Product Datasheet - Technical Specifications

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HIGH VOLTAGE CABLE TESTERS Accessories List

SYNOR5000-H_A	HIGH VOLTAGE CABLE TESTER MASTER; enclosure - height 7U Includes: Central unit (generation and measurement). On/Off and emergency stop panel. 2- and 4-wire continuity, 2- and 4-wire resistance, 2- and 4-wire diode, component measurement (resistance, diode, capacitor in DC). DC hipot and insulation (if option ref. SY5000-HVDC ordered). AC hipot (if option ref. SY5000-HVAC ordered). Winpass5000 software. 1 touch probe. 1x 19" rack with 16 available switching card slots (the switching cards have to be ordered apart); for more boards, see ref. SYNOR5000-HS or ask for other available configurations. One crossed Ethernet cable 1.8m. Requires a PC with one available Ethernet port. All the available switching boards can be mixed in each rack
SYNOR5000-HX	HIGH VOLTAGE CABLE TESTER MASTER/SLAVE; enclosure - height 7U Includes: Central unit (generation and measurement). On/Off and emergency stop panel. 2- and 4-wire continuity, 2- and 4-wire resistance, 2- and 4-wire diode, component measurement (resistance, diode, capacitor in DC). DC hipot and insulation (if option ref. SY5000-HVDC ordered). AC hipot (if option ref. SY5000-HVAC ordered). Winpass5000 software. 1 touch probe. 1x 19" rack with 16 available switching card slots (the switching cards have to be ordered apart); for more boards, see ref. SYNOR5000-HS or ask for other available configurations. One crossed Ethernet cable 1.8m. Requires a PC with one available Ethernet port. All the available switching boards can be mixed in each rack
SYNOR5000-P_A	HIGH VOLTAGE CABLE TESTER; unit - height 3U Includes: Central unit (generation and measurement). On/Off and emergency stop. 2- and 4-wire continuity, 2- and 4-wire resistance, 2- and 4-wire diode, component measurement (resistance, diode, capacitor in DC). DC hipot and insulation (if option ref. SY5000-HVDC ordered). AC hipot (if option ref. SY5000-HVAC ordered). Winpass5000 software. 1 touch probe. 1x 19" rack with 3 available switching card slots (the switching cards have to be ordered apart); for more boards, see ref. SYNOR5000-RS or ask for other available configurations. One crossed Ethernet cable 1.8m. Requires a PC with one available Ethernet port. All the available switching boards can be mixed in each rack

SYNOR5000-R_A	HIGH VOLTAGE CABLE TESTER; rack - height 6U Includes: Central unit (generation and measurement). 2- and 4-wire continuity, 2- and 4-wire diode, component measurement (resistance, diode, capacitor in DC). DC hipot and insulation (if option ref. SY5000-HVDC ordered). AC hipot (if option ref. SY5000-HVAC ordered). Winpass5000 software. 1 touch probe. 1x 19" rack with 16 available switching card slots (the switching cards have to be ordered apart); for more boards, see ref. SYNOR5000-RS or ask for other available configurations. One crossed Ethernet cable 1.8m. Requires a PC with one available Ethernet port. All the available switching boards can be mixed in each rack
SYNOR5000-RX	HIGH VOLTAGE CABLE TESTER MASTER/SLAVE; enclosure - height 7U Includes: Central unit (generation and measurement). On/Off and emergency stop panel. 2- and 4-wire continuity, 2- and 4-wire resistance, 2- and 4-wire diode, component measurement (resistance, diode, capacitor in DC). DC hipot and insulation (if option ref. SY5000-HVDC ordered). AC hipot (if option ref. SY5000-HVAC ordered). Winpass5000 software. 1 touch probe. 1x 19" rack with 16 available switching card slots (the switching cards have to be ordered apart); for more boards, see ref. SYNOR5000-HS or ask for other available configurations. One crossed Ethernet cable 1.8m. Requires a PC with one available Ethernet port. All the available switching boards can be mixed in each rack
SYNOR5000-C	HIGH VOLTAGE CABLE TESTER; cabinet - from 18U to 36U Includes: 1x 19" cabinet which can include several racks (ref. SYNOR5000-R and SYNOR5000-RS) or unit (ref. SYNOR5000-P and SYNOR5000-RS) with switching card slots (the switching cards have to be ordered apart); ask for available configurations. On/Off and emergency stop panel. Requires a PC with one available Ethernet port. All the available switching boards can be mixed in each rack. HAS TO BE ORDERED WITH ONE MAIN RACK OR UNIT (Ref. SYNOR5000-R or SYNOR5000-P) IN ORDER TO GET A CENTRAL UNIT (GENERATION AND MEASURMENT) INSIDE

