection lies outside the range specified in the standard. In this case do not proceed in the usual manner but contact your supervisor or follow your company procedure.
7. To return the monitor to standby mode, unplug the cord.

## In case of non-conformance

The instrument measures the resistance of the external circuit between the metal contact button and the cord connectors or the foot test plates. The wristband and cord, the plates and the footwear, the connection to the operator, the operator's body resistance and the fingertip button contact are all part of the circuit. In case of a failure being indicated, determine whether the wrist strap or the footwear alone is failing by ensuring that the other elements of the circuit are sound.

## Calibration

All resistances are in-built using matched fixed resistors. They are measured using an ohmmeter, which is of known accuracy and standards used are traceable to UKAS. No variable resistors e.g. potentiometers are used. The resistances should nonetheless be re-checked once a year.

Use a calibration unit such as our product code 223002.

The potentiometers are accessible through the two holes on the left-hand side of the case. The upper hole allows the upper limit to be adjusted, the lower hole the lower limit. Follow the procedure described on TB-7543. Alternatively, we offer a calibration service.

## Specifications

### Resistance Limits

**Wrist straps:** Low Fail - 0.75M $\Omega$   
Low Pass - 0.85M $\Omega$   
High Pass - 33.3 M $\Omega$   
High Fail - 36.6M $\Omega$

**Accuracy**  $\pm 5\%$

**Weight** 0.1 kg excluding power supply

**Dimensions** 70 x 66 x 21 mm

**Power supply** external, 12 volt DC, >150mA

**Test voltage** 10V maximum

**Test current** <1mA

### Limited Warranty

Vermason expressly warrants that for a period of one (1) year from the date of purchase, Vermason Continuous Monitors For Wrist Strap Only will be free of defects in material (parts) and workmanship (labour). Within the warranty period, a unit will be tested, repaired or replaced at Vermason's option, free of charge. Call Customer Service at 0044 (0) 1462 672005 for a Return Material Authorisation (RMA) and for proper shipping instructions and address. Any unit under warranty should be shipped prepaid to the Vermason factory. You should include a copy of your original packing slip, invoice, or other proof of purchase date. Warranty repairs will take approximately two weeks.

If your unit is out of warranty, Vermason will quote repair charges necessary to bring your unit to factory standards. Call Customer Service at 0044 (0) 1462 672005 for a Return Material Authorisation (RMA) and proper shipping instructions and address.

### Warranty Exclusions

THE FOREGOING EXPRESS WARRANTY IS MADE IN LIEU OF ALL OTHER PRODUCT WARRANTIES, EXPRESSED AND IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH ARE SPECIFICALLY DISCLAIMED. The express warranty will not apply to defects or damage due to accidents, neglect, misuse, alterations, operator error, or failure to properly maintain, clean or repair products.

### Limit of liability

In no event will Vermason or any seller be responsible or liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability to use the product. Before using, users shall determine the suitability of the product for their intended use, and users assume all risk and liability whatsoever in connection therewith.