

SEFELEC SXS500-506

Electrical safety tester

The electrical safety testers in the SXS series carry out simply and comprehensively the electrical safety tests required by the principle standards concerned by the Low-Voltage Directive. The XS is a combination of a dielectric strength tester, a megohmmeter and an earth continuity controller.

Associated with an FXS rack, it carries out leakage current measurements under nominal voltage.

Standards EN 61010-1, EN 60335-1, EN 60950, EN 60598-1, EN 60601-1, EN 60204-1

TECHNICAL CHARACTERISTICS

- Dielectric strength test from 0 to 5 kV AC and from 0 to 6 kV DC (SXS506 model)
- Insulation resistance from 50 k Ω to 200 G Ω (2 T Ω option)
- Earth continuity from 1 m Ω to 1 500 m Ω from 5 to 32 A
- Leakage current and power measurement (with FXS rack)
- 8 test steps in sequence mode
- 10 parameter memories per function
- RS232 interface in series

As option: ETHERNET, PLC or IEEE488-2 interfaces

DIELECTRIC STRENGTH TEST FUNCTION

Output voltage

- 0 to 5 kV AC (50 or 60 Hz). Limited to 4.2 kV AC with the FXS501
- 0 to 6 kV DC (SXS506)
- Specification +/- (2 % + 50 V) of the programmed value between 100 and 5000 V and for a current < 1 mA (SXS500) with breakdown detection modes: ΔI , IMAX or ΔI +IMAX

Voltage reading

- On digital kilovoltmeter directly connected to the output terminals
- Specification: +/- (1.5 % + 20 V)
- Display: 600 digits

Voltage stability

- Better than 3 % for the mains supply variations of +/- 10 % (SXS500-506)

Current

- Short circuit > 200 mA AC (SXS500/506) and > 20 mA DC (SXS506) for the max. voltage adjustment
- Short circuit duration limited to 5 seconds
- Nominal 110 mA AC (SXS500-506) and 10 mA DC (SXS506)

Current reading

- On shunt inserted into the test circuit
- Specification: +/- (2.5 % + 2 U) 1 U = 0.1 mA (SXS500)
- Resolution: 1000 digits

Fault detection

- "DELTATEST" detector
- The ΔI detection allows complete insensitivity to the current due to the resistance and the capacitance of the sample tested.

- "IMAX" detector by maximum current adjustable from 0.1 mA to 110 mA by steps of 0.1 mA (SXS500-506)
- Combination of DELTATEST and IMAX modes

IMIN threshold function

- Detects whether the test probe is connected correctly to the sample
- Adjustable from 0.1 mA to 110 mA (SXS500)

DC Voltage Option

- Positive terminal to ground
- Residual ripple < 1 % for I < 1 mA (SXS506)

Fault detection signalling

- By visual indication (LCD screen and LED lights) and sound
- Memorisation of the voltage and default current on the LCD display unit
- Nominal HV source interruption when the sinusoid goes to zero

Voltage application time

- Adjustment of the rise, holding and fall times from 0 to 999 seconds

Memorisation

- Memorisation of 10 test parameter configurations (voltage, thresholds, time...)

MEGOHMMETER FUNCTION

Measurement range

- 50 k Ω to 200 G Ω (2 T Ω option XS-20)
- The insulation resistance is (UTEST/UMAX) x 200 G Ω

Specification

- +/- (1.5 % + 1 U)
- Display: 2000 digits

Thresholds

- A High threshold (allowing the presence of the element to be measured to be detected) and a Low threshold adjustable from 50 k Ω to 200 G Ω (2 T Ω option XS-20)

Measurement time

- Adjustable from 0 to 999 seconds or continuous

Measurement voltage

- Configurable in steps of 1V from:
- 10 V to 500 V DC or
- 20 V to 1000 V DC (option XS-26)
- Specification: +/- (1 % + 2 V)
- DC current: 2 mA



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Memorisation

- Memorisation of 10 test parameter configurations (voltage, thresholds, time...)

EARTH CONTINUITY FUNCTION

Measurement range

- 0.001 Ω to 1.500 Ω
- Possibility of displaying in voltage drop (Norm EN60204)

Specification

- +/- (2.5 % + 10 m Ω)
- Display: 1500 digits

Thresholds

- A High threshold and a low threshold adjustable from 0.001 Ω to 1.500 Ω
- Possibility of adjusting the threshold in volts (Norm EN60204)

AC measurement current

- 5 to 32 A AC by graduations of 0.5 A
- Specification: +/- (1 % + 0.5 A)
- Possibility of applying the current gradually from 5 A to the maximum value selected for the test.
- Voltage in open circuit: < 6 or < 12 V AC sinusoidal
- Frequency: mains supply (50 or 60 Hz)

CURRENT LEAKAGE MEASUREMENT

See the FXS501 technical sheet

SEQUENCE FUNCTION

8 test lines sequenced automatically among: Dielectric, insulation, Continuity, Leakage, Pause, Multiple continuity. Each test function is associated to a parameter memory number. Storage of 10 sequence configurations.

