POWERTRAN

P 8142

Earth Leakage Detection Tester

User Manual

Polarity Tests
The procedure is simple. Plug the unit into a mains socket. If the wiring is correct 3 green LED's light up and a continuous buzzer sounds. This is the only correct combination. If the wiring is not correct, then one, two or all three LED's will change to red and the buzzer will pulse. Please refer to the table below for a list of states as indicated by the LED conditions.

Earth Volts Touchpad
This function will detect if the earth voltage is greater than 50V a.c. which could give rise to potentially dangerous situations. The procedure is as follows:

• Plug the tester into the socket under test.
• If there is a polarity fault the LED's will indicate this and a touchpad test will not be allowed. If there and a touchpad test will not be allowed. If there are 3 green LED's and the buzzer is continuously on, then the polarity is correct.
• Touch the touchpad with an index finger. If there is voltage greater than 50V a.c. on the earth of the socket, the 3 green LED's will change to 3 reds and a pulsing buzzer will sound.
• Do not proceed with any further tests. Investigate the cause of the high earth voltage!

RCD Test
The purpose of this is to verify that an RCD rated at 30mA will trip within 300ms when a nominal 30mA earth fault current is applied.

• Plug the unit into the socket under test
• If there is a polarity fault the LED's will indicate this and an RCD test will not be allowed. If there are 3 green LED's and the buzzer is continuously on, then the polarity is correct.
• Touch the RCD touchpad for more than one second to initiate a test. If the RCD has tripped within 300ms, then power to the socket will be disconnected all LED's go out and the buzzer will switch off. The user should reset the RCD to energise the circuit. If the RCD didn't trip within 300ms then the first two LED's will change to red, the third remains green and the buzzer will pulse. After approximately 4-5s, the unit returns to correct polarity mode.
• If there is a high earth resistance, which could cause a potentially dangerous voltage rise above 50v as a result of the RCD test, the tester automatically aborts the test. Under these circumstances the LED's will change to RED RED RED with a pulsing buzzer for 4-5s. After this time the unit returns to correct polarity mode.

The unit is only intended to be used for short periods, typically less than 5 minutes. Do not leave the plug in for extended periods of time. Vent slots should not be covered or obstructed. The unit is intended for use in the vertical orientation only. The unit must always be checked for any sign of damage prior to use. If there is any damage to unit do not use. To verify the tester is working correctly first plug into a well known working socket prior to use. If the unit has any mechincal damage please bring into store for our staff to check. This product has no serviceable parts. **If RED RED RED is indicated by the LED's, unplug the unit immediately and check the installation wiring.**

RCD Test
Rated current: 30mA +/-5% @ 230V 50Hz
Max test time: 300ms
NE Lockout: 50V +/-10%rms

Earth Touch Voltage
Threshold: 50V +/-10%rms for earth resitance
less than 100k ohm
Response: 100ms

RCD TEST STATUS COMBINATION CHART

Indication	LED 1	LED 2	LED 3	Buzzer
Correct	Green	Green	Green	Continue
During Test	Green	Green	Green	OFF
After No Trip	Red	Red	Green	Pulse
After N-E>50V	Red	Red	Red	Pulse

STATUS COMBINATION CHART

Plug Pins	Status	Display Result	Indication
N E L		LED 1 LED 2 LED 3	
N E L	Correct	Green Green Green	Continue
E N L	E/N Swap	Green Green Green	Continue
X E L	Lack N	Red Green Green	Pulse
X L E	Lack N	Red Green Green	Pulse
X N L	Lack N	Red Green Green	Pulse
X L N	Lack N	Red Green Green	Pulse
N X L	Lack E	Green Red Green	Pulse
L X N	Lack E	Green Red Green	Pulse
E X L	Lack E	Green Red Green	Pulse
L X E	Lack E	Green Red Green	Pulse
E L X	L Fault	Green Green Red	Pulse
L E X	L Fault	Green Green Red	Pulse
N L X	L Fault	Green Green Red	Pulse
L N X	L Fault	Green Green Red	Pulse
N L E	LE Reserve	Green Red Red	Pulse
E L N	LE Reserve	Green Red Red	Pulse
L E N	LN Reserve	Red Red Green	Pulse
L N E	LN Reserve	Red Red Green	Pulse

X = No Connection