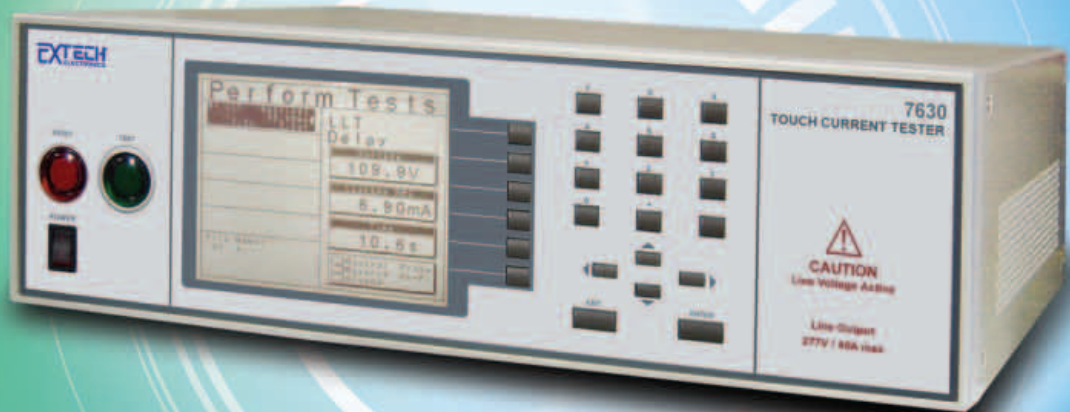


**全自動測試，組合性強，兼具大功率負載
量測能力，及便利的測試資料收集功能**



產品特點:

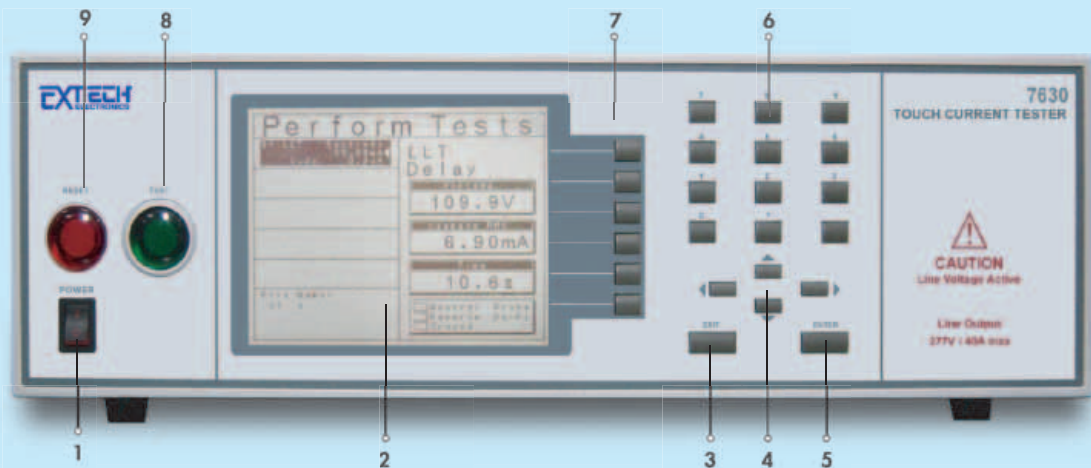
- 內建七組 MD,且可外擴一組 MD
- 量測頻寬 DC ~ 1MHz
- 10KVA / 40A 負載可直接量測
- 模擬多種接觸電流測試狀態
- 選配 75mApeak / 35mArms 量測範圍
- 選配 USB - A 測試資料收集功能
- 50 個記憶組，每組 30 個測試步驟

產品描述

全新開發7630 全功能接觸電流測試器，其內建標準七組人體模擬阻抗模型 Measuring Device (MD)，基本涵蓋了絕大部份安規標準MD要求。除了滿足IEC60990接觸電流量測方法的要求，也符合全新安規標準接觸電流測試規範；如醫療器具 (IEC60601-1) 對地漏電流測試、外殼漏電流測試、患者漏電流測試及患者輔助漏電流測試的要求，資訊產品 (IEC60950-1) 的測試標準、家用電器 (IEC60335-1) 的測試標準、音視頻產品 (IEC60065) 測試標準…等。另外還提供一組外接 MD 方便客戶擴充使用，以因應非常特殊標準要求。此外，還可選擇量測接觸電流為有效值(RMS)或峰值(Peak)，量測頻寬從 DC~1MHz，且 MD 透過 BNC 量測端子，可外接示波器或電壓錶方便對 MD 進行校準是實驗室、安規檢測機構的必選測試設備。7630 全功能接觸電流測試器可直接測試大功率負載 (Max.10KVA / 40A) 的接觸電流，同時，儀器可以模擬多種安規標準中要求接觸電流測試狀態，使得測試過程快捷、準確。

