

**FINERO** *The Quality Control Company*



# *Quanti* HD

## **HIGH VOLTAGE DUAL**

**Reliable, Rugged, Fast, Accurate, Intrinsicly Safe & Easily Programmable Measurements**

## DIELECTRIC WITHSTAND - H



### WHY?

Hipot test or also called a Dielectric Withstand test verifies that the insulation of a product or component is sufficient to protect the operator from electrical shock. In a typical Hipot test high voltage is applied between a product's current carrying conductors and for instance its metallic chassis. Hipot equipment measure extremely low currents like from microamps to milliamps.

DIELECTRIC WITHSTAND (HIPOT) FUNCTION SPECIFICATIONS			
OUTPUT VOLTAGE	0.05V - 6kV AC/DC, Fully floating		
OUTPUT REGULATION	Max $\pm$ (2% of output + 5V) from no load to full load over input voltage range		
VOLTAGE SETTING	Range: AC: 0.05 - 6000V, DC: 0.05 - 6000V Resolution: 5V Accuracy: $\pm$ (1% of reading + 5V)		
VOLTAGE MEASUREMENT	Range: 0.05 - 6000V Resolution: 1V Accuracy: $\pm$ (1% of reading + 5V)		
MAXIMUM OUTPUT CURRENT	100mA AC/DC		
MAX TEST APPARENT POWER	600VA		
MEASUREMENTS	AC Total, AC Real, DC		
CURRENT MEASUREMENT RESOLUTION	1mA : 0.1 $\mu$ A AC/DC 10mA: 1 $\mu$ A AC/DC 100mA: 10 $\mu$ A AC/DC		
CURRENT ACCURACY	AC Total: $\pm$ (0.5% of range + 5 counts) AC Real: $\pm$ (1% of range + 5 counts) DC: $\pm$ (0.5% of range, + 5 counts)		
OUTPUT FREQUENCY	50 or 60 Hz, User selectable		
TEST TIME	AC: 0; 0.3 - 999.9sec (0 = continuous) DC: 0; 0.3 - 999.9sec (0 = continuous)		
RAMP TIME	AC: 0.1 - 99.9sec; No Ramp DC: 0.1 - 99.9sec; No Ramp, $\tau \ll$ Ramp time		
OUTPUT WAVEFORM	True Sine wave, THD < 1 %		
HI AND LO LIMIT	AC TOTAL	AC REAL	DC
	Range: 100mA Resolution: 10 $\mu$ A Range: 10mA Resolution: 1 $\mu$ A	Range: 100mA Resolution: 10 $\mu$ A Range: 10ma Resolution: 1 $\mu$ A	Range: 10mA Resolution: 1 $\mu$ A Range: 1mA Resolution: 0.1 $\mu$ A
	Lo Limit: 0 = OFF		
MEASUREMENT CIRCUIT DISCHARGE TIME	< 0.2sec, see max. capacitive loads		
MAXIMUM CAPACITIVE LOAD IN DC MODE	0.03 $\mu$ F $\leq$ 6kV 0.5 $\mu$ F $\leq$ 3kV 1 $\mu$ F $\leq$ 1kV		
MEASUREMENT SAFETY	Fully floating output <sup>1</sup>		
ARC DETECTION	Setting mode: Programmable setting Minimum pulse width: < 5 $\mu$ sec or > 5 - 100 $\mu$ sec Detection current: Programmable 1 - 20mA		

1) Except with some combination with other functions

## 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.

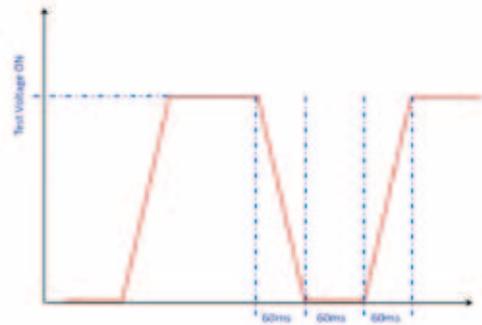
## 1, 2 AND 4 CHANNEL SIMULTANEOUS MEASUREMENT POSSIBLE

## ARC DETECTION

Arc is electrical spark occurred by voltage or current quickly changing. There should be no "sparking" in a Hipot test. Arc detection can help you to solve product quality issues.

## MINIMUM TEST CYCLE 1,2 SEC

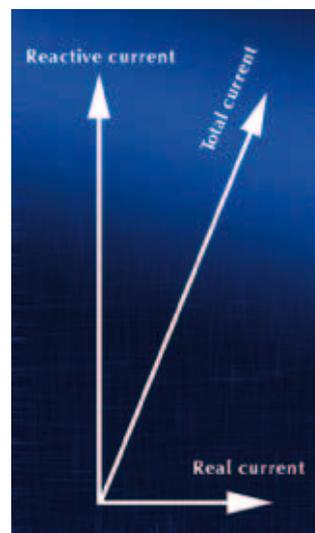
Exceptional high speed (see the diagram) allows to build ultra high speed high volume production test lines. This diagram shows how fast the test cycle can be. With minimum test time of 1sec the overall test cycle time is 1.18sec only. And this for all channels.



## TOTAL AND REAL CURRENT MEASUREMENTS

Real Current measurement allows operators to monitor total and real current on a single screen. When testing highly capacitive devices, it is often desirable to make a distinction between real and total current.

Total current is the vector sum of resistive and capacitive leakage current (see picture on the right). If the tester monitors only the total current, a substantial change in real current can often go undetected. The ability to separate the real and capacitive currents is an important requirement for AC Hipot testing. Nowadays some test requirements clearly specify the measurement of real rather than total current.



**DANGER: HIGH VOLTAGE**

## INTRINSICALLY SAFE - FLOATING OUTPUT

A floating electrical circuit is created by separating grounds; one for the operator, one for the equipment. This method creates an intrinsically safe operator environment. (please see the picture on the right).

