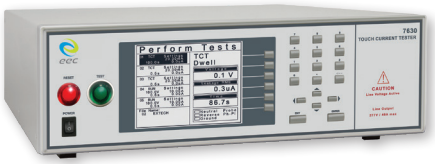
# 7630 Touch Current Tester



The 7630 series is the complete full set of touch current analyzer. It is built-in with different measuring devices (MD) and testing conditions meeting any environmental simulation. The 7630 also integrate a dynamic load monitoring function capable of handling with up to 40A. Remotely control the 7630 via RS-232 to form an automatic testing system.

## Key Highlight

- 7 different human body simulation measuring devices (MD).
- 8 different testing fault condition simulations.
- Prompt & Hold function: provides alerts and instructions between tests.
- Capable of handling up to 40A DUT power.
- Simulate human body impedance (MD) and simultaneously displaying both voltage and touch current during the measurement results.
- Swappable measuring device (MD) for quick calibrations, maintenances, and replacements.
- Provided with touch current to measure AC/DC/ AC+DC in conformity to the IEC 60601 standard for medical electrical equipment.

## Available Interface

USB

RS-232

Ethernet (optional)

GPIB (optional)

## 7630 Product Specifications

| MODEL | | 7630 |
|---|---|---|
| **INPUT** | | |
| Voltage (AC) | | 115/230V ± 15% |
| Frequency | | 50/60Hz ± 5% |
| **TOUCH CURRENT** | | |
| Line Condition | | Power Switch：Reverse polarity switch for normal condition (on/off/auto setting)<br>Neutral Switch：Neutral switch on/off selection for single fault condition<br>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) |
| Leakage Current & Imax Display Range1 (RMS) | | 0.0μA-20.00mA |
| Leakage Current & Imax Resolution (RMS) | 0.0-999.9μA | 0.1μA |
| | 1000-8399μA | 1μA |
| | 8.40-20.00mA | 0.01mA |
| Leakage Current & Imax Accuracy (RMS) (AC + DC) | DC | ±(2% of reading + 3 counts)[2] |
| | 15Hz < f < 100kHz | ±(2% of reading + 3 counts)[2] |
| | 100kHz < f < 1MHz | ±(5% of reading) (> 10.0μA) |
| Leakage Current & Imax Accuracy[3] (RMS) (AC) | 15Hz < f < 30Hz | ±(3% of reading + 5 counts)[2] |
| | 30Hz < f < 100kHz | ±(2% of reading + 3 counts)[2] |
| | 100kHz < f < 1MHz | ±(5% of reading) (> 10.0μA) |
| Leakage Current & Imax Accuracy[4] (RMS) (DC) | | ±(2% of reading + 3 counts)[2] (> 10.0μA) |
| Leakage Current & Imax Display Range[1] (Peak) | | 0.0μA-30.00mA |
| Leakage Current & Imax Resolution (Peak) | 0.0-999.9μA | 0.1μA |
| | 1000-8399μA | 1μA |
| | 8.40-30.00mA | 0.01mA |
| Leakage Current & Imax Accuracy (Peak) (AC + DC) | DC | ±(2% of reading + 3 counts) |
| | 15Hz < f < 1MHz | ±(10% of reading + 2μA)[5] |
| Leakage Current & Imax Accuracy[2] (Peak) (AC) | 15Hz < f < 1MHz | ±(10% of reading + 2μA)[5] |
| Touch Voltage Display Range (RMS) | MD Resistance is 0.5kΩ | 0.0mV-10.00V |
| | MD Resistance is 1kΩ | 0.0mV-20.00V |
| | MD Resistance is 1.5kΩ | 0.0mV-30.00V |
| Touch Voltage Resolution (RMS) | 0.0-999.9mV | 0.1mV |
| | 1000-8399mV | 1mV |
| | 8.40-10.00V | 1V |
| Touch Voltage Accuracy (RMS) (AC + DC) | DC | ±(2% of reading + 3 counts)[6] |
| | 15Hz < f < 100kHz | ±(2% of reading + 3 counts)6[6] |
| | 100kHz < f < 1MHz | ±(5% of reading) (> 10.0mV) |
| Touch Voltage Accuracy[2] (RMS) (AC) | 15Hz < f < 30Hz | ±(3% of reading + 5 counts)[6] |
| | 30Hz < f <100kHz | ±(2% of reading + 3 counts)[6] |
| | 100kHz < f < 1MHz | ±(5% of reading) (> 10.0mV) |
| Touch Voltage Accuracy[3] (RMS) (DC) | | ±(2% of reading + 3 counts)6 (> 10.0mV) |

