ISO 9001 Certified

Electrical safety testers

SXS50 - 50VA
SXS500 - 500VA

- Dielectric strength tester from 0 to 5 kVAC and 0 to 6 kVDC (SXS56, SXS506 models)
- Insulation resistance from 50 kΩ up to 200 GΩ (2 TΩ option)
- Ground continuity from 1 mΩ to 1500 mΩ
- Leakage current and power measurement (with FMG rack)
- 8 test step sequences
- 50 parameter sets storage
- Built in RS232C interface
- ETHERNET, PLC or IEEE488-2 interfaces on option

The SXS series electrical safety testers perform easily and simply all the electrical tests according to the VDE, UL, CSA standards and to the main EN European standards involved in the LOW VOLTAGE DIRECTIVE (LVD).
The SXS is a combination of a dielectric strength tester, a megohmmeter and a ground continuity tester. Together with the FMG rack, the SXS performs also leakage current measurement under nominal voltage, and power measurement, for single phase equipment as well as three phases equipment.

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

TECHNICAL CHARACTERISTICS

DIELECTRIC STRENGHT TEST FUNCTION

Output voltage
- 0 to 5 kV AC (50 or 60 Hz). Limited to 4.2 kV AC with FMG501
- 0 to 6 kV DC (SXS56, SXS506)
- Accuracy: ± (2%+50 V) (SXS50) and ± (3%+50 V) (SXS500) of the preset value between 100 to 5000 V and for a current < 100 µA (SXS50) and < 1 mA (SXS500) with the detection modes: ΔI, IMAX or ΔI+IMAX

Voltage reading
- On a digital kilovoltmeter connected on the output terminals
- Accuracy: ± (1.5% + 20 V)
- Display: 600 digits

Stability
- Less than 1% for a mains variation of ± 10% (SXS50)
- Less than 3% for a mains variation of ± 10% (SXS500)

Current
- Short circuit < 13 mA AC (SXS50/56) and < 9 mA DC (SXS56) for the max. voltage adjustment
- 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 current : 10 mA AC (SXS50/56) and 4 mA DC (SXS56)
- Nominal current : 110 mA AC (SXS500/506) and 10 mA DC (SXS506)

Current reading
- On a shunt resistor inserted in the test circuit
- Accuracy: ± (2.5% + 2U)
  1U = 0.01 mA (SXS50)
  1U = 0.1 mA (SXS500)
- Display: 1000 digits

Breakdown detection
- "DELTATEST" detector adjusted for ΔI = 1 mA ± 10% (SXS50) and ΔI = 10 mA ± 10% (SXS500) with 10 µsec. ± 20%. Total insensitivity to current due to the resistance and the capacitance of the device under test
- "IMAX" detection by maximum current adjustable from 0.01 to 10 mA, by 0.01 mA steps (SXS50) and from 0.1 to 110 mA by 0.1 mA steps (SXS500)
- DELTATEST and IMAX mode combination

IMIN threshold function
- Detects whether the probe is properly connected to the specimen under test
- Adjustable from 0.01 to 10 mA (SXS50) and from 0.1 to 110 mA (SXS500)

DC voltage (SXS56, SXS506 models)
- Positive pole grounded
- Ripple < 1% for I < 100 µA (SXS56) and I < 1 mA (SXS506)

Breakdown indication
- By visual (LCD screen and LED) and sound signal
- Breakdown voltage and current are stored on the LCD display
- HV primary transformer shorted when the output voltage is switched off

Timer
- Rise, hold and fall time adjustment between 0 and 999 sec.
- Fast mode : (rise + hold) < 900msec.

Storage
- 10 test parameter (voltage, threshold, time,…) sets can be stored

MEGOHMMETER FUNCTION

Measurement range
- 50 kΩ to 200 GΩ (2 TΩ option XS20)
- The maximum insulation resistance is given by : (U_{TEST}/U_{max}) x 200 GΩ

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

Threshold
- A High limit (making specimen under test detection possible) and a Low limit adjustable from 50 kΩ to 200 GΩ (2 TΩ option XS20)

Measurement voltage
Adjustable by 1 V DC step from :
- 10 to 500 V DC
- 20 to 1000 V DC (XS26 option)
- Accuracy: ± (1% + 2 V)
- Short circuit ≤ 2 mA DC

Measurement time
- Adjustable from 0 to 999 sec. or permanent
- Rise time adjustable in Volt/sec.

Storage
- 10 test parameter (voltage, time, threshold,…) sets can be stored

GROUND CONTINUITY FUNCTION

Measurement range
- 0.001 Ω to 1.500 Ω
- Display possible in voltage drop according to the EN60204 standard

Accuracy
- (2.5% + 10 mΩ)
- Display: 1500 digits

Threshold
- High and Low limits adjustable from 0.001 Ω to 1.500 Ω
- Threshold adjustable in volt according to EN60204 standard

AC current
- 5 to 30 A AC by 0.5 A steps, with load regulation
- Accuracy: ± (1% + 0.5 A)
- Current can be progressively applied from 5 A to the maximum test value.
- Open circuit voltage: < 6 or 12 V AC
- Frequency: mains power supply (50 or 60 Hz)

Measurement time
- Current rise time from 0 to 999 sec.
- Hold time from 0 to 999 sec. or permanent

Storage
- 10 test parameter (current, threshold, time,…) sets can be stored

LEAKAGE CURRENT MEASUREMENT
Refer to FMG501 data sheet

SEQUENCE FUNCTION
- 8 test steps automatically sequenced among: Dielectric strength test, Insulation, Ground continuity, Leakage, Pause, Multiple continuity

