

LOOP/PSC TESTERS

MODEL 4118A



	4118A
Loop impedance ranges	20/200/2000Ω
Loop impedance accuracy	±2%rdg±4dgt
AC test current	20Ω 25A 200Ω 2.3A 2000Ω 15mA
AC test period	20Ω (20ms) 200Ω (40ms) 2000Ω (280ms)
PSC ranges	200A(2.3A 40ms) 2000A(25A 20ms) 20kA(25A 20ms)
PSC ranges accuracy	Consider accuracy of loop impedance
Voltage	110V - 260V ±2%rdg±4dgt
Operating voltage	230V +10%, -15%(195V - 253V)50Hz
Applicable Standards	IEC 61010-1 CAT III 300V Pollution degree 2 IEC 61557-1,3, IEC 60529(IP54)
Dimensions	167(L) × 185(W) × 89(D)mm
Weight	750g approx.
Accessories	Molded plug test leads* 7121B(Distribution board test leads) 9147(Cord case) 9121(Shoulder strap) Instruction manual

* 7123(AU): Australian plug 7124(UK): British plug(13A)
7125(EU): European SHUKO plug 7126(SA): South african plug

- Custom microprocessor controlled for highest accuracy and reliability.
- 3 LEDs for checking correct wiring status.
- 15mA LOOP measurement: LOOP impedance 2000Ω range measurement is carried out with low test current (15mA). The current will not cause tripping out involved RCD even the one with the lowest nominal differential current (30mA).
- Direct reading of Prospective Short Circuit Current (PSC).
- Measure low loop resistances(resolution of 0.01Ω)
- Automatic lock-out if test resistor overheats.
- Large custom digital display readout .
- Visual indication of reversed phase and neutral wiring at socket.
- Designed to IP54 Rating

Accessories



Molded plug test leads

- MODEL 7123 (AU) Australian plug
- MODEL 7124 (UK) British plug(13A)
- MODEL 7125 (EU) European SHUKO plug
- MODEL 7126 (SA) South african plug

Loop Testing Methods

In the buildings mainly used for private residence where low voltage power is supplied from electric utilities the fundamental protection against electric shock hazards is provided by appropriately coordinating the function of an earthing circuit with automatic switches placed at the latter stage of indoor wiring circuits. This is intended to quickly cut off the supply to an earthing circuit where a fault occurs following touch voltage exceeding an acceptable limit. Proper protection against electric shock hazards is given when the TT wiring system satisfies the requirement as expressed by the following formula:

$$R_a \times I_a \leq 50$$

where R_a is the sum of the resistances of earth bars and protective conductors and I_a is the maximum current of a protection system provided for installations, indicating that the value obtained by multiplying R_a with I_a is not more than 50V. This means a maximum voltage one can touch shall not exceed 50V in the event of an earth fault.

- Method of earth fault loop impedance testing at socket outlet. As shown in Fig., total earth fault loop impedance can be measured by plugging a loop tester into socket. The value of earth fault loop impedance measured represents the sum of transformer coil winding resistance, phase conductor (L3) resistance and protective conductor (PE) resistance as well as source earth resistance and installation earth resistance. With the loop tester set to any one of the PSC (prospective short circuit current) range, it is also possible to measure earth fault current.

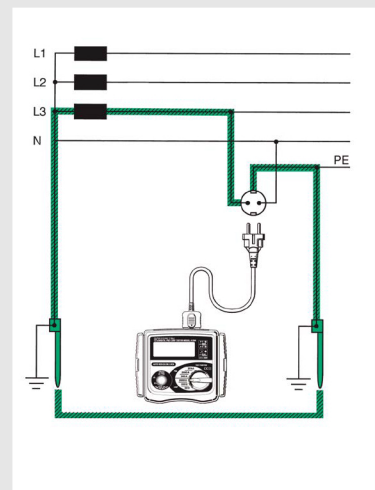


Fig. Earth fault loop impedance testing at socket outlet.