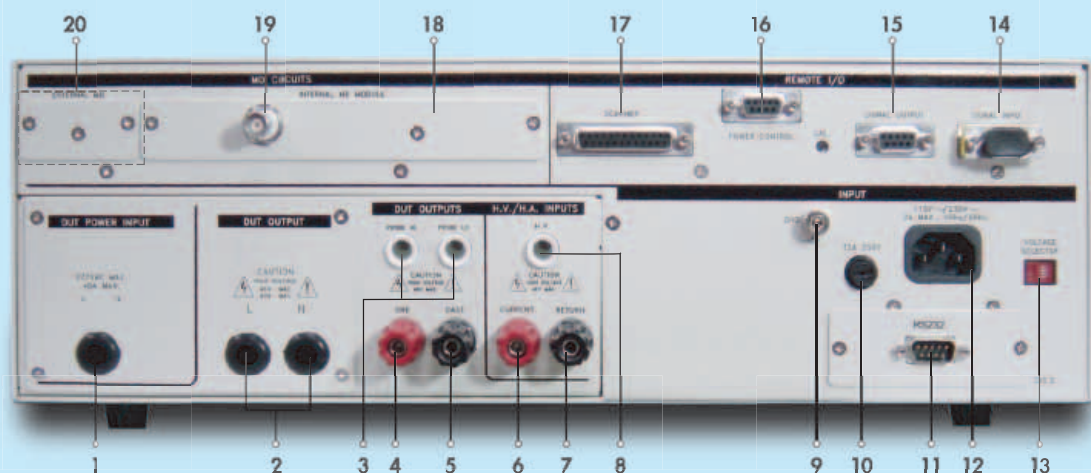
面版簡易說明

7630 正面:



- | | | |
|------------------------------|----------------|-------------|
| 1. POWER 輸入電源開關 | 4. CURSOR 方向按鍵 | 7. 功能選擇鍵 |
| 2. 320 x 240 Graphic LCD 顯示器 | 5. ENTER 鍵 | 8. TEST 開關 |
| 3. EXIT 鍵 | 6. 數字鍵 | 9. RESET 開關 |

7630 背面: (含選配)



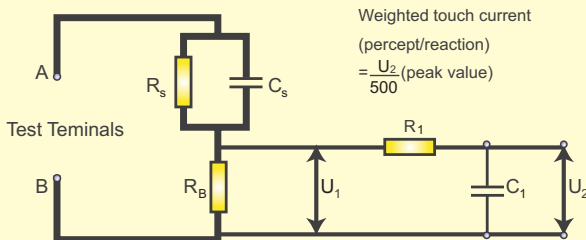
- | | | |
|-------------------------|----------------------|------------------------|
| 1. 被測物電源供應端子 | 8. H. V. 端子 | 15. SIGNAL OUTPUT 端子排 |
| 2. 輸出至被測物 L/N 端子 | 9. 接地端子 | 16. POWER CONTROL 端子 |
| 3. PROBE HI/PROBE LO 端子 | 10. 保險絲座 | 17. SCANNER 端子 |
| 4. GND 端子 | 11. INTERFACE 裝置 | 18. 內部七個標準 MD 模組 |
| 5. CASE 端子 | 12. 輸入電源座 | 19. MD 輸出訊號(外接示波器/電壓表) |
| 6. CURRENT 端子 | 13. 輸入電壓選擇開關 | 20. 外部擴充 MD |
| 7. RETURN 端子 | 14. SIGNAL INPUT 端子排 | |

