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Universal Meter Test Socket Users Guide

This manual applies to the Microtex Electronics Mechanical Meter Upgrade Modules and the Sub-Meter Modules. Any variations due to local operating practices shall be addressed and defined in site-specific operational procedures.

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Introduction

The Universal Meter Test/Program Socket is designed to allow the user to power up and test or program any power meter regardless of the meter's internal configuration. The system can be powered from normal AC at the workbench or it can be powered by the 12-volt lighter socket in your work vehicle. The system has loading capability to allow you to test as well as program the meters you place in it. The Zero Insertion Force Socket makes use of this testing unit particularly easy without having to wrestle the meter in and out of the socket. Just set the meter into the socket and flip the lever up for a secure connection. Flip the lever down to lift the meter out of the socket .

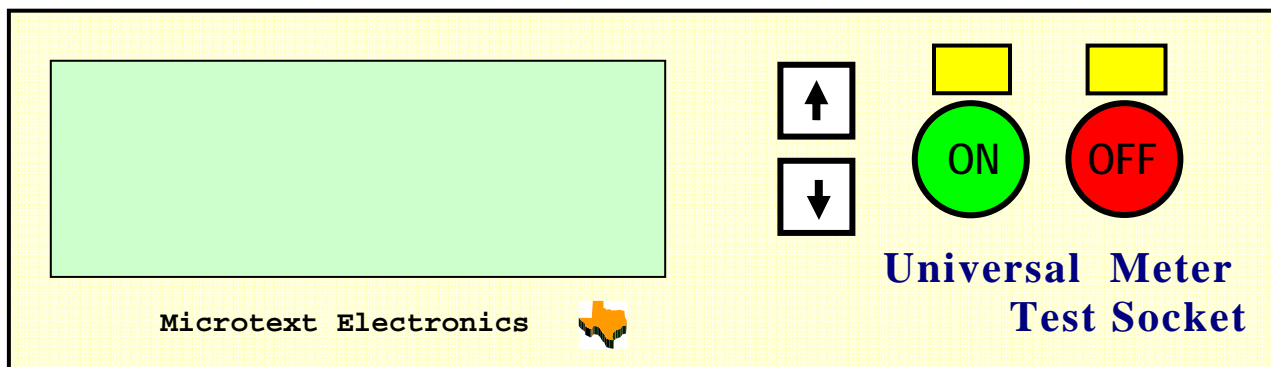
The Universal socket is also available with optional built-in safety interlock to prevent powering up exposed connections.



Figure 1. The Meter Test Unit

Control / Display Panel

The main control panel of the Universal Meter Test Socket contains four push button switches, four LEDs and a four line by twenty character backlit display. The two arrow buttons scroll up and down through the list of meter types. The on button supplies power to the appropriate contacts on the meter based **ON** the meter type selected. The **OFF** button disconnects power from the meter. The four LEDs (*two above the ON button and two above the OFF button*) indicate the power status.

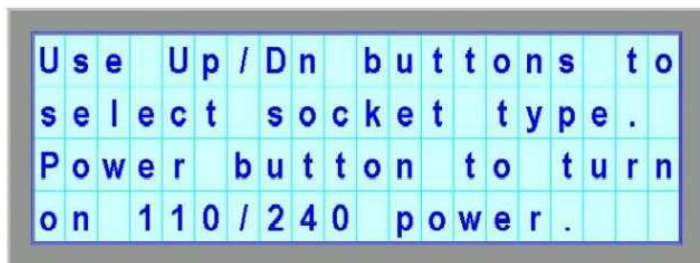


Control / Display Panel Initial Start-Up



Initial Power-Up Screen

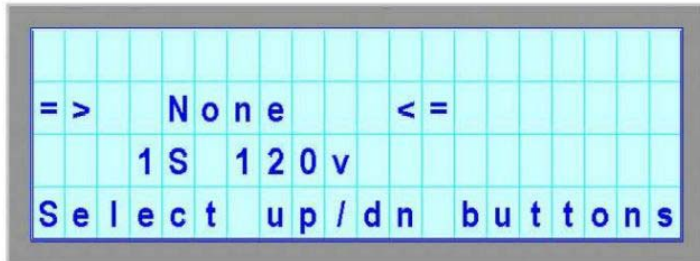
This is the Basic 20 X 4 LCD screen layout. When power is first applied to the test box the screen will display the Company ID / Title Information for about 5 seconds



General Instruction Screen

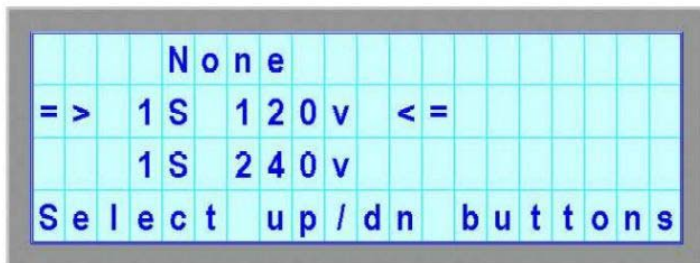
This instruction screen appears about 5 seconds after power is first applied. This screen will display the basic operating instructions until an up or down button is pushed.

Control / Display Panel Normal Operation



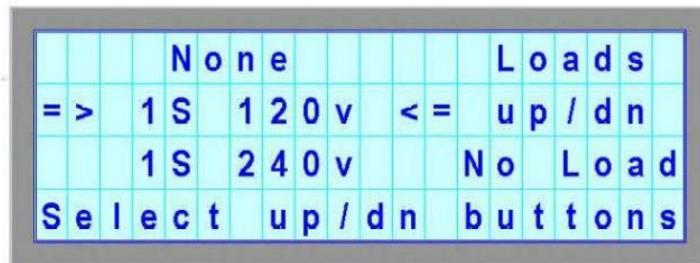
Initial Menu Display

When the Meter Type Selection Menu first comes up it show that no meter type is currently selected. You must select a meter type before turning on the power.