| MODEL | | 7630 |
|---|---|---|
| Touch Voltage Display Range (Peak) | MD Resistance is 0.5kΩ | 0.0mV-15.00V |
| | MD Resistance is 1kΩ | 0.0mV-30.00V |
| | MD Resistance is 1.5kΩ | 0.0mV-45.00V |
| Touch Voltage Resolution (Peak) | 0.0-999.9mV | 0.1mV |
| | 1000-8399mV | 1mV |
| | 8.40-15.00V | 1mV/1V |
| Touch Voltage Accuracy (Peak) (AC + DC) | DC | ±(2% of reading + 3 counts)[7] |
| | 15Hz < f < 1MHz | ±(10% of reading + 2mV) |
| Touch Voltage Accuracy[2] (Peak) (AC) | 15Hz < f < 1MHz | ±(10% of reading + 2mV)[7] |
| Measuring Device (MD) | MD1 | IEC60990 Fig4 U2, IEC 60950-1, IEC60335-1, IEC60598-1, IEC60065, IEC61010, IEC 62368-1 |
| | | IEC60990 Fig4 U1 |
| | MD2 | IEC60990 Fig5 U3, IEC60598-1, IEC 62368-1 |
| | | IEC60990 Fig5 U1 |
| | 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 & Frequency check | Basic measuring element 1kΩ |
| MD Components Accuracy | | Capacitance : ± 1%; Resistance : ± 1% |
| MD Voltage Limit | | Maximum 70Vpeak or 70Vdc |
| Leakage Current Offset | | 0-6500μA |
| DUT Power Rating (AC) | | 277.0V/40 Arms max continuous |
| Voltage Display Range | | 0.0-277.0V |
| Voltage Display Resolution | | 0.1V/step |
| Voltage Accuracy | | ±(1.5% of reading + 2 counts) , 30.0-277.0V |
| Over Current Protection | | 50 Arms, Response Time < 2 s/250Apeak Response Time < 10us |
| Delay Timer | AC + DC | 0.5-999.9s |
| | AC/DC only Auto range | 1.8-999.9s |
| | AC/DC only Fixed range | 1.3-999.9s |
| Dwell Timer | AC + DC | 0, 0.5-999.9s (0 = continuous) |
| | AC/DC only | 0, 0.1-999.9s (0 = continuous) |
| Timer Resolution | | 0.1s |
| Timer Accuracy | | ±(0.1% of reading + 0.05s) |

| MODEL | | 7630 |
|---|---|---|
| **HIGH MEASUREMENT RANGE 35mArms/75mApeak (Optional)** | | |
| Measuring Device (MD) | MD1 | IEC60990 Fig4 U2, IEC 60950-1, IEC60335-1, IEC60598-1, IEC60065, IEC61010 |
| | MD2 | IEC60990 Fig4 U1 |
| | MD3 | IEC60990 Fig5 U3, IEC60598-1 |
| | MD5 | IEC60990 Fig5 U1 |
| **RUN TEST** | | |
| Power Measurement Range | | 0.0 - 10kW |
| Power Accuracy | | ± (5% of reading + 3 counts) |
| Power Factor | | 0.000 - 1.000 |
| Power Factor Accuracy | | ± (8% of reading + 2 counts) |
| Voltage Measurement Range(AC) | | 0.0 - 277.0V , 1ø |
| Voltage Accuracy | | ± (1.5% of reading + 2 counts) |
| Current Measurement Range(AC) | | 0.000 - 40.00A |
| Current Accuracy | | ± (2% of reading + 5 counts) |
| Leakage Current Measurement Range | | 0.00 - 10.00 mA |
| Leakage Current Accuracy | | ± (2% of reading + 2 counts) |
| MD (L-G) | | Resistor MD 2kΩ ± 1% |
| **GENERAL** | | |
| Remote Input Signal | | Test, Reset, Interlock, Recall File 1 through 10 |
| Remote Output Signal | | Pass, Fail, Test-in-Process, Start-Out, Reset-Out |
| Memory | | 40 memories, 30 steps/memory Max. Result Display 900 data (30 memories x 30 steps) |
| Auto Reverse Function | | AUTO Reverse ON/OFF parameter setting selection<br>Automatic Reverse polarity switch for normal condition in one step setting menu<br>Only display maximum leakage current value |
| Scope Output Interface | | At rear panel BNC type to connect scope for some IEC standards test requirement and application |
| Display | | 320 x 240 graphic LCD/Contrast 9 Levels 1-9 |
| Interface[8] | | Standard USB & RS232, Optional Ethernet, GPIB |
| External Scanner port | | Yes |
| Op./Non-Op. Temp./Humidity | | 0 to 40°C/-40 to 75°C/20 to 80%RH |
| Dimension (W × H × D), mm | | 430 x 133 x 300 |
| Weight | | 12kg |
| **INBOX ACCESSORIES** | | |
| Power Cable (10A)*1; Fuse*1; 1102 Hipot Return Lead - Alligator Clip*2; 1148 DUT Power Cable (3 Wires)*1; 1151 DUT Power Cable (2 Wires)*1; 1224 USB Cable*1; 1505 Interlock Disable Key*1 | | |

***Product specifications are subject to change without notice**

1. For Leakage Current: if the final measured signal is > 5mA, then the maximum composite signal can be measured is 28Vpeak. If the final measured signal is ≤5mA, then the maximum composite signal can be measured is 12Vpeak.
   For Leakage Voltage: if the final measured signal is > 8V, then the maximum composite signal can be measured is 28Vpeak. If the final measured signal is ≤8V, then the maximum composite signal can be measured is 12Vpeak.
2. When current > 5mA, the accuracy is ±(5% of reading).
3. AC cutoff frequency for High Pass Filter is 15Hz on AC only mode.
4. AC cutoff frequency for Low Pass Filter is 15Hz on DC only mode.
5. When current > 5mA & 15Hz < f < 100kHz, the accuracy is ±(10% of reading + 2 counts).
6. When voltage > 8V, the accuracy is ±(5% of reading).
7. When voltage > 8V & 15Hz < f < 100kHz, the accuracy is ±(10% of reading + 2 counts).
8. Only one interface can be selected among RS232 & USB, GPIB & Ethernet interface card.

## Models

- 7630 Touch Current Tester

## Options

- OPT.109 Replace RS232 Interface by GPIB Interface
- OPT.754 High Measurement Range 35mArms/75mApeak & 4MDs
- OPT.760 HV (5kVac/6.0kVdc) & GB(40A) Link Module
- OPT.766 AC/DC/AC + DC Touch Current Measurement
- OPT.789 MD Module (5MDs)JIS C9250, UL544NP, UL1563
- OPT.7020 MD 1k ohm (non-inductive resistor)
- OPT.7021 MD NFPA99 Figure A.8.4.1.3.3
- OPT.7022 MD IEC60974
- OPT.7023 MD IEC60598-1
- OPT.7024 MD NFPA99 Figure A.4.3.3.1.3b
- OPT.7025 MD NFPA99 Figure A.4.3.3.1.3a
- OPT.7027 MD 2k ohm (non-inductive resistor)
- 7006 Matrix Scanner
- 6600 Series Programmable AC Power Source (6605, 6610, 6620, 6630, 6650)
- 6700 Series Programmable AC Power Source (6705, 6710, 6720, 6730, 6740)

Note: 1. OPT.754, OPT.766 & OPT.789 are mutually exclusive, only one Option can be selected.
- OPT.789: UL544P, IEC60601 and External MD will be disable and OPT.789 is mutually exclusive with OPT.754, OPT.7020-OPT.7027.
2.OPT.7020 to OPT.7027 are mutually exclusive, only one Option can be selected.