產品特點和優勢

- 內建 7 組 MD，且可外擴一組 MD**
 一台儀器就可以滿足多種安規標準的測試要求
- 可選配 IEC60065 最大接觸電流量測**
 最大峰值 75mA_{peak} / 有效值 35mA_{RMS}
- 量測頻寬 DC~1MHz**
 完全符合 IEC 標準的量測規定
- 可直接測試大功率負載的接觸電流**
 最大容量 10KVA / 40Arms，啟動瞬間可承受 250A_{peak} 不作切斷保護
- 可以直接驗證儀器內部 MD 線路**
 符合 IEC60990 要求，直接驗證 MD 線路
- MD 具有外接 BNC 端子**
 可外接電壓表或示波器，方便對 MD 進行校準
- 模擬多種接觸電流測試狀態**
 自動完成測試狀態，不用人工切換測試開關
- GPIO or RS232 通訊界面**
 提供多種控制界面，方便客戶使用
- 多功能界面卡**
 內建 USB-A 界面，可儲存 10 萬筆資料，方便客戶進行資料的收集
- 可選配產品電氣性能 (RUN) 測試模組**
 可量測功率 / 電壓 / 電流 / 功率因數
- 可與華儀電子其他安規測試器連結**
 組成安規六合一 測試系統
 ACW / DCW / IR / GB / RUN & TC(LLT)
- 超大型 320 x 240 Graphic LCD**
 可同時顯示量測電壓/接觸電流及測試時間
- 50 個記憶組，每組 30 個測試步驟**
 可以設定產品的類別及測試條件，提高測試效率
- 保護密碼設定**
 當密碼設定後可以限制使用者操作權限，防止誤操作

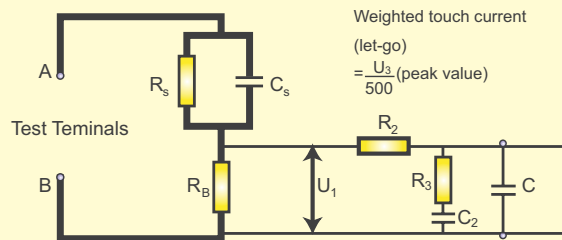
內建七個人體模擬阻抗模型 (MD)，且可擴充一組

MD1=IEC60990 Fig4 U₁ & U₂, IEC60950-1



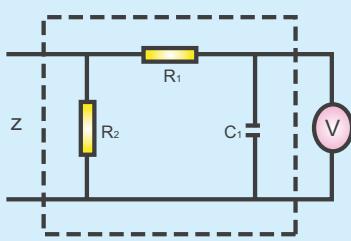
$R_s=1500\Omega$, $R_B=500\Omega$, $R_1=10000\Omega$, $C_1=0.022\mu F$, $C_s=0.22\mu F$

MD2=IEC60990 Fig5 U₁ & U₃, IEC60598-1



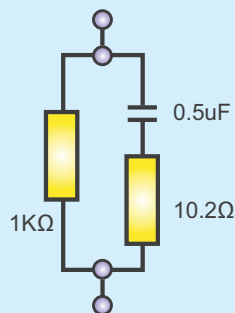
$R_s=1500\Omega$, $R_B=500\Omega$, $R_3=20000\Omega$, $C_2=0.0062\mu F$, $C_3=0.0091\mu F$, $C_s=0.22\mu F$

MD3=IEC60601-1

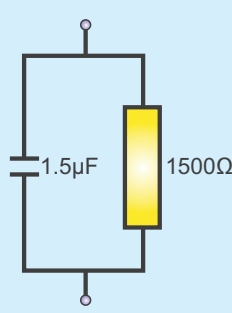


$R_1=10K\Omega \pm 5\%$
 $R_2=1K\Omega \pm 1\%$
 $R_3=0.015\mu F \pm 5\%$

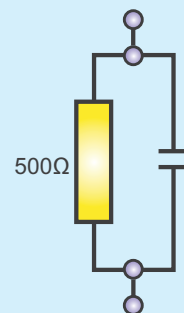
MD4=UL544P



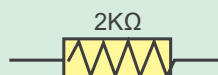
MD5=UL544NP



MD6=UL1563



MD7=IEC60950-1 (Limit Values) (For RUN Test)

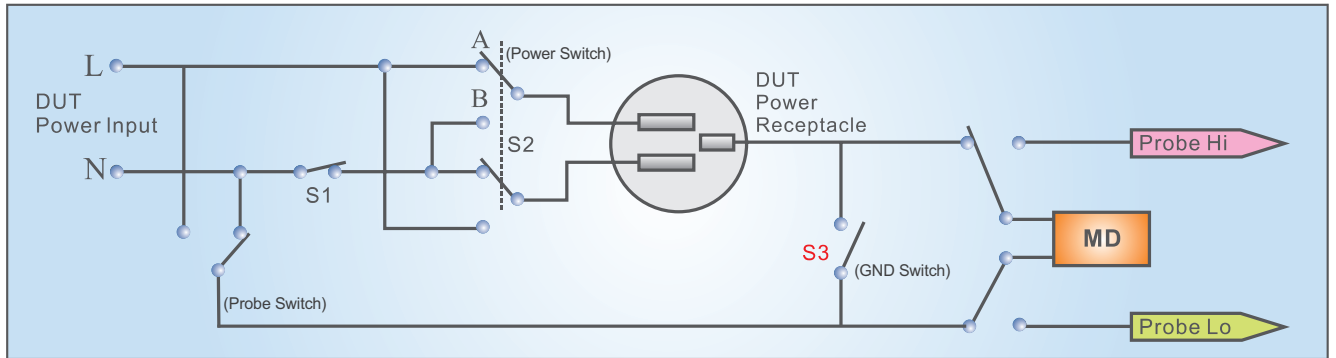


External MD (Option)