SYNOR5000-D_A	HIGH VOLTAGE CABLE TESTER; composite enclosure type - height 7U Includes: Central unit (generation and measurement). 2- and 4-wire continuity, 2- and 4-wire diode, component measurement (resistance, diode, capacitor in DC). DC hipot and insulation (if option ref. SY5000-HVDC ordered). AC hipot (if option ref. SY5000-HVAC ordered). Winpass5000 software. 1 touch probe. 1x 19" rack with 16 available switching card slots (the switching cards have to be ordered apart); for more boards, see ref. SYNOR5000-DS or ask for other available configurations. One crossed Ethernet cable 1.8m. Requires a PC with one available Ethernet port. All the available switching boards can be mixed in each rack
SYNOR5000-DX	HIGH VOLTAGE CABLE TESTER MASTER/SLAVE; enclosure - height 7U Includes: Central unit (generation and measurement). On/Off and emergency stop panel. 2- and 4-wire continuity, 2- and 4-wire resistance, 2- and 4-wire diode, component measurement (resistance, diode, capacitor in DC). DC hipot and insulation (if option ref. SY5000-HVDC ordered). AC hipot (if option ref. SY5000-HVAC ordered). Winpass5000 software. 1 touch probe. 1x 19 rack with 16 available switching card slots (the switching cards have to be ordered apart); for more boards, see ref. SYNOR5000-HS or ask for other available configurations. One crossed Ethernet cable 1.8m. Requires a PC with one available Ethernet port. All the available switching boards can be mixed in each rack

All switching and stimuli cards below can be mixed together in the tester, at any place. Available quantities in steps of 1...16, 17...32, 33...50,

Switching Cards, Stimuli and Mixed Test/Stimuli Cards

Switching cards	
SY5000-M128A5A	500VDC (if option SY5000-HVDC)/350VAC (if option SY5000-HVAC)/2A switching card - 128 points
SY5000-M64A15	1500VDC (if option SY5000-HVDC)/1000VAC (if option SY5000-HVAC)/2A switching card - 64 points
SY5000-M64A20C	2000VDC (if option SY5000-HVDC)/1500VAC (if option SY5000-HVAC)/2A switching card - 64 points
SY5000-M128A10A	1000VDC (if option SY5000-HVDC)/750VAC (if option SY5000-HVAC)/2A switching card - 128 points
SY5000-M22A20	2000VDC (if option SY5000-HVDC)/1500VAC (if option SY5000-HVAC)/10A switching card - 22 points
SY5000-M32A30	3000VDC/2000VAC/2A switching card - 32 points ; requires SY5000-XS-VHV option + a XS equipement
SY5000-M24A42A	4200VDC/3000VAC/2A switching card - 24 points ; requires SY5000-XS-VHV option + a XS equipement
SY5000-M8A55	5500VDC/4000VAC/2A switching card - 8 points ; requires SY5000-XS-VHV option + a XS equipement
Stimuli cards	

SY5000-S22A20	2000V*DC*/1500V*AC*/10 A stimuli card - 22 channels and common. 2 variable power supplies can be driven independently
SY5000-S32A15	1500V*DC*/1000V*AC*/5 A stimuli card - 32 channels and common. 2 variable power supplies can be driven independently
SY5000-MS32A15	1500V*DC*/1000V*AC*/2A (test)/5A (stimuli) mixed test/stimuli card - 32 points

Extension Racks and Cabinets

SYNOR5000-HS_A	7U metallic extension with enclosure, 19", 18 slots
SYNOR5000-RS_A	6U metallic extension rack without enclosure, 19", 18 slots
SYNOR5000-DS_A	7U composite extension distributed module, 19", 18 slots