- Each test function is linked to a parameter memory number.
  10 sequence setups storage
- Example of a sequence performing a Dielectric strength test with parameters stored in memory number 1, followed by an insulation test with parameters stored in memory number 0, followed by a Pause, then by a Ground continuity test made on 10 different points with parameters stored in memory number 5

L1: HIPOT 1

L2: MEGOHM 0

L3: PAUSE

L4: POINTS 10

L6: CONTI 5

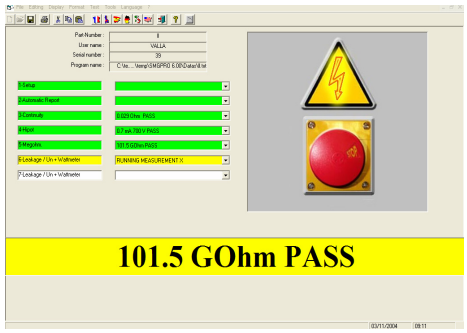
SXSPRO software on a PC computer makes possible to perform as many tests as wished

INTERFACE
- Built in talker and listener RS232C interface
- Start Test and PASS/FAIL signals

REMOTE CONTROL SOFTWARE

National Instruments Labview Drivers
- Software drivers which can be used in a Labview application to remote control the XS series unit through Ethernet, RS232C or IEEE488-2 interface
- Remote control of all the unit functions
- CD-R including install and uninstall files
- Measurement results in Excel format

Application software
- SXSPRO: powerful software controlling the XS series according to your application (Access & Excel results, bar code management, customized test reports, customized user guidance through the test, user level management, production line oriented features, …)
- Specific software on request
- Applications examples available with sources in Labview, Delphi, C++ and Java



PROTECTIONS

Instrument
By slow blow fuse

Operator
- No HV or current on the outputs as long as the safety interlock is open
- Red/green lamp to indicate HV presence
- Double safety loop which can be used with safety bloc devices

Device under test
- Fast breakdown detection
- HV primary cut off
- Output terminal shorted and capacitors discharged (DC option, t < 1 sec./µF)

GENERAL CHARACTERISTICS

Presentation
- Table top unit
- Metal case

Dimensions
Height : 131 mm
Width : 440 mm
Depth : 450 mm

Weight
28 kg

Power
- 230 V or 115 V ± 15% single phase, 47-63 Hz
- Consumption: 70 to 600 VA depending on test

Operating temperature
0°C to +45°C

Storage temperature
-10°C to +60°C

Over-voltage category
CATII

Pollution degree
2

Safety class
Class I (earth connection)

OPTIONS

XS02
PLC interface :
- START contact
- FAULT contact
- PASS / FAIL contacts
- END OF TEST contact

XS03
0-10 Volts input/output :
- 0-10 Volts inputs to control the High Voltage
- 0-10 Volts output for voltage and current

XS05 (RXS, DXS) & XS09 (SXS)
Rear panel outputs

XS06
IEEE488-2 (Talker - Listener) interface

XS80
Ethernet interface

XS08
Option 02 + 03

XS14
3 mA hardware limitation

XS20
Insulation resistance measurement up to 2 TΩ

XS22
Resistance display in MΩ x km

XS26
Insulation resistance measurement from 20 up to 1000 V DC

XS93
Remote control box (option XS02) is requested

SOFTWARES

XS95
EasyScan software for driving XS Series equipped with Switching matrix

XS96
SXSPro software for driving XS Series instruments

XS99
Delphi & C++ program examples

OPTIONNAL ACCESSORIES

TE54 (SXS50) - TE65 (SXS500)
Test probe (hipot + insulation)

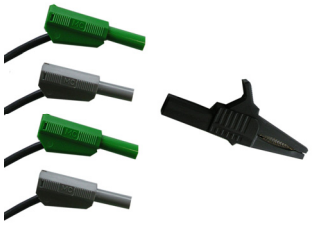
TE58-XS
Test probe with remote control (hipot + insulation)

TE86 (SXS50) - TE83 (SXS500)
Test pistol (hipot + max. insulation 2 GΩ)

TE81-XS
2 wire ground continuity test probe with remote control push button and Pass-Fail LED (for multiple continuity)

CO177 (SXS50) - C0180 (SXS500)
Test lead without probe for test system connection (not removable)

CO183
2 wire ground continuity test lead with alligator clip



CO210
Pistol for return earth (hipot + insulation)

CO175
black ground return lead

CO200 (SXS50) - C0201 (SXS500)
Test box equipped with 1 schücko female soc ket

CO202 (SXS50) - C0203 (SXS500)
Test box equipped with 1 UK female socket

CO204 (SXS50) - C0205 (SXS500)
Test box equipped with 1 Swiss female socket

CO206 (SXS50) - C0207 (SXS500)
Test box equipped with 1 Italian female socket

CO208 (SXS50) - C0209 (SXS500)
Test box equipped with 1 US female

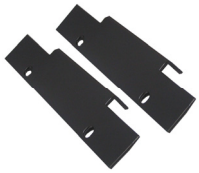
CO193 (SXS50) - C0192 (SXS500)
Test box with 6 international female sockets

CO160-xx
Red-Green lamp for HV indication

AO10-XS
Two user hands occupied with safety user buttons

AO11-XS
Remote control foot switch

KRXS
19" rack mount kit



REMA0 to REMA8
High value Standard resistors (from 1 MΩ up to 1 TΩ)

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