上述人體模擬阻抗模型，基本涵蓋了目前通用的IEC、UL等標準，包括IT、家用電器、醫療設備、音頻視頻產品、燈具、電動工具等。對於特殊的其他標準，可以通過外接MD方式使用。

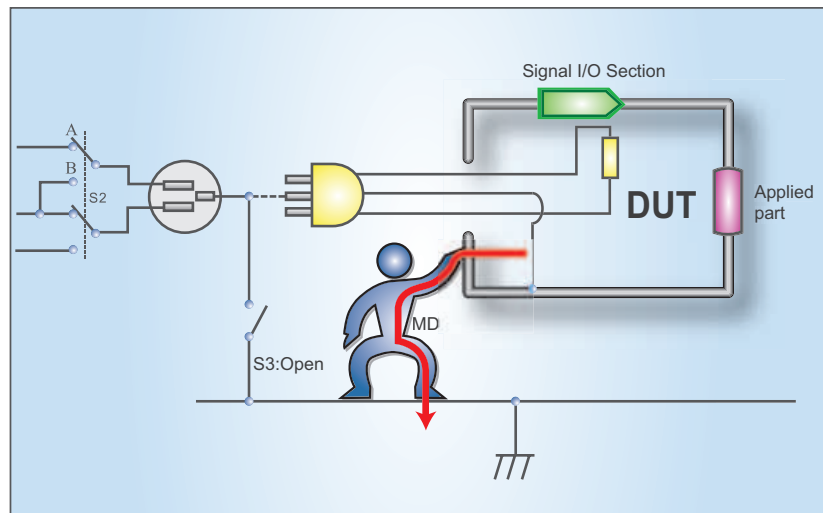
產品描述



洩漏電流測試

◆ 對地漏電流 (Earth Leakage Current), G-L

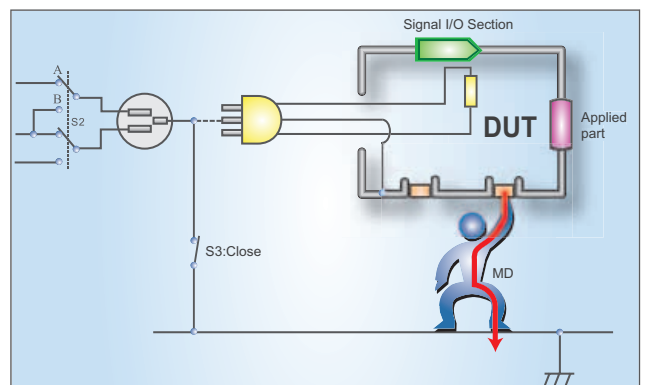
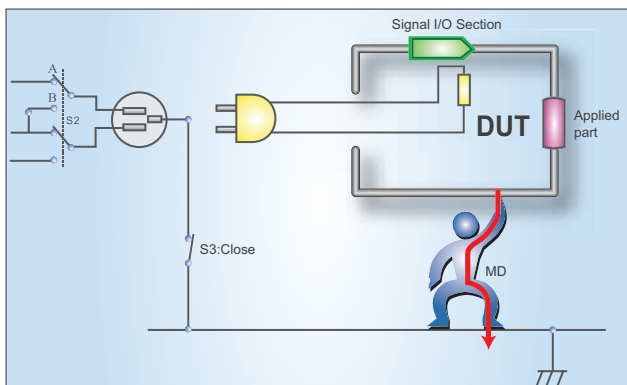
對地漏電流測試主要是針對 Class I 的產品，模擬當接地保護導體 (Protective Conductor) 到接地線斷路時，經由人體流到地 (GND) 產生的漏電流。



