FINERO *The Quality Control Company*

Quanti GI

GROUND BOND - INSULATION RESISTANCE

Reliable, Rugged, Fast, Accurate, Intrinsically Safe & Easily Programmable Measurements

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GROUND BOND - G

WHY?

Ground bond test (also referred to as
PE resistance test, ground continuity test) determines whether
the safety ground circuit of the Device Under Test (DUT) can adequately handle
fault current if the product should ever become defective. The measured resistance has to be lower than
the indicated limit from the applicable international standards. Usual values are << 500mΩ.

GROUND BOND FUNCTION SPECIFICATIONS	
OUTPUT CURRENT	Range: 3.00 - 30.00A AC Resolution: 0.01A Accuracy: ± 1% (of setting + 0.15A)
OUTPUT FREQUENCY	50 / 60Hz, User selectable
RESISTANCE MEASUREMENT	Range: 0.5mΩ - 500.0mΩ Resolution: 0.1mΩ Accuracy: 0.5% of range
TEST METHOD	4 wire measurement
TEST TIME	0; 0.3 - 999.9sec (0 = continuous)
HI AND LO LIMIT	Range: 0.5mΩ - 500.0mΩ Resolution: 0.1mΩ
MAXIMUM LOADING	20A 500mΩ 25A 380mΩ 30A 300mΩ
CURRENT DISPLAY	Range: 3.00A - 30.00A Resolution: 0.01A Accuracy: ± (1% of reading + 0.15A)
WAVEFORM	True Sine wave

Quanti's ground bond is a high current continuity test. Ground continuity is important for instance in manufacturing to ensure that the products leaving to the customers are safely grounded.

OUTPUT CURRENT RANGE 3 - 30A AC

With Quanti's ground bond test you will test with the currents that most common standards require. User programmable output current from 3A to 30A AC provides extensive coverage for testing according to UL, IEC, EN and other requirements.

OUTPUT CURRENT RESOLUTION 0.01A

Adjustable output current and milliohm trip ranges to meet all safety specifications for ground bond test requirements.

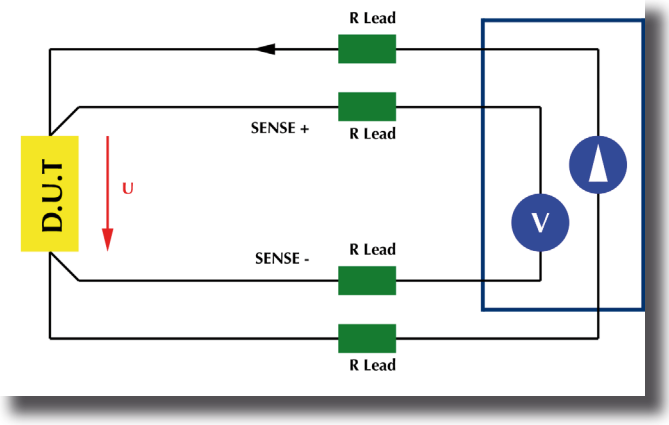
PROGRAMMABLE HIGH AND LOW RESISTANCE LIMITS

A resistance measurement range from 0.5mΩ to 500mΩ, in conjunction with user-programmable high and low resistance limits with Pass/Fail indication, makes this tester ideal for production testing.

4 WIRE MEASUREMENT, CONSTANTLY ACCURATE RESULTS

4 wire measurement ensures accurate and repeatable measurements. When measuring low values resistances, an important error source can be found in the contact resistance. In many applications, the contact resistance value can go beyond the value which has to be measured. To cancel this error source a 4 wire measurement is used.

For instance during the day the factory ambient temperature can change, which would mean wrong resistance values with 2 wire measurements if the error is not manually and constantly offset.



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INSULATION RESISTANCE - I

WHY?

Insulation resistance test is one of the tests that are required by the electrical safety testing standards. The test measures insulation resistance of a Device Under Test, while phase and neutral are short circuited together.

INSULATION RESISTANCE FUNCTION SPECIFICATIONS				
OUTPUT VOLTAGE	Range: 50 - 1000V DC Resolution: 1V Accuracy: ± 0.5% of range			
RESISTANCE MEASUREMENT	Range: 0.5MΩ - 50 000MΩ (5 digit, Auto range) Resolution: MΩ MΩ 0.001 0.500 - 9.999 0.01 1.00 - 99.99 0.1 10.0 - 999.9 1 100 - 50 000 Accuracy: ± 5% to ± 15% depending upon the voltage and the selected range 50 - 499V DC: 0.5MΩ - 999.9MΩ, ± (5% of reading +2 counts) 1000MΩ - 9999MΩ, ± (8% of reading +2 counts) 10000MΩ - 50000MΩ, ± (17% of reading +2 counts) 500 - 1000V DC: 0.5MΩ - 999.9MΩ, ± (3% of reading +2 counts) 1000MΩ - 9999MΩ, ± (6% of reading +2 counts) 10000MΩ - 50000MΩ, ± (15% of reading +2 counts)			
RAMP TIME	Ramp up: 0.1 - 99.9sec; No Ramp Ramp down: 0.1 - 99.9sec; No Ramp			
TEST TIME	0; 0.3 - 999.9sec (0 = continuous)			
HI AND LO LIMIT (MΩ)	Range: 0.500 - 0.999 Resolution: 0.001	Range: 1.00 - 9.99 Resolution: 0.01	Range: 10.0 - 99.9 Resolution: 0.1	Range: 100 - 50 000 Resolution: 1
	Hi Limit: 0 = OFF			

ENSURING CONNECTIVITY

For optimum quality process control the connectivity to the DUT has to be ensured. Quanti gives the user several options to check this. The user can select either automatic or manual mode connectivity check. The parameters can be adjusted in order to meet high quality control standards and optimum yield.

OUTPUT VOLTAGE 50 - 1000V DC

Quanti measures insulation resistance in electrical systems and equipment such as: electrical machines, household appliances, transformers, cables, power supplies and so on. Measuring range is from 0.5MΩ to 50GΩ.

VOLTAGE RESOLUTION 1V

VOLTAGE ACCURACY ±0.5% OF RANGE

RESISTANCE MEASUREMENT ACCURACY ± 5% TO ± 15%

RAMP TIMER

The voltage is ramped up from zero to the final value. Once the voltage reaches the selected value, it is kept at that value for a brief period (typically up to 5 seconds) before the resistance value is measured.