VMT

Load Cell Central Load Cell Moisture/Leakage Tester

Introduction

The VMT is a load cell insulation tester that is easy to use, accurate, and reliable for shop and field testing of load cells. The VMT is especially designed for strain gauge transducer testing and uses a safe test voltage that will not damage sensitive strain gauge or other electronic components. With regular use, this instrument will save you time and money by correctly finding problems right away.

For years of service, when storing, and in field service, keep the VMT away from direct contact with moisture, which could cause incorrect readings. Batteries should be replaced in 6 month intervals.

Before Using

The VMT is shipped from the factory, calibrated and ready to use. Install a fresh set of two (2) "C" type batteries (included). The VMT has a 20-1000 megohm test range, with test stages from the top to bottom labeled as "Short", "Caution", "Poor", "Fair", and "Good". There are two leads, one Red and one Black. Before use, press the test button with both leads hanging free. The "Power ON" LED, should be the only light on. In an area with heavy moisture in the air, the "1000" LED might light temporarily, this is normal. By touching both test clips to one hand, and pressing the "Press to Test" button, the LED tree should go all the way to "Short" and then back down to "Good" when removed.

Testing Load Cells

If the load cell is wired to a j-box or instrument/device, unhook. Attach one of the VMT leads (Red or Black) from the tester to any cable wire (not shield) and touch the remaining lead to a BARE METAL surface of the load cell. A reading of "700" to "400" is usable, and "300" to "20" is not good and would be the cause of drift, instability, and various calibration errors. A cell below "400" should be removed and repaired or replaced.

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Testing Load Cells and J-Box

If the load cells are summed in a j-box, always check the entire system first to determine if there is an insulation leakage. To do this, disconnect the home run cable (cable between the j-box and the indicator). It is very important that the leads do not touch the scale base or the ground as this could give a false reading. Clip the "Red" lead of the VMT to any lug or terminal of the j-box (not shielded) and clip the "Black" lead to an UNPAINTED metal surface of the j-box, and note the reading. Then, move the "Black" lead to the case of the load cell and frame of the scale, and note the reading. (Note: If the leads do not reach, use extension with an alligator clip.) A reading of "∞" to "1000" is "Good", "700" to "300" "Fair" is borderline usable, and "300" to "20" is "Poor" which could be the cause of the drift, instability, and various calibration errors. To locate the problem load cell, follow the procedure for "Testing Load Cells". If all of the load cells check out as usable, the problem could be in the j-box or home run cable.

Testing Cables

Disconnect and expose the conductors at both ends, making sure the ends of each are spread and have NO contact with another. **Check only one end of the cable.** Clip one lead of the tester to one lead and the second lead of the tester to each conductor. Continue and test every combination of pairs. (i.e. White and black, red and black, green and black, white and red, and so on) Note that the cable could be different colors from our example, such as blue, yellow, and brown, etc.

Questions? Call: 1-800-562-3235

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