



Specification  
IN2101 & IN2102  
Insulation Tester



**ELECTRICAL**

All specified accuracies are at 23°C ± 5°C, <80% RH for 1 year.

**Temperature coefficient:**

Add 0.1 x (specified accuracy) per °C (0°C to 18°C, 28°C to 40°C)

All accuracies below are expressed as ± (percentage of reading + digits)

**Voltage**

Range	Resolution	Accuracy
600V	1V	3% + 5

Voltage warning: >30V



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**Insulation Resistance**

IN2101					
Test voltage	Test current	Range	Operating range to BS EN 61557-2 (See note 1)	Resolution	Accuracy
500V	1mA at 0.5MΩ	4MΩ	0.1MΩ to 1000MΩ	0.001MΩ	3% + 5
		40MΩ		0.01MΩ	
		400MΩ		0.1MΩ	
		1000MΩ		1MΩ	

IN2102					
Test voltage	Test current	Range	Operating range to BS EN 61557-2 (See note 1)	Resolution	Accuracy
250V	1mA at 0.25 MΩ	4MΩ	0.1MΩ to 1000MΩ	0.001MΩ	3% + 5
		40MΩ		0.01MΩ	
		400MΩ		0.1MΩ	
		1000MΩ		1MΩ	
500V	1mA at 0.5MΩ	4MΩ	0.1MΩ to 4000MΩ	0.001MΩ	3% + 5
		40MΩ		0.01MΩ	
		400MΩ		0.1MΩ	
		4000MΩ		1MΩ	
1000V	1mA at 1MΩ	4MΩ	0.1MΩ to 5000MΩ	0.001MΩ	3% + 5
		40MΩ		0.01MΩ	
		400MΩ		0.1MΩ	
		5000MΩ		1MΩ	



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Test voltage accuracy: 0% to +20%

Short circuit test current: <1.5mA

Auto discharge: Discharge time <1s for C=1μF or less

Maximum capacitive load: Operable with up to 1μF load

Live circuit detection: >30V DC or AC rms, test is inhibited

Overload protection: 600V DC or AC rms

**Continuity Resistance**

Range	Open circuit test voltage	Short circuit test current	Operating range to BS EN 61557-4 (See note 1)	Resolution	Accuracy
40Ω	8V dc typical	≥ 200mA	0.2Ω to 40Ω	0.01Ω	3% + 5

Overload protection: 600V DC or AC rms

**kΩ Resistance**

Range	Open circuit test voltage	Short circuit test current	Resolution	Accuracy
1999kΩ	1.8V dc typical	0.37mA approx	≤999.9Ω - 0.1Ω ≥1000Ω - 1Ω	3% + 5

Overload protection: 600V DC or AC rms

**●))) Resistance**

Range	Open circuit test voltage	Short circuit test current	Resolution	Accuracy
999.9Ω	2V dc approx.	0.37mA approx.	0.1Ω	3% + 5

Overload protection: 600V DC or AC rms



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Note 1: The operating range where the operating uncertainty does not exceed ±30% in accordance with BS EN 61557-2 and BS EN 61557-4.

$$\text{Operating uncertainty (B)} = \pm (|A| + 1,15 \sqrt{E_2^2 + E_3^2})$$

where, A is the intrinsic uncertainty at reference conditions

E<sub>2</sub> is the variation due to supply voltage change

E<sub>3</sub> is the variation due to temperature change

**GENERAL**

Display: 5000 count liquid crystal display


Sample rate: 2.5 times/sec

Bar-graph: 51 segments

Overrange: (OL) is displayed

Power: 6 x 1.5V, AA alkaline batteries (IEC LR6, NEDA 15A)

Battery life (alkaline): >3000 measurements typical

Low battery indication:  symbol is displayed

Auto power off: After 5 minutes

Fuse: F 0.5 A/600 V 6.3x32mm fast blow ceramic

Dimensions: 90 x 210 x 54mm

Weight: Approx. 596g, including batteries

Includes: Carrying case, set of TL47 test leads, 6 x 1.5V AA batteries, instructions

**ENVIRONMENTAL**

Temperature & Humidity

(Operating): 0°C to 40°C <70% R.H.

(Storage): -20°C to 60°C < 80% R.H., batteries removed

Altitude: up to 2000m

Pollution degree: 2

IP rating: IP44, not for use in wet conditions



## Specification IN2101 & IN2102 Insulation Tester

### FUNCTIONALITY

Conforms to BS EN 61557-2 and BS EN 61557-4

### SAFETY

Conforms to BS EN 61010-1, CAT III 600V  
Class II, double insulation

### EMC

Conforms to BS EN 61326-2-2

### SPECIFICATION FOR TL47 TEST LEADS

Maximum voltage: 1000V AC/DC  
Maximum current: 10A continuous  
Connector: 4mm banana plug with fixed shroud

### Environmental

Temperature (Operating & Storage): 0°C to 40°C  
Altitude: up to 2000m  
Pollution degree 2

### Safety

Conforms to BS EN 61010-031, CAT IV 600V, CAT III 1000V, 10A (Probe tip covers fitted)  
CAT II 1000V, 10A (Probe tip covers removed)  
Class II, double insulation

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