

Ziegler

Redefine Innovative Metering

Technical Datasheet

ZIT 12/12A

1KV INSULATION TESTER

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Ziegler ZIT 12/12A is a 1kV Insulation tester. This instrument is suitable for testing insulation resistance of LT devices like motors, cables, transformers and household appliances. It is very useful for onsite maintenance and service departments.

Product Features

- Insulation Resistance measurement from 10k Ω to 2 G Ω
- Selectable Test Voltages 50V/100V/250V/500V/1000V
- Voltage Measurement <25V to 600V AC/DC
- Live Circuit Detection >25V irrespective of function selected
- Pre-selectable Measurement time for Insulation Resistance
- Mains adaptor for operation on mains (ZIT 12A)
- Storage of Min-Max values, storage memory for last 10 readings
- Go-No-Go Test Facility
- Auto power OFF, Low Battery Indication, stop watch function, blown fuse indication, lead resistance null facility
- Protective holster for rough duty
- Automatic discharge of capacitive circuits
- Hands free continuity testing
- User Selectable Backlit Display



Fact Sheet

Display

LCD display field (65mm x 30mm) with analog indication and digital display of unit of measured quantity and functions.

Digital

Display	7 segment
Character height	12mm
Number of digits/Counts	3 digits for Ω , M Ω , G Ω and V Ω , 4 digits for stop watch
Overflow Display	OL

Analog

Display	Logarithmic scale
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Applicable Standards

IEC/EN 61010 -1 VDE 0411 -1	Safety regulations for electrical measuring, control, regulation and laboratory devices
IEC/EN 61557 VDE 0413 Part 1 Part 2 Part 3	Devices for testing, measuring and monitoring protective safety measures in system with voltages of upto 1000 V A.C and 1500 V D.C – General requirements - Insulation Resistance measuring instruments - Low resistance measuring instruments
IEC/ EN 61326	Electromagnetic Compatibility(EMC)
EN 60529 VDE 0470 – Part 1	Test instruments and test procedures Degree of protection provided by enclosures (IP Code)

Technical Specifications

Measuring function	Measuring range	Resolution	Accuracy ±(...% of rdg±.....Digit)	Overload Value & Duration
Insulation resistance MΩ 100 V	0.01 MΩ to 0.99 MΩ	10 kΩ (0.01 MΩ)	± 3 % ± 2 D	1200Vrms
	≥1.0 MΩ to 9.9 MΩ	10 0kΩ (0.1 MΩ)	± 5 % ± 2 D	10 Sec
	≥10 MΩ to 99 MΩ	1 MΩ	± 30 %	
Insulation ¹⁾ resistance MΩ U=250V, 500V ,1000V	0.01 MΩ to 9.99 MΩ	10 kΩ (0.01 MΩ)	± 5 % ± 2 D	1200Vrms
	≥10 MΩ to 99.9 MΩ	10 0kΩ (0.1 MΩ)	± 5 % ± 2 D	10 Sec
	100 MΩ to 999 MΩ	1 MΩ	± 30 % Service error	
Low Ohms ²⁾ Ω	0 MΩ to 9.9 MΩ	0.01Ω at 210mA	± 3 % ± 2 D	1200Vrms
	≥10 MΩ to 99.9 MΩ	0.1Ω at 21mA	± 5 % ± 2 D	10 Sec
Continuity	0 MΩ to 9.9 MΩ	0.01Ω at 210mA	± 3 % ± 2 D	1200Vrms
	≥10 MΩ to 99.9 MΩ	0.1Ω at 21mA	± 5 % ± 2 D	10 Sec
VAC/DC	25V to 450 V	1V	± 2 % ± 3 D	1200Vrms
	450V to 600V	1V	± 3 %	10 Sec

1) For insulation resistance range:

- Terminal voltage on open circuit(DC) - 0% + 30% of rated voltage
- Short circuit current < 2mA
- Test current on load 1mA at minimum pass values of Insulation as specified in VDE 0413 Part 1

2)For low ohms'/continuity ranges:

- Open circuit voltage: 5V +1V DC
- Lead Resistance Compensation: 0 - 9.99 Ω

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Mechanical design	
Protection	Instruments: IP 50, for terminal sockets: IP 20 to DIN VDE 0470 Part 1/ EN 60529 according
Dimensions	W x H x D 84 mm x 195 mm x 35 mm
Weight	500g including battery
Reference conditions for accuracy	
Ambient Temperature	23°C + 2K
Relative Humidity	45%...55%
Battery Voltage	8 V +0.1 V
Voltage Measurement	AC (Sine), 50/60 Hz
Environmental conditions	
Temperature Coefficient	<0.1 % per °C
Operating temperature	-20 to +40°C (full range) -20 to 60° (upto 100 MΩ)
Storage temperature	- 25 to +65°C
Relative humidity	90 % RH at 40°C max.
Electrical safety	
Protection Class	II as per IEC 61010-1/VDE0411-1
Overvoltage Category, Nominal Voltage	CAT II 600V, CAT III 300V
Contamination Degree	2,2
Test Voltage	3.7kV-per IEC 61010-1 /EN 61010-1

Power Supply

Battery: 6 x 1.5 V cells IEC LR6 non-rechargeable cells

Service Life:

Without Backlit ON: Typically, 2500 x 5 sec operation

With Backlit ON: Typically, 1250 x 5 sec operation

Fuse

500mA/440V H.B.C. 10kA min (32mm x 6mm)

Mains Adapter (with ZIT 12A model)

230V AC/DC 9V, 500mA (4.5 VA) (isolated)

Standard scope of Supply

- Cable Set
- Crocodile Clips set
- Rubber Holster
- 6 nos., 1.5 V Batteries
- Instruction Manual
- Mains adapter (with ZIT 12A model)

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