Generators, Measuring Options

SY5000-HVDC_B	DC hipot and insulation module from 20VDC to 2121VDC, internal to the SYNOR5000
SY5000-HVAC	AC hipot module from 50VAC to 1500VAC 10 mA 50/60Hz, internal to the SYNOR5000; has to be ordered with ref. SY5000-HVDC
SY5000-FLT	Floating low voltage measurement for continuity module, internal to the SYNOR5000
SY5000-TEMP/HUM	External temperature and humidity measurement
SY5000-GMOV	Avalanche breakdown voltage measurement for GMOV (peak limiter circuit) ; max. 200V/1A
SY5000-GMOV100	Avalanche breakdown voltage measurement for GMOV (peak limiter circuit) ; max. 100V/3A
SY5000-GMOV1kV	Avalanche breakdown voltage measurement for GMOV (peak limiter circuit) ; max. 1000V/1A
SY5000-LEAK	Leakage current measurement for transorbs (transient voltage suppression diode) under max. 200V ; has to go with option ref. GMOV
SY5000-LEAK100	Leakage current measurement for transorbs (transient voltage suppression diode) under max. 100V ; has to go with option ref. GMOV
SY5000-LEAK1K	Leakage current measurement for transorbs (transient voltage suppression diode) under max. 1000V ; has to go with option ref. GMOV
SY5000-CONT28V	Continuity measurement under 28V*DC* instead of 20V*DC*

External Power Supplies for Stimuli Cards

SY5000-PCR500	540W: 0...270VAC /2A or 0...380VDC /2A, 3U height external power supply for stimuli cards

Interconnection Cables

Signal transmission cables, measuring bus, power supplies, energy. These cables ared designed to work in rough environment: Ringed sheathed	
SY5000-CBL0.8M	0.8m interconnection cable, in between central unit and distributed module, or in between distributed module and other distributed modules
SY5000-CBL2.5M	2.5m interconnection cable, in between central unit and distributed module, or in between distributed module and other distributed modules
SY5000-CBL5M	5m interconnection cable, in between central unit and distributed module, or in between distributed module and other distributed modules
SY5000-CBL10M	10m interconnection cable, in between central unit and distributed module, or in between distributed module and other distributed modules
SY5000-CBL15M	15m interconnection cable, in between central unit and distributed module, or in between distributed module and other distributed modules
SY5000-CBL20M	20m interconnection cable, in between central unit and distributed module, or in between distributed module and other distributed modules

Connections for External Device and Interfaces

SY5000-MGR10	I/O connection for MGR10 microhm-meter, including connection cables (needs to be ordered, if an MGR10 is included in the tester)
SY5000-M1501P	I/O connection for M1501 series megohm-meter, including connection cables (needs to be ordered, if an M1501 is included in the tester)
SY5000-XS	I/O connection for XS equipment (U<2000VDC /1500VAC , I<10mA), including connection cables (needs to be ordered, if an XS is included in the tester)
SY5000-XSVHV	I/O connection for XS equipment (U>2000VDC /1500VAC), including connection cables (needs to be ordered, if an XS is included in the tester)
SY5000-AUX	I/O connection for universal equipment (U<2000VDC /1500VAC , I<2A)

SY5000-STI	I/O connection for STIMULI power supply (I<10A)
SY5000-OUT10V	I/O connection in 0...10V in order to drive some external equipment
SY5000-STDA	Black box (autonomnous mode) ; tester does not need a PC to run; test file is stored into internal memory ; external devices (XS, MGR10, …) cannot be controlled in this autonomnous mode
SY5000-RLC	I/O connexion for RLC bridge (needs to be ordered if an RLC bridge is included in the tester)

Computer Setups

SY5000-DESKTOP*	Desktop PC including central unit, display, keyboard and mouse
SY5000-LAPTOP*	Laptop PC
SY5000-RACKPC1*	2U rackable central unit with desktop display, keyboard, mouse
SY5000-RACKPC2*	2U rackable central unit and 1U rackable keyboard with desktop display
SY5000-RACKPC3*	2U rackable central unit and 1U rackable keyboard, rackable display
SY5000-PCINTEGR	Control, validation, winpass installation on a customer PC and integration into 5000C cabinet for rackable versions, see minimum required setup
SY5000-BARCODE	Bar code reader for Winpass 5000
SY5000-INKJET	Inkjet colour printer
SY5000-LASERN&B	Black and white laser printer
* chose OS language and add letter-code at the end of the reference: F(french), G(english), D(german), R(russian)	