◆ 表面對地漏電流 (Surface to Line Leakage Current), PH-L

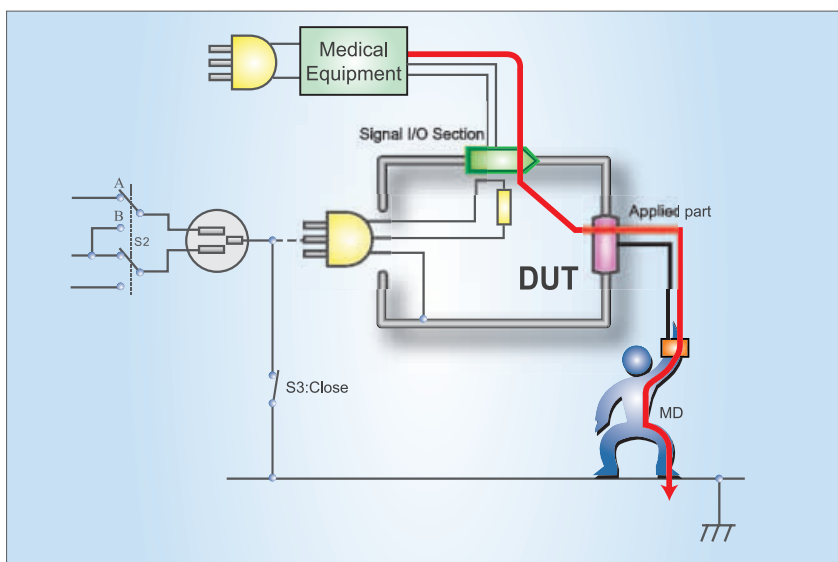
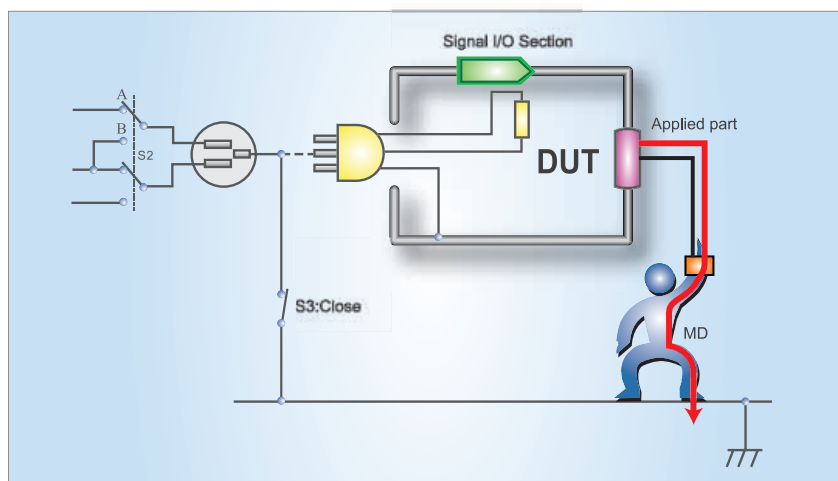
(1) 外殼漏電流 (Enclosure Leakage Current)

該電流主要針對 Class I 產品中的 Class II 結構，或者 Class II 產品外殼，模擬人體去接觸被測物 (DUT) 非金屬或是金屬但與地 (GND) 非相連接部件產生的漏電流。



(2) 患者漏電流 (Patient Leakage Current)

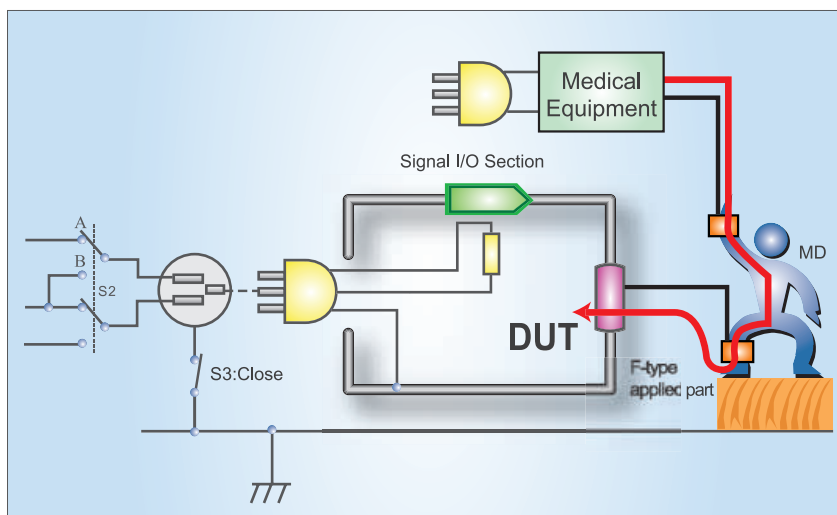
針對醫療設備的漏電流測試，從應用部件經患者流到地 (GND) 的漏電流，或被測物經外部輸入 / 輸出訊號 (Signal I / O Section) 量測從F型應用部件經患者流到地 (GND) 的漏電流。



