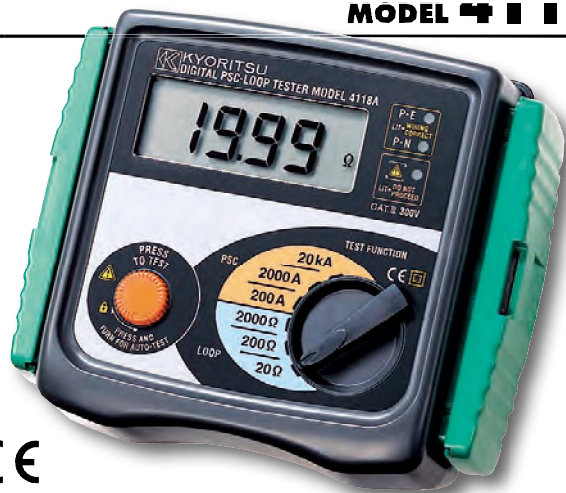


LOOP/PSC TESTERS

MODEL 7112



- 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

	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

LOOP/PSC TESTERS

Accessories



MODEL 7121B
(Distribution board test leads)



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.

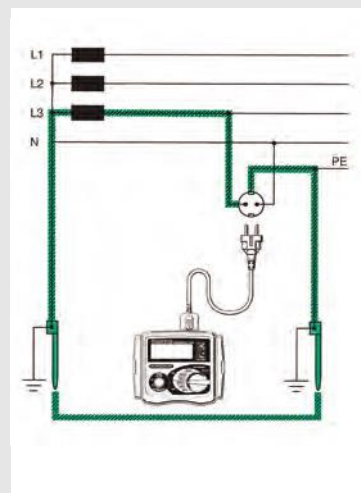


Fig. Earth fault loop impedance testing at socket outlet.

LOOP/PSC TESTERS

KEW 4140



- Anti-Trip Technology for complete trip free Loop testing on all RCDs rated 30mA and above.
- Dual Display allows simultaneous measurements like Loop & PFC/PSC.
- Two wire connection for Loop L-L, L-N and PSC testing is possible.
- Phase rotation, Voltage and Frequency measurements.
- Lock-down test button for 'hands free' testing with auto-start operation.
- Display and front panel keyboards with Backlight to be visible in dark places.
- Water and Dust proof (IP54)



4140			
Loop Impedance			
Function	L-PE ATT OFF	L-PE ATT ON	L-N/L-L
Rated voltage	230V (50/60Hz)		L-N: 230V (50/60Hz) L-L: 400V (50/60Hz)
Operating Voltage	100 - 280V (45 - 65Hz)		100 - 500V (45 - 65Hz)
Range (Auto-Ranging)	20/200/2000Ω	20/200/2000Ω (L-N ≤ 20Ω)	20Ω
Nominal Test Current at 0Ω External Loop Magnitude/Duration at 230V	20Ω: 6A/40ms 200Ω: 2A/20ms 2000Ω: 15mA/500ms	L-N: 6A/60ms N-PE: 10mA/approx. 5s	20Ω: 6A/20ms
Accuracy	±3%/rdg ±4dgt (±1)	±3%/rdg ±6dgt (±1)	L-N: ±3%/rdg ±4dgt L-L: ±3%/rdg ±8dgt
PFC(L-PE)/PSC(L-N/L-L) (±2)			
Function	PSC	PFC (ATT)	PSC
Rated voltage	230V (50/60Hz)		L-N: 230V (50/60Hz) L-L: 400V (50/60Hz)
Operating Voltage	100 - 280V (45 - 65Hz)		100 - 500V (45 - 65Hz)
Range (Auto-Ranging)	2000A/20kA	2000A/20kA (L-N ≤ 20Ω)	2000A/20kA
Nominal Test Current at 0Ω External Loop Magnitude/Duration at 230V	20Ω: 6A/40ms 200Ω: 2A/20ms 2000Ω: 15mA/500ms	L-N: 6A/60ms N-PE: 10mA/approx. 5s	20Ω: 6A/20ms
Phase Rotation			
Operating Voltage	50 - 500V, 45 - 65Hz		
Remarks	Correct phase sequence: displayed "1.2.3" and ⌚ mark Reversed phase sequence: displayed "3.2.1" and ⌚ mark		
Volts			
Function	Volts	Frequency	
Measuring range	0 - 500V	45 - 65Hz	
Accuracy	±2%/rdg ±4dgt	±0.5%/rdg ±2dgt	
Applicable standards	IEC 61010-1 CAT III 300V (500V L to L) IEC 61557-1, 3, 7, 10, IEC 60529 (IP54), IEC 61326 (EMC)		
Power source	1.5V AA batteries × 6 Use of alkaline batteries (LR6) is recommended.		
Dimensions	84(L) × 184(W) × 133(D) mm		
Weight	860g (including batteries.)		
Accessories included	Main test lead (±3), Distribution board test lead (±4), 9155 (shoulder strap), 9156 (Soft case) LR6 (Battery) ±6, Instruction manual		

±1: Accuracy of L-N LOOP displayed on the Sub Display is synchronized with the one at L-N/L-L function.
 *2: PSC/PFC Accuracy is derived from measured loop impedance specification and measured voltage specification.
 ±3: 7187A (UK) British plug, 7218A (EU) European SHUKO plug, 7221A (SA) South african plug, 7222A (AU) Australian plug
 ±4: 7246: Blue, Green, Red, 7247: Black, Green, Red

LOOP/PSC TESTERS

Accessories



Main test lead

MODEL 7187A
 MODEL 7218A (EU) European SHUKO plug
 MODEL 7221A (SA) South african plug
 MODEL 7222A (AU) Australian plug



Distribution board test lead

MODEL 7246 Blue, Green, Red
 MODEL 7247 Black, Green, Red



MODEL 9156
 Soft case