External Accessories, Options and Other Softwares

SY5000-PROBE	Additional touch probe
SY5000-LIGHTS	Red/green column light with magnetic socket
WINTRANSFERT (+SYWINTRANSFERT)	File transformer from excel format to Winpass format
SY5000-CLIM	6U height 19" rackable air conditioning system for SYNOR5000C
KRXS	19" rack mounting adaptation for 3U

Interface cables and mating connectors

SYINT-1x8-2	1 interface cable 8 wires from 1x POSITRONIC to free end (loosing wires), for ref. SY5000-M8A55 switching boards; length 2m
SYINT-1x8-5	1 interface cable 8 wires from 1x POSITRONIC to free end (loosing wires), for ref. SY5000-M8A55 switching boards; length 5m
SYINT-1x11-2	1 interface cable 11 wires from 1x DIN41612 to free end (loosing wires), for ref. SY5000-M22A20, SY5000-S22A20 boards; length 2m
SYINT-1x12-5	1 interface cable 12 wires from 1x DIN41612 to free end (loosing wires), for ref. SY5000-M24A42 switching board; length 5m
SYINT-2x12-2	1 interface cable 12 wires from 2x DIN41612 to free end (loosing wires), for ref. SY5000-M24A42 switching board; length 2m
SYINT-1x16-2	1 interface cable 16 wires from 1x DIN41612 to free end (loosing wires), for ref. SY5000-M32A30 switching board; length 2m
SYINT-1x16-5	1 interface cable 16 wires from 1x DIN41612 to free end (loosing wires), for ref. SY5000-M32A30 switching board; length 5m
SYINT-2x16-2	1 interface cable 16 wires from 2x DIN41612 to free end (loosing wires), for ref. SY5000-M32A30 switching board; length 2m
SYINT-2x16-5	1 interface cable 16 wires from 2x DIN41612 to free end (loosing wires), for ref. SY5000-M32A30 switching board; length 5m
SYINT-1x32-2	1 interface cables 32 wires from 1x DIN41612 to free end (loosing wires), for ref. SY5000-M64A10/SY5000-M64A20B/ SY5000-M64A15, switching board; length 2m
SYINT-1x32-5	1 interface cable 32 wires from 1x DIN41612 to free end (loosing wires), for ref. SY5000-M64A10/SY5000-M64A20B/ SY5000-M64A15, switching board; length 5m
SYINT-2x32-2	1 interface cables 32 wires from 2x DIN41612 to free end (loosing wires), for ref. SY5000-M64A10/SY5000-M64A20B/SY5000-M64A15, switching board; length 2m
SYINT-2x32-5	1 interface cable 32 wires from 2x DIN41612 to free end (loosing wires), for ref. SY5000-M64A10/SY5000-M64A20B/ SY5000-M64A15, switching board; length 5m
SYINT-1x64-2	1 interface cable 64 wires from 1x DIN41612 to free end (loosing wires), for ref. SY5000-M128A5A/SY5000-M128A10 switching board; length 2m
SYINT-1x64-5	1 interface cable 64 wires from 1x DIN41612 to free end (loosing wires), for ref. SY5000-M128A5/SY5000-M128A10 switching board; length 5m