◆ 表面間漏電流 (Surface to Surface Leakage Current) , $P_H - P_L$

(1) 患者輔助漏電流 (Patient Leakage Current)

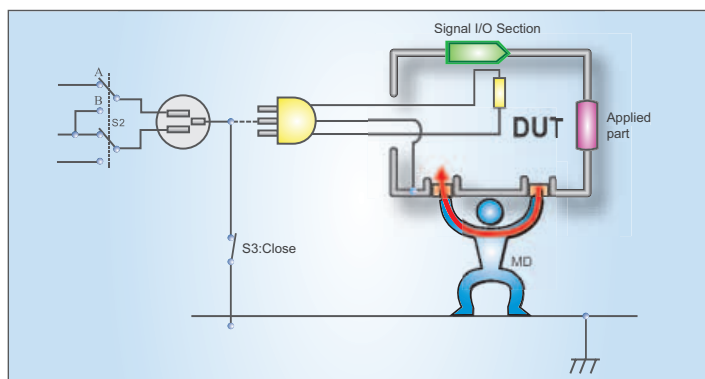
正常使用時，流入處於應用部份部件之間的患者電流，此電流預期不產生生理效應。



F型應用部件：應用部件需與設備的所有其他部位相隔離，當電壓等於 1.1 倍的最高額定電源電壓施加於應用部件與地之間，在這樣的條件下可容許患者漏電流在單一故障條件下不超過標準的容許值。

(2)外殼任意兩點間漏電流 (Enclosure to Enclosure Leakage Current)

該漏電流是量測被測物 (DUT) 的任意兩點間與地 (GND) 無關流經人體的漏電流。



組成安規測試系統

7630 接觸電流測試器，可以和華儀電子的其他安規測試儀器連結，組成安規自動測試系統如附圖顯示 7630 Link 7742(ACW/DCW/IR/GB) + 6700 系列可程式交流電源供應器。只要簡單的按下一測試鍵，即可完成整合性安規六合一交流耐壓 / 直流耐壓、絕緣電阻、接地阻抗、接觸電流 (洩漏電流)、產品電氣性能綜合測試，方便快捷，有效提高生產測試效率。



7630+7742+ 6700 系列 安規六合一
ACW / DCW / IR / GB / RUN & Touch Current (TC)

Specifications

INPUT			
Voltage	115/230 VAC \pm 15%		
Frequency	50/60 Hz \pm 5%		
Fuse	2A Slow-Blo 250V AC		
Line condition			
Power Switch	Reverse polarity switch for normal condition (on / off / auto setting)		
Neutral Switch	Neutral switch on/off selection for single fault condition		
Ground Switch	Ground switch on/off selection for class I single fault condition		
Probe Setting			
Surface to Surface (PH- PL)			
Surface to Line(PH - L)			
Ground to Line (G - L)			
Ground to Neutral (G - N)			
Auto Function (G - N & G - L)			
SETTING			
Touch Current High Limit (RMS)	Range:	0.0uA~ 999.9uA/ 1000uA~5999uA/ 6.00mA~20.00mA	
	Resolution:	0.1uA/1uA/0.01mA	
Touch Current Low Limit (RMS)	Range:	0.0~999.9 uA	
	Resolution:	0.1uA	
Touch Current High Limit (Peak)	Range:	0.0uA - 999.9uA/ 1000uA - 9999uA/ 10.0mA - 30.0mA	
	Resolution:	0.1uA/1uA/0.1mA	
Touch Current Low Limit (Peak)	Range:	0.0~999.9 uA	
	Resolution:	0.1uA	
DISPLAY			
Touch Current Display (RMS)	Range 1	0.0uA~ 999.9uA, frequency DC - 1MHz	
	Resolution	0.1uA	
	Accuracy	DC : \pm (2% of reading + 3counts)	
		15Hz \leq f < 100KHz : \pm (2% of reading + 3counts)	
		100KHz \leq f \leq 1MHz : \pm 5% of reading (10.0uA - 999.9uA)	
	Range 2	1000uA~8500uA, frequency DC - 1MHz	
Resolution	1uA		
Accuracy	DC : \pm (2% of reading + 3counts)		

