

Digital Earth Resistance Tester

Technical Data



K4105

The K4105 is a digital ultra-compact earth resistance tester housed in a shock resistant IP54 rated dust and drip proof case. The K4105 has a large, easy to read 3½ digit LCD display and is supplied with a carrying case containing all the equipment needed to perform measurements. There is an automatic warning when resistance of auxiliary earth spikes is in excess of tolerance. 2mA Measuring current permits earth resistance tests without tripping the earth leakage current breakers in the circuit under test.

Features Include:

- Simplified earth test
- Direct earth resistance to 2000Ω
- Earth voltage to 200V
- Indicates if Resistance of Auxiliary Spikes is within Tolerance
- Low Power Consumption for Extended Battery Life
- Small and lightweight and supplied in a shock resistant case conforming to IP54
- Low power consumption for extended battery life
- Direct readout of the earth resistance on the LCD display

General Specifications

Applicable Standards	: IEC 61010-1 Overvoltage CAT III 300V Pollution Degree 2 IEC 61010-2-31 IEC 61557-1,5 IEC 60529 (IP54)
Measuring Method	:
Earth voltage measurement	: Average sensing
Earth resistance measurement	: Constant current inverter Frequency: Approx. 820Hz Measuring Current: 20Ω range Approx. AC 3mA
Maximum Operating Error	: Operating error (B) is an error obtained within the rated operating conditions, and calculated with the intrinsic error (A), which is an error of the instrument used, and the error (Ei) due to variations.
Range to keep the maximum operating error	: Measurement range within which the max operating error(±30%) applies 20Ω range 5-19.99Ω 200Ω range 20-199.9Ω 2000Ω range 200-1999Ω
Number of Measurement	: 3300 times or more (measure 10Ω for 5s on 20Ω range and take a pause for 25s)
Operating Temperature and Humidity	: 0 to 40°C, relative humidity 85% or less (no condensation)
Storage Temperature and Humidity	: -20 to 60°C, relative humidity 75% or less (no condensation)
Power Source	: 9VDC: R6P (SUM-3) X6
Overload Protection	: Earth resistance ranges: 280V AC/DC(10 seconds) Earth voltage: 300V AC/DC(1minute)
Insulation Resistance	: 5MΩ or more at 500V between the electrical circuit and the housing
Withstand Voltage	: case 3700V AC for one minute between the electrical circuit and the housing
Dimensions	: case 150(L) X 158(W) X 70(D)mm



General Specifications

Accessories	:	K-7095	Test leads	X1 set
		K-8032	Auxiliary earth spikes	X2
		K-7127	Simplified measurement probe (with safety alligator clip and flat test bar)	X1 set
		K-9084	Carrying case	X1
			Strap belt	X1
			Instruction manual	X1
			Battery R6((SUM-3)	X6

Measuring Range and Accuracy (at 23±5°C and RH 75% or less)

Range		Measuring Range	Accuracy
Earth Voltage		0 - 199.9V	± 1.0%rdg ± 4dgt
Earth	X1Ω	0 - 19,99Ω	± 2.0%rdg ± 0.1Ω (0-19,99Ω)
Resistance	X10Ω	0 - 199.90Ω	± 2.0%rdg ± 3dgt (above 20Ω) (Auxiliary earth resistance 100Ω ± 5%)
	X100Ω	0 - 1999Ω	(Earth voltage 10V or less)