SYINT-2x64-2	1 interface cable 64 wires from 2x DIN41612 to free end (loosing wires), for ref. SY5000-M128A5A/SY5000-M128A10 switching board; length 2m
SYINT-2x64-5	1 interface cable 64 wires from 2x DIN41612 to free end (loosing wires), for ref. SY5000-M128A5/SY5000-M128A10 switching board; length 5m
SYDIN-32	32 points DIN41612 male mating connector with hood to connect on tester outputs; this connector is for ref. SY5000-M64A10/SY5000-M64A20A/B/SY5000-M64A15, board type; (minimum order quantity: 10)
SYDIN-16	16 points DIN41612 male mating connector with hood to connect on tester outputs; this connector is for ref. SY5000-M32A30/MS32A20 board type; (minimum order quantity: 10)
SYDIN-12	12 points DIN41612 male mating connector with hood to connect on tester outputs; this connector is for ref. SY5000-M24A42 board type; (minimum order quantity: 10)
SYDIN-11	11 points DIN41612 male mating connector with hood to connect on tester outputs; this connector is for ref. SY5000-M22A20/SY5000-S22A20 board type; (minimum order quantity: 10)
SYPOS-08	8 points POSITRONIC male mating connector with hood to connect on tester outputs; this connector is for ref. SY5000-M8A55 board type; (minimum order quantity: 10)
SYDIN-64	64 points DIN41612 male mating connector with hood to connect on tester outputs; this connector is for ref. SY5000-M128A5A/SY5000-M128A10 board type; (minimum order quantity: 10)
SY5000-CAISSE	Wooden packing crate for SYNOR5000C
SY5000-TRBOX	Wooden packing crate for SYNOR5000H & R

Calibration kit

SY5000-CAL	Automatic calibration kit, calibration and reporting program file

Spare part kit

SY5000-P-SPARE	Spare part* kit for SYNOR5000-P including: 1x low voltage measurement board (ref. SYSE0770). 1x high voltage measurement board (SY5000-HVDC, ref. SYSE0672). 1x interface board (ref. SYSE0771). 1x backpanel board 5 slots (ref. SYSE0876). 1x power supply 24V/8A (ref. PDZA0399). 1x power supply 5V/3A, 2x 15V/1A (ref. PDZA0076). 1x transformer 230V/1750V (ref. PETR 3391). 1x box of 10 fuses 5x 20 10AT (ref. PRFU 0006). * The spare part kit is delivered with a data measurement for LV and HV measurement board.

SY5000-R-SPARE	Spare part* kit for SYNOR5000-R including: 1x low voltage measurement board (ref. SYSE0770). 1x high voltage measurement board (SY5000-HVDC, ref. SYSE0672). 1x interface board (ref. SYSE0771). 1x backpanel board 18 slots (ref. SYSE0772). 1x power supply 28V/18A, 5V/2A, 2x 15V/1A (ref. PDZA0381). 1x transformer 230V/1750 V (ref. PETR 3391). 1x box of 10 fuses 5x 20 8AT (ref. PRFU 0005). * The spare part kit is delivered with a data measurement for LV and HV measurement board.
SY5000-AC-SPARE	Spare part* kit for SYNOR5000-P/H/R (when HVAC option is ordered) including: 1x high voltage measurement board (SY5000-HVAC, ref. SYSE0774). 1x transformer 30V/1500V (ref. PETR 0199). * The spare part kit is delivered with a data measurement for the HV measurement board.

Safety Panel for Integration

SY5000-B1UFAV	1U front safety panel with On/Off and emergency button plus lights. Typically used for integrating a SYNOR5000R into a cabinet. The safety panel is delivered with 2m of wires for the connections. SEFELEC advises to order the reference SY5000-B2UFAR together with SY5000-B1UFAV.
SY5000-B2UFAR	2U rear panel for industrial filtered mains input and interlocks. Typically used for integrating a SYNOR5000R into a cabinet. The safety panel is delivered with 2m of wires for the connections. SEFELEC advises to order the reference SY5000-B1UFAV together with SY5000- B2UFAR.

SERVICES

TRAINING-EXPORT	on request
EG2	2 years warranty (1 year basic warranty and 1 year extension). Only for SYNOR5000P w/o calibration on request for all others units
EG3	2 years warranty (1 year basic warranty and 1 year extension). Only for SYNOR5000P w/o calibration on request for all others units

CALIBRATION/METROLOGY

RMT	For SYNOR ranges. ISO EN 10012 report with factory calibration data records (if you need uncertainty, see ref. ++CCOFRAC)
CCOFRAC	ISO 17025 calibration certificate (includes uncertainty)
TRACE	Certificates of each equipment, calibration tools used to calibrate the equipment