Example of a sequence carrying out a dielectric test with parameter memory n°1, followed by an insulation test with parameter memory n°0, then a Pause then an earth continuity test with parameter memory n°5 repeated on 10 different points (Multiple Continuity):

L1: RIGID 1
L2: MEGOHM 0
L3: PAUSE
L4: POINTS 10
L6: CONTINUITY 5

The SXSPRO software on a PC allows an infinite number of test steps to be carried out.

INTERFACE

- Device supplied with the RS232 interface

CONTROL SOFTWARE

Application software

- WINPASS-MX: powerful software for controlling the devices in the SXS series
- Specific on-demand software

PROTECTIONS

Instrument

By time-delay fuse

Operator

- By safety loop suppressing the generation of High Voltage or current
- Red green light

Equipment under test

- Immediate fault detection and nominal HV transformer voltage interruption
- Short circuit of the output terminals and discharge of the capacitances tested (voltage option DC, t < 1 sec. per μ F)

GENERAL CHARACTERISTICS

Presentation

- Table device
- Metallic housing

Dimensions

- Height 131 mm
- Width 440 mm
- Depth 450 mm

Weight

- 28 kg

Mains supply

- 230 V +/- 15 % single phase, 47 - 63 Hz
- Consumption: 70 to 600 VA maximum according to the test

Operating temperature

- 0° C to + 45° C

Storage temperature

- -10° C to + 60° C

Overvoltage category

- CATII

Degree of pollution

- 2

Category

- Category 1 (earth leakage protection)

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OPTIONS

XS-02

PLC interface, available contacts:

- START
- PASS and FAIL
- ENDOFTTEST
- FAULT

XS-03

Input output 0-10 volts:

- Input 0-10 volts to control high voltage.
- Output 0-10 volts to read the current or the voltage.

XS-06

IEEE488-2 interface (Talker - Listener)

XS-08

PLC Option
Input 0-10 volts

XS-100

Ethernet Interface

XS-13

AC-DC (6kV DC - 20 mA short circuit) SXS500

XS-20

Insulation resistance measurement up to 2 TΩ

XS-22

Display of resistance in MΩ x km

XS-26

Insulation resistance measurement under 20 to 1000 V DC by steps of 1 V

SOFTWARE

WINPASS-MX software for electro-domestic application

ACCESSORIES

TE65

Test probe (dielectric + insulation)



CO183

2-wire cord with crocodile clips



CO184

2-wire banana cord probe with retractable tips



CO180

Fixed HV cord



CO175

Standard XS return cord



TE81-XS

2-wire continuity test probe with remote control and PASS/FAIL lights (for multiple continuity tests)



PI001-04-L05

HV pistol 500VA with remote control - length 5M

PI001-04-L02

HV pistol with remote control - max length 2M

PI001-04-LXX

HV pistol with remote control - max length 10M

PI001-10-L02

2 HV pistols 500 VA + return remote control - length 2M



C0201

Housing equipped with mains socket

C0193

Housing equipped with 6 international mains sockets



CO160-XS

Red/green lamp



KRXS

19" rack kit

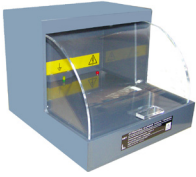


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SAFETY CAGES

CA001-00-00+CO007-01-L05
Safety cage for SXS500/506



CA002-00-00+CO007-01-L05
Safety cage for SXS500/506

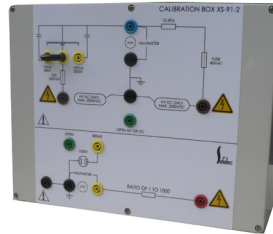


REM
Resistance standard with
high value (from 1 M Ω to
1 T Ω)

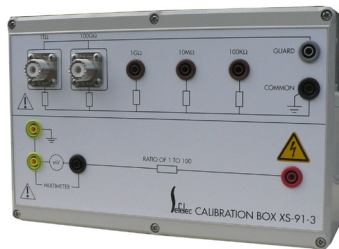


CALIBRATION BOXES

XS91-2
Calibration kit for 500VA
rigidity



XS91-3
Calibration kit for insulation



XS91-4
Calibration kit for 30A
continuity



XS91-6
Calibration kit for 40A
continuity



SD-SXS-500
Fault simulator

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