

**STANDARD**

# Test & Measuring Instruments

**DIGITAL INSULATION TESTER (1kV below)****4101 IN****4102 MF**

- This Family (4101 IN and 4102 MF) of Originally Designed Unique Products have features ranging from Insulation Resistance Testing, Voltage (ac-dc) measurements with Automatic Hold facility, Continuity Test with a short circuit current of minimum 200mA.
- Two very unique features are found on the Multifunction Model 4102MF; MOV and Gas Arrester Testing.
- Today, most equipments and electrical installations are protected by MOVs and Gas arresters.
- The 4102MF can test these devices to establish if the devices are still operating correctly or not.
- Energy conservation is featured on all these new Advanced Products.
- EnerSave™ limits the test duration to about 10 Seconds to save energy.
- This new generation of test equipments have no moving parts. All calibration are saved internally in a non volatile memory.
- Calibration can be done at any calibration facility around the world, without the need for dedicated calibration equipment.
- This makes these products easier to maintain and lower the cost of calibration and ownership.
- Their calibration interval can be extended without much problem.
- They comply to all the latest regulations, including UK.
- This product family is part of our new World Class series.
- Meets IEC/EN 61010-1 CAT III 600V

## FEATURES COMPARISON

	4101IN	4102MF
Digital EE Calibration (No Potentiometers)	■	■
Keypad Operation	■	■
Automatic Voltmeter AC/DC at Start / Reset	■	■
ON-Reset/Restart Key	■	■
Off Push Button (press more than 5 Sec on 1kV key)	■	■
Auto-Off	■	■
MOV / Protection Devices Test		■
Test ON-OFF	■	■
Polarization Index (PI) on 250, 500 and 1000V	■	■
Dielectric Absorption Ratio (DAR) on 250, 500 and 1000V	■	■
Battery Test	Test Battery at Start	Test Battery at Start
Battery Test at Switch ON / Reset	■	■
Voltmeter on request by Keypad	Automatic	Automatic
Safety Voltmeter before each Test	■	■
Auto-Discharge on all Test and all Ranges	■	■
Continuity Short Circuit Current >220mA ( 225mA Typical )	■	■
Continuity Open Circuit Voltage of 5V dc	■	■
Nominal Voltage @ 1mA on all Insulation Ranges	■	■
Buzzer ON/OFF	Always ON	Always ON
Leads Auto-Null key	■	■
Test Auto-Stop	■	■
Display Customization for OEM	■	■
Re-programmable Microprocessor for Easy Updates	■	■
Can be calibrated in ALL calibration laboratories	■	■
Insulation measurement from 2k $\Omega$ (250V range) to 8G $\Omega$ (1kV Range)	■	■
Continuity from 0.01 $\Omega$ (220mA) to 1999 $\Omega$	■	■
DC Voltmeter from $\pm 1$ Vdc to $\pm 950$ Vdc	■	■
AC Voltmeter from 1Vac to 700Vac	■	■
Accept 8 Rechargeable Batteries or Alkaline or Normal	■	■
Smart Hold & Stop on Voltmeter ac / dc	■	■
Gas Arrester Function		■
EnerSave™	■	■

**STANDARD ELECTRIC WORKS CO., LTD.**

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**STANDARD**

# Test & Measuring Instruments

## DIGITAL INSULATION TESTER (1kV below)

### SPECIFICATIONS

Insulation Test	4101 IN	4102 IN
Test Voltage (DC V)	250V/500V/1000V	250V/500V/1000V
Output Voltage @ 1mA	Reted test Voltage +10% Max	
Measuring Ranges	2K-2G/4K-4G/8K-8G $\Omega$	2K-2G/4K-4G/8K-8G $\Omega$
Accuracy	<30k $\Omega$ : $\pm 20\%$ rdg 30k $\Omega$ - 1M $\Omega$ : $\pm 5\%$ rdg > 1M $\Omega$ : $\pm 3\%$ rdg	<30k $\Omega$ : $\pm 20\%$ rdg 30k $\Omega$ - 1M $\Omega$ : $\pm 5\%$ rdg > 1M $\Omega$ : $\pm 3\%$ rdg
When Voltage is constant, Current is Limited at	$\pm 1.2$ mA	$\pm 1.2$ mA
Short Circuit Current	$\pm 4$ mA Max	$\pm 4$ mA Max

### Continuity Test

Measuring Ranges	0.01-1999 $\Omega$	0.01-1999 $\Omega$
Accuracy	0.01-100 $\Omega$ : $\pm 1.0\%$ rdg 100-300 $\Omega$ : $\pm 1.5\%$ rdg 300-1999 $\Omega$ : $\pm 2.0\%$ rdg	0.01-100 $\Omega$ : $\pm 1.0\%$ rdg 100-300 $\Omega$ : $\pm 1.5\%$ rdg 300-1999 $\Omega$ : $\pm 2.0\%$ rdg
Short Circuit Current	> 220mA	> 220mA
Open Circuit Voltage	5V dc	5Vdc
Resolution	$\pm 2$ counts	$\pm 2$ counts

### Voltmeter

AC Voltage(Auto)	0-700V	0-700V
DC Voltage(Auto)	0-950V	0-950V
Accuracy	$\pm 1.5\%$ of F.S.	$\pm 1.5\%$ of F.S.
Resolution	$\pm 1$ V	$\pm 1$ V

### MOV Test

Test Voltage	—————	5-1020Vdc
Voltage Result Accuracy	—————	$\pm 3\%$
Voltage Result Resolution	—————	$\pm 2$ counts

### GAS Arrester Test

Test Voltage	—————	5-1020Vdc
Voltage Result Accuracy	—————	$\pm 3\%$
Voltage Result Resolution	—————	$\pm 2$ counts

### Protections

Over Load	700V (between all terminals)
Over Voltage	Class III-700V towards ground
Fuses	1 X 500mA, 5 x 20mm, HBC, 600 Fast Blow

### General

Display	2 lines x 16 characters LCD
Auto-Null Threshold	5 $\Omega$
Buzzer Threshold	3 $\Omega$
Fast Test	10Sec
Long Test	60Sec
With PI and DAR test Function	10Min
Load Battery Test Current	About 300mA
Power Source	1.5 x 8 (Type alkaline)
Dimensions	250(L) x 190(W) x 110(H)mm
Weight	1460g Approx. (battery included)
Operating Temperature	1 °C to 55 °C not in full sun
Storage Temperature	-20 °C to 70 °C
Accessories	Test leads (TEL-AL11-A)      Shoulder belt Instruction manual              Batteries

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