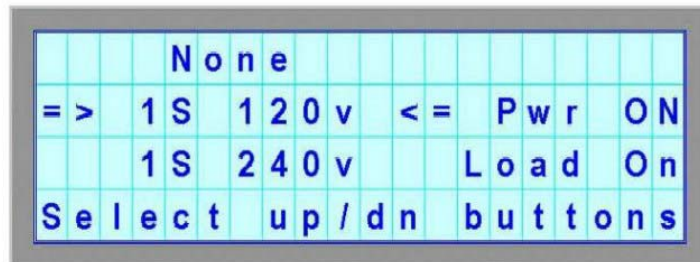
Meter Type Selection

Use the **up** and **down** arrows, scroll through the menu till you the type of meter you want to test is between the two indicators [=> <=]. Then press the **Power On** Button.



Load / No Load Selection

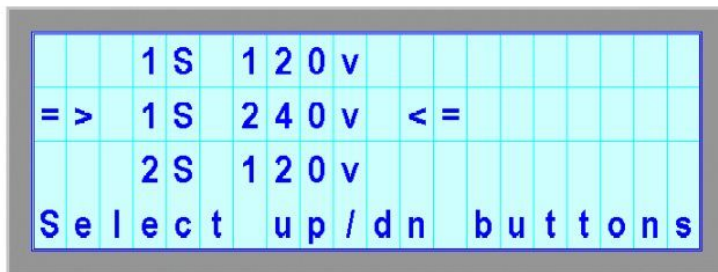
Any time the **Power On** button is pressed you are asked to select Load or No Load. Press the up arrow to apply a load to the meter. Press the down arrow to remove the load.



Power On Display

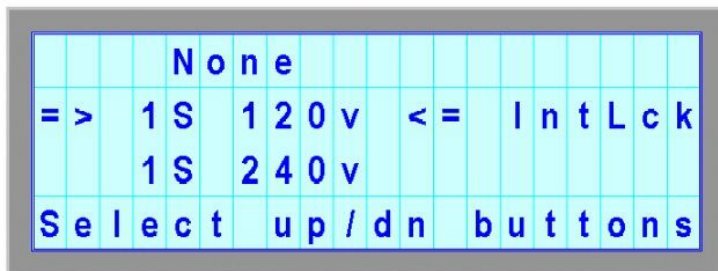
In normal powered operation the screen will display Pwr ON with Load or No Load below it. Pressing the **Power On** button allows you to change the Load condition.

Control / Display Panel Special Conditions



Auto Power Off

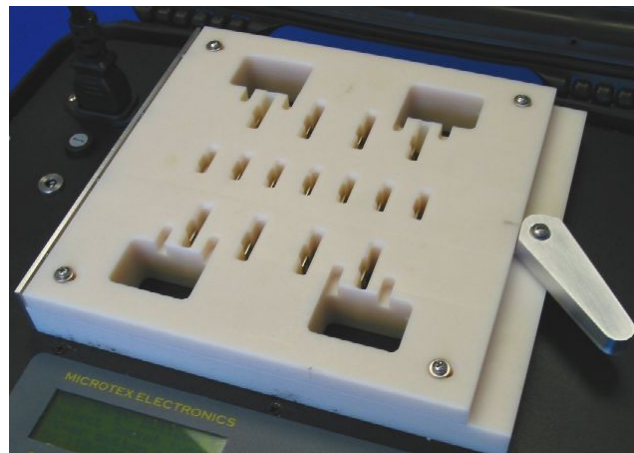
Power is automatically turned off whenever the up arrow or down arrow buttons are pushed to change the meter type.



Safety Interlock

The optional Safety Interlock will temporarily shut off power to the meter socket when the meter is removed. It will restore the power when another meter is inserted.

Zero Insertion Force Meter Socket



Flip the lever to the right of the connector down to release the pressure on the contact pins. Then you can simply lift the meter out or drop the meter into the connector. Flip the lever up to clamp down on the pins, locking the meter in for a secure connection.

General Operation Instructions

Use of the Meter Tester is simple and straight forward. Simply drop the meter in to the **ZIF** socket, select the meter type and apply power and load.

1. Connect the power cable to any available 110 AC power outlet using the AC power cord provided with the tester. Or if you are in the field, use the provided 12 volt DC cable to connect to your vehicles 12 volt (*the cigarette lighter*) outlet. A built-in inverter converts the 12 volts DC to the AC power necessary to operate the meter. The tester automatically uses the 12V if available.
2. When the tester is initially connected to a power supply it will first display the product identification screen, then it will display a general operation instruction screen and wait for you to press the down arrow button to begin selection of a meter type.
3. Using the **up** and **down** arrow buttons, scan through the menu till you have found the meter type that you will be testing. (*NOTE: Any time the meter type is changed the power to the socket is automatically turned off*)
4. Set the lever to the right of the meter socket to the down position (*towards you*), and set the meter to be tested into the socket. Then flip the lever up (*away from you*) to secure the meter in the socket.
5. Press the **Power On** button. Any time the Power on button is pressed you will then be prompted to select Load or No Load operation. Press the **UP** arrow button to apply a load. Press the **DOWN** arrow button to select a no-load condition. (*NOTE: To change from load to no load or from no load to load simply press the power on button.*)
6. After testing is finished, press the **Power Off** button to remove power from the meter under test.
7. Flip the lever to the right of the socket down to release the meter under test and remove the meter.