Specifications

Touch Current Display (RMS)	Accuracy	15Hz ≤ f < 100KHZ : ± (2% of reading + 3counts) 100KHz ≤ f ≤ 1MHz : ± 5% of reading (10uA - 6000uA)
	Range 3	8.00mA~20.00mA, frequency DC - 1MHz
	Resolution	0.01mA
	Accuracy	DC : ± (2% of reading + 3counts) 15Hz ≤ f ≤ 1MHz : ± 5% of reading (0.01mA -20.00mA)
Touch Current Display (Peak)	Range 1	0.0uA~ 999.9uA, frequency DC - 1MHz
	Resolution	0.1uA
	Accuracy	DC : ± (2% of reading +2uA) 15Hz ≤ f ≤ 1MHz : ±(10% of reading +2uA)
	Range 2	1000uA ~ 8500uA, frequency DC - 1MHz
	Resolution	1uA
	Accuracy	DC : ±(2% of reading +2counts) 15Hz ≤ f ≤ 1MHz : ±(10% of reading +2counts)
	Range 3	8.0mA ~ 30.0mA, frequency DC - 100KHz
	Resolution	0.1mA
	Accuracy	DC : ±(2% of reading +2counts) 15Hz ≤ f ≤ 100KHz : ±(10% of reading +2counts)
	Measuring Device Module	
MD1	IEC60990 Fig4 U ₂ , IEC 60950-1, IEC60335-1, IEC60598-1, IEC60065, IEC61010 IEC60990 Fig4 U ₁ , IEC60065	
MD2	IEC60990 Fig5 U ₃ , IEC60598-1 IEC60990 Fig5 U ₁	
MD3	IEC 60601-1	
MD4	UL544NP, UL484 , UL923, UL471, UL867, UL697	
MD5	UL544P	
MD6	UL1563	
MD7	IEC60950, IEC61010-1 FigA.2 (2K ohm) for RUN Test MD Circuit.	
External MD	Basic measuring element 1k ohm	
MD Voltage Limit	Maximum 70 Vpeak or 70 VDC	
Leakage Current Offset	Range:	0 - 999.9uA
	Resolution:	0.1uA
DUT POWER		
AC Voltage	0.0-277.0V	
AC Current	40Arms max continuous	
Over Current Protection	50Arms, Response Time < 3 sec / 250Apeak Response Time <10u sec	
AC Voltage High/Low Limit	Range:	0.0-277.0V
	Resolution:	0.1V/step
AC Voltage Display	Range:	0.0 - 277.0 V
	Resolution:	0.1 volt / step
	Accuracy:	±(1.5% of reading + 2 counts) , 30.0 - 277.0VAC
Delay time setting	Range:	0.5 -999.9 seconds
	Resolution:	0.1 second
Dwell time setting	Range:	0, 0.5 -999.9 seconds
	Resolution:	0.1 second
Timer display	Range:	0.0 - 999.9 seconds
	Resolution:	0.1 second
	Accuracy:	±(0.1% of reading + 0.05 seconds)
GENERAL		
PLC Remote Control	Input - Test, Reset, Interlock & Recall File 1 through10	
	Output - Pass, Fail, Test-in-Process, Start-Out, Reset-Out	
Scanner Control	It is applied to control Matrix Scanner (Model 7006)	
Memory	50 memories , 30steps per each memory. Max. Result Display 900 data (30 memories x 30 steps)	
Auto Reverse Function	AUTO Reverse ON / OFF parameter setting selection Automatic Reverse polarity switch for normal condition in one step setting menu. Only display maximum leakage current value.	
Scope Output Interface	At rear panel BNC type to connet scope for some IEC standards test requirement and application.	
Display	320 X 240 graphic LCD	
LCD Contrast Setting	Range: 1-9; 1 is lightest character, 9 is darkest character.	
Alarm Volume Setting	Range: 0-9; 0=OFF, 1 is softest volume, 9 is loudest volume.	
Security	Lockout capability to avoid unauthorized access to test set-up programs.	
Calibration	Software and adjustments are made through front panel, Automatic Calibration alert function to signal operator when calibration is due.	
Results Display	All test result information will be displayed on the screen.	
Interface	RS232 standard	
Safety	Product with TUV / GS certificate	
Dimension	430 (W) x 133(H) x 300 (D) mm	
Weight	12Kg	

