

SEFELEC 506-S

Data sheet



ELECTRICAL SAFETY TESTER

GENERAL SPECIFICATIONS

Mains power supply	230 VAC ±10%, 50 to 60 Hz / single-phase			
Mains protection	Dual time-delay fuse, type T10AH 250V			
Input power	950 VA max.			
Temperature range	Storage			Operation
	-10°C à +60°C			0°C à +45°C
	Specifications guaranteed after a 30-minute warm-up and with relative humidity < 50%			
Altitude	Up to 2000 m			
Relative humidity	80% max. @ 31°C			
Dimensions & weight	Height	Width	Depth	Weight
	131 mm	440 mm	455 mm	approx. 28kg



ADVANTAGES OF THE SEFELEC 506-S

- ✓ **Dielectric Strength Test:** up to 5 kVAC / 500 VA and 6 kVDC
- ✓ **Megohmmeter:** up to 2 T Ω at 1000 VDC
- ✓ **Protective Earth Continuity:** up to 6 V / 32 A
- ✓ **Programmable Test Ramps:** ramp-up, dwell, and ramp-down
- ✓ **ARM Dual-Core Control & 3D NAND Technologies:** embedded for improved accuracy, stability, and repeatability
- ✓ **Large Internal Memory:** for storing test configurations and results
- ✓ **Plug & Play Solution**
 - Real-time visualization of tests via a 7" TFT touchscreen
 - Embedded DSP for faster testing speeds
 - Sequence Mode: allows multiple tests to be combined in succession
 - Automatic range selection
 - Remote control via WinPass software for test report generation
- ✓ **Compliance & Safety**
 - Compliant with IEC 61010-2-034, safety standard for insulation testers and dielectric strength test equipment
 - Dual safety loop SIL2
- ✓ **Connectivity & Communication**
 - Standard interfaces: Ethernet / RS232 / USB / PLC
 - Optional IEEE488-2 interface
 - CAN bus for controlling extensions (scanners)

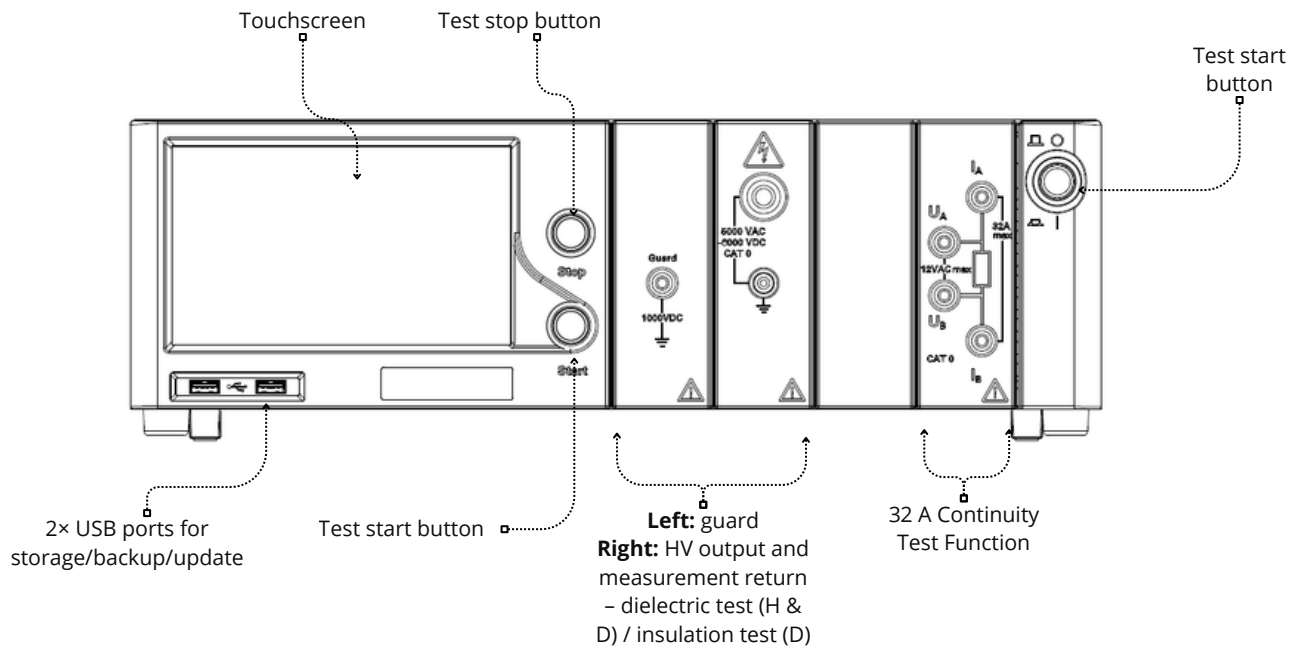


TECHNICAL SPECIFICATIONS

