Static Solutions, Inc.

"Strategies, Solutions, Innovation"

GUARDIAN PRO ™ CM-1702 USER MANUAL

PRODUCT DESCRIPTION

The Guardian PRO is a dual channel continuous monitor for monitoring the path to ground of two operators wearing single wire wrist straps. When using the CM-1702 constant monitor, any breaking of the path of operator wearing a wrist strap to ground would be immediately known because of the blinking LED and buzzer.. The operator is always connected to ground even if the constant monitor is turned off. This means the CM-1702 equipment becomes a common point ground even when the CM-1702 monitor is turned off.

IMPORTANT

The Guardian PRO CM-1702 constant monitor must always be connected to ground.

INSTALLATION

1. Connect the CM-1702 to the earth (ground) or electrical (ground) of the building. The CM-1702 monitor comes with a grounding cord. One end is connected to the back of the monitor; and the other end is connected to the earth or electrical ground. (FIGURE 1.).
2. Connect the 9VDC power adaptor to the back of the CT-1702 constant monitor; the other end is connected to the external AC power supply (FIGURE 1.) connected to the building.
3. The monitor can be installed either on top or under the table or workstation. There are two holes in the equipment, just attach the monitor to the ESD workstation by using the screws which come with the equipment. Heavy duty two sided pressure sensitive tape or Velcro hook and loop can also be used to attach the monitor to the workstation...

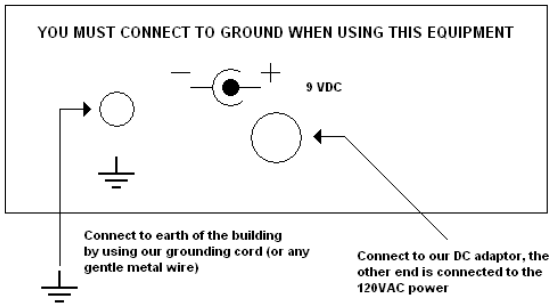

FIGURE 1.

OPERATION

When the path of the ground of either operator wearing a wrist strap is broken or the installed resistance of wrist strap is higher than preset value (This means the impedance of the user, wrist strap and ground is higher than the preset value), the green LED of the monitor will change from a constant green LED to a flashing red and piezo buzzer alarm.

SPECIFICATION

Power source: 9VDC adaptor.
Preset impedance: This equipment screw can be turned and adjusted to another capacitance value (FIGURE 2.) according to the weight or height of the user and the operation conditions.

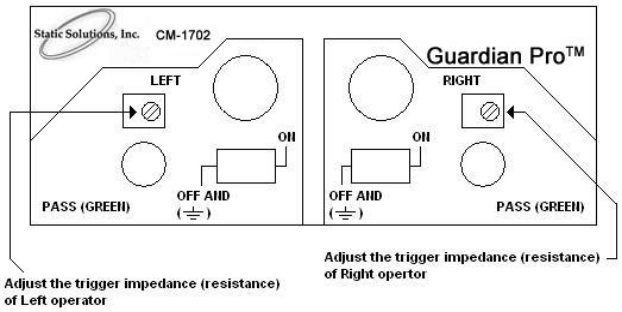

FIGURE 2.

ADJUSTMENT

A 5 Meg Ohm (original setting) was used as an adjustment in case the user's monitor is out of specification. To re-calibrate or check on the accuracy , connect a 5meg ohm resistor between the ground and banana jack for wrist strap, then turn the knob in Figure 2 until the LED **"JUST"** changes from flashing red to green or green to flashing red. A different resistance values may be used.

TROUBLE SHOOTING

The LED is always on in the flashing red LED state and alarms even the user (s) wear in specification wrist straps.

1. The wrist strap is broken in the coil cord.
2. The wristband on the operator is not in good contact with the skin of the user.
3. The equipment is not connected correctly to the earth or electrical ground.
4. The impedance setting is not adjusted correctly to the user due to the weight or height of the operator. To adjust the monitor to the operator turn the impedance setting pot inside the rectangular hole in the front panel (FIGURE 2.) in order to lower or increase the sensitivity.
5. The earth wire of the building is not connected to the earth correctly.

The LED is always on and in the green state even if the user is not wearing the wrist strap but has laid the wrist strap on the grounder ESD table mat or ESD work surface.

1. The sensitivity of the impedance is too low you .To correct turn the impedance setting pot inside the rectangular hole in the front panel (FIGURE 2.) to a higher sensitivity.

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