Specifications

OPTION		
RUN Module (Opt.752)		
W	Range : 0-1KW / 1-10KW Resolution : 0.5W / 5W	
A	Range : 0.000 - 3.500A / 3.00 - 40.00A, Resolution : 0.001A/ 0.01A	
PF	0.000 -1.000	
Leakage Current	Range : 0.00 - 10.00mA , Resolution : 0.01mA	
AC Current High/Low Limit Setting	Range:	0-40A
	Resolution:	0.01A / step
AC Current Display	Range:	0.000 -3.500A/ 3.00 - 40.00A
	Resolution:	0.001A / 0.01A
	Accuracy :	±(2 % of reading + 5 counts) / ± (2 % of reading + 2 counts)
AC Power High/Low Limit Setting	Range:	0 - 10KW
	Resolution:	1W
AC Power Display	Range:	0.0 - 1000.0W
	Resolution:	0.5W / 5W
	Accuracy :	± (2 % of reading + 2 counts)
Power Factor High/Low Limit Setting	Range:	0.000 - 1.000 / 1000 - 10000W
	Resolution:	0.001
Power Factor Display	Range:	0.000 - 1.000
	Resolution:	0.001
	Accuracy :	± (2 % of reading + 2 counts)
Leakage Current High/Low Limit Setting	Range:	0.00 - 10.00mA
	Resolution:	0.01mA
Leakage Current Display	Range:	0.00 - 10.00mA
	Resolution:	0.01mA
	Accuracy :	± (2 % of reading + 2 counts)
Delay Timer Setting	Range:	0.5 - 999.9 seconds
	Resolution:	0.1 second
Dwell Timer Setting	Range:	0, 0.5-999.9 seconds (0=continuos)
	Resolution:	0.1 second
Timer display	Range:	0.0- 999.9 seconds
	Resolution:	0.1 second
	Accuracy:	± (0.1% of reading + 0.05 seconds)
Power Control	It is applied to control Transformer Box (1931/1931S) or AC Power Source(6700/6800/6400 Series)	
HV & GB Link Module (Opt. 753)		
Max. ACW 4000VAC, DCW 4000VDC & Max. Ground Bond 40A		
GPIB Interface Card (Opt. 731)		
Printer Port Interface Card (Opt. 732)		
Multi-function Interface Card (Opt. 751)		
High Measurement Range 35mArms / 75mApeak & 4MDs (Opt. 754)		
35mArms / 75mApeak for IEC60990 fig4(U1 and U2), IEC60990 fig5(U1 and U3), UL484, IEC60601		
Test Requirement , Notice : Option this MD circuit have to replace MD module all MD circuits .		
Transformer Box (Option) Add this option must optional Opt.752 RUN Module.		
1931 Series Transformer Box (500VA/ 1KVA/1.8KVA/3.6KVA)	Multi-Tape of 1.0, 1.06, 1.1 times of input voltage.	
1931-S Series Transformer Box (500VA/ 1KVA/1.8KVA/3.6KVA)	Multi-Tape of 0.8, 0.85, 0.9, 1.0, 1.06, 1.1 times of input voltage.	
AC Power Source (Option) Add this option must optional Opt.752 RUN Module.		
6800 Series Digital AC Power Source (6805, 6810 , 6820 , 6830 and 6840)		
6700 Series Programmable AC Power Source (6705, 6710 , 6720 , 6730 and 6740)		
6400 Series AC Power Source (6402, 6403, 6405, 6410)		

* product specifications are subject to change without notice.

Ordering Information

- ★ 7630 Touch Current Tester
- ★ Opt.752 RUN Module
- ★ Opt.753 HV & GB Link Module
- ★ Opt.754 High Measurement Range 35mArms / 75mApeak & 4MDs
- ★ Opt.731 GPIB Interface Card
- ★ Opt. 732 Printer Port Interface Card
- ★ Opt.751 Multi-function Interface Card
- ★ 1148 DUT Power Cable 40A
- ★ 1149 DUT Power & HV Cable 40A /4 KV
- ★ 1931 Series Transformer Box (500VA/ 1KVA/1.8KVA/3.6KVA)
- ★ 1931-S Series Transformer Box (500VA/ KVA/1.8KVA/3.6KVA)
- ★ 6800 Series Digital AC Power Source (6805, 6810 , 6820 , 6830 and 6840)
- ★ 6700 Series Programmable AC Power Source (6705, 6710 , 6720 , 6730 and 6740)
- ★ 6400 Series AC Power Source (6402, 6403, 6405, 6410)
- ★ 7006 Matrix Scanner
- ★ 1932 LLT Receptacle Adaptor Box for 7630
- ★ 1101 Hipot Test Lead for 7630 PH / PL
- ★ 1223 Hipot / Ground Bond Output Link Lead for 7630 Link to 7440 / 7452



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