

數位絕緣阻抗計及多功能檢測計

DIGITAL MULTIFUNCTION AND INSULATION CONTINUITY-VOLTAGE TESTERS

- 微處理器控制設計。
- 寬廣型液晶顯示器。
- 測試電壓類比刻劃顯示。
- 絕緣阻抗三檔測試電壓：250V、500V、1000V。
- 可作交流直流電壓量測。
- 低阻抗(Low Ω)自動歸零量測高阻抗(M Ω)時，被測物帶有直流或交流電壓時，功能檔自動保護切換。
- 電容性充電電壓自動放電。
- 讀值鎖定、自動關機。
- 過電壓保護、自動電池電量檢查。
- 測試線絕緣度良好。
- 具測試被動元件(MOV)和Gas(氬燈)功能(4102 MF)。
- 符合英國第16版本(UK16th)。
- 符合IEC/EN 61010-1 CAT III 600V。

CE



4101 IN

CE



4102 MF

電氣規格(23±5°C ≤ 80%RH)

絕緣阻抗(M Ω)

4101 IN

4102 MF

量測檔位	250V/500V/1000V	250V/500V/1000V
量測電壓最大容許	額定值加10%	額定值加10%
量測範圍	250V : 2K~2G Ω 500V : 4K~4G Ω 1000V : 8K~8G Ω	250V : 2K~2G Ω 500V : 4K~4G Ω 1000V : 8K~8G Ω
準確度	>1M Ω : ±3%讀值 30k Ω ~1M Ω : ±5%讀值 <30k Ω : ±20%讀值	>1M Ω : ±3%讀值 30k Ω ~1M Ω : ±5%讀值 <30k Ω : ±20%讀值
量測時電流限制	1mA	1mA
短路電流	最大4mA	最大4mA

導通測試(Ω)

量測範圍	0.01-1999	0.01-1999
準確度	0.01-100 : ±1.0% 讀值 100-300 : ±1.5% 讀值 300-1999 : ±2.0% 讀值	0.01-100 : ±1.0% 讀值 100-300 : ±1.5% 讀值 300-1999 : ±2.0% 讀值
短路電流	> 220mA	> 220mA
開路電壓	5V dc	5V dc

電壓量測(V)

交流電壓(ACV)	0-700V	0-700V
直流電壓(DCV)	0-950V	0-950V
準確度	±1.5%滿刻度	±1.5%滿刻度
解析度	1V	1V

被動元件耐壓測試(MOV Test)

量測範圍	——	5-1020Vdc
準確度	——	±3%
電壓解析度	——	2位數

氙燈測試(Gas Arrester Test)

量測範圍	——	5-1020Vdc
準確度	——	±3%
電壓解析度	——	2位數

一般敘述

顯示器	2 x 16 LCM
過電壓保護	700V
低 Ω 自動歸零	5 Ω 以下
蜂鳴器響應	約3 Ω
快速測試	10秒
長時間測試	60秒
PI和DAR功能	10秒
保險絲	1 x 500mA · 5 x 20mm · HBC · 600 快速熔斷型
使用電池	1.5V x 8(顆)充電電池
外形尺寸	250(長) x 190(寬) x 110(高)公厘
重量	約655克(含電池)
操作溫濕度	1°C~55°C 80%RH
儲有溫濕度	-20°C~70°C 90%RH
附件	測試線 x 1(組) 說明書 x 1(本) 肩帶 x 1(條) 電池



STANDARD

Test & Measuring Instruments

DIGITAL INSULATION TESTER (1kV below)



CE

4101 IN



CE

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 2kΩ (250V range) to 8GΩ (1kV Range)	■	■
Continuity from 0.01Ω (220mA) to 1999Ω	■	■
DC Voltmeter from ±1Vdc to ±950Vdc	■	■
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™	■	■

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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 Ω	2K-2G/4K-4G/8K-8G Ω
Accuracy	<30kΩ:±20%rdg 30kΩ-1MΩ:±5%rdg >1MΩ:±3%rdg	<30kΩ:±20%rdg 30kΩ-1MΩ:±5%rdg >1MΩ:±3%rdg
When Voltage is constant, Current is Limited at	±1.2mA	±1.2mA
Short Circuit Current	±4mA Max	±4mA Max

Continuity Test

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

Voltmeter

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

MOV Test

Test Voltage	—————	5-1020Vdc
Voltage Result Accuracy	—————	±3%
Voltage Result Resolution	—————	±2 counts

GAS Arrester Test

Test Voltage	—————	5-1020Vdc
Voltage Result Accuracy	—————	±3%
Voltage Result Resolution	—————	±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	5Ω	
Buzzer Threshold	3Ω	
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) Instruction manual	Shoulder belt Batteries



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