

# Developed according to international standards and the way you test

## DEFINITION

THE SAFETYTESTER IS THE GENERIC TERM TO COVER THE 3 OR 4 TESTS OF THE ELECTRICAL SAFETY STANDARDS, FROM THE INTERNATIONAL STANDARDS



- ground bond test (also called bonding test, ground continuity test)
- insulation test (also called high resistance test, megger test)
- hipot test to make a high voltage test (also called dielectric strength test, hipot test, hi-pot test, breakdown test or flash test)
- leakage current measurement (also called line leakage test)

The final purpose of those tests is to validate that the product under test is safe for the end user, and complies with the quality requirements from the Low Voltage Directive (LVD), applicable to the corresponding standards (IEC335, IEC950, IEC601, IEC1010, IEC598, IEC990, IEC204...)

## APPLICATION

MANUFACTURER, LABORATORY, HIGH SPEED PRODUCTION, MAINTENANCE, IN ORDER TO COMPLY WITH THE LOW VOLTAGE DIRECTIVE

- IEC 335 household manufacturer (washing machines, coffee machines, fridges, heaters, boilers, ...)
- IEC 204 industrial equipment (compressor, electrical tools, ...)
- IEC 598 lighting industry (street lights, professional lighting, medical lighting, bulbs, ...)
- IEC 601 medical industry (scanners, surgery equipments, X-ray, electrical beds, ...)
- IEC 950 information technology industry (modems, satellite receivers, servers, printers, cash dispensers, ...)
- IEC 1010 measurement, control and laboratories industry (electrical meters, test & measurement equipment, ...)
- IEC 61439 low voltage switchgear and control gear assemblies (panel builders,...)

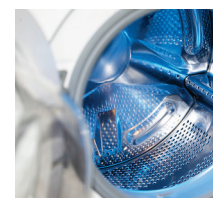
- IEC 990 technical report on leakage current measurement (many standards will refer to this report for leakage current measurement)
- IEC 61730-2, IEC 61215, IEC 61646, UL1703 (solar panels, inverters, converters, solar cables, solar connectors)

## SPECIFICATION OVERVIEW

FROM LABORATORY TO PRODUCTION TESTING, OUR RANGE COVERS THE FOLLOWING SPECIFICATIONS

- ground bond test from 5 A AC up to 40 A AC with resistance measurement from 1 mΩ up to 1.5 Ω
- insulation test up to 2 TΩ with DC Voltage from 10 V up to 1000 V DC (1V steps)

- hipot test with our "delta I" exclusive detection type for non destructive testing, up to 5 kV AC, 6 kV DC
- possible destructive hipot test (for investigation and laboratory use) but also hipot test at operating temperature
- leakage current measurement in single or three phases, according to all current international standards
- power measurement and cos φ measurement
- GPIB, RS232, Ethernet, 0-10 V, PLC available
- get our latest software platform for quality purposes, traceability and professional reporting



# Technical specifications

## Selector guide

From the below board select the right product according to your application

| Sefelec Electrical Safety Tester range | Ground continuity test (Ground bond test)    | AC/DC Dielectric strength test (Hipot test) | Insulation test (High resistance test)                        | Leakage current (Line leakage test)                   | Power measurement P, U, I cosφ                | Interface  | Software      |
|--|--|---|---|---|---|--|---------------|
| SXS50                                  | 5 - 32 A AC<br>40 A option<br>1 mΩ - 1.5 Ω   | 0 - 5 kV AC - 10 mA                         | 500 V DC<br>1000 V in option<br>50 kΩ - 200 GΩ<br>2 TΩ option | FXS501  | FXS501  | RS232 included,<br>GPIB, PLC,<br>0-10 V, Ethernet<br>in option | Yes in option |
| SXS56                                  | 5 - 32 A AC<br>40 A option<br>1 mΩ - 1.5 Ω   | 0 - 5 kV AC - 10 mA<br>0 - 6 kV DC - 4 mA   | 500 V DC<br>1000 V in option<br>50 kΩ - 200 GΩ<br>2 TΩ option | FXS501  | FXS501  | RS232 included,<br>GPIB, PLC,<br>0-10 V, Ethernet<br>in option | Yes in option |
| SXS500                                 | 5 - 32 A AC<br>40 A option<br>1 mΩ - 1.5 Ω   | 0 - 5 kV AC - 110 mA                        | 500 V DC<br>1000 V in option<br>50 kΩ - 200 GΩ<br>2 TΩ option | FXS501  | FXS501  | RS232 included,<br>GPIB, PLC,<br>0-10 V, Ethernet<br>in option | Yes in option |
| SXS506                                 | 5 - 32 A AC<br>40 A option<br>1 mΩ - 1.5 Ω   | 0 - 5 kV AC - 110 mA<br>0 - 6 kV DC - 50 mA | 500 V DC<br>1000 V in option<br>50 kΩ - 200 GΩ<br>2 TΩ option | FXS501  | FXS501  | RS232 included,<br>GPIB, PLC,<br>0-10 V, Ethernet<br>in option | Yes in option |
| SXS16                                  | 5 - 32 A AC<br>40 A option<br>1 mΩ - 1.5 Ω   | 100 V DC - 10 kV DC<br>1000 μA              | 500 V DC to 1500 V DC<br>1000 kΩ - 20 GΩ                      | -   | -   | RS232 included,<br>GPIB, PLC,<br>0-10 V, Ethernet<br>in option | Yes in option |
| PREMIER 2804                           | 3 - 30 A AC<br>up to 650 mΩ                  | 0 - 5 kV AC - 40 mA<br>0 - 6 kV DC - 10 mA  | 1000 V DC<br>up to 9.5 GΩ                                     | -   | -   | RS232, USB,<br>signal I/O<br>included                          | No            |
| MEMI2094 (portative)                   | 100 mA, 200 mA,<br>10 A, 25 A<br>10 mΩ - 1 Ω | 0 - 5 kV AC - 100 mA                        | 1000 V DC<br>0 - 1 GΩ   | IEC335, IEC950,<br>IEC598, IEC601,<br>IEC990          | Until 16A single<br>phase                     | RS232  | No            |
| FXS501 (slave)                         | XS Series                                    | XS Series                                   | XS Series   | IEC335, IEC950,<br>IEC598, IEC601,<br>IEC1010, IEC990 | Up to 63 A single<br>phase or three<br>phases | XS Series  | Yes in option |
| FMG500 (master)                        | -  | -   | -   | IEC335, IEC950,<br>IEC598, IEC601,<br>IEC1010, IEC990 | Up to 63 A single<br>phase or three<br>phases | RS232 included,<br>GPIB, PLC<br>in option                      | Yes in option |

For product datasheet, options and accessory details, or for more technical information, go to our website [www.sefelec.com](http://www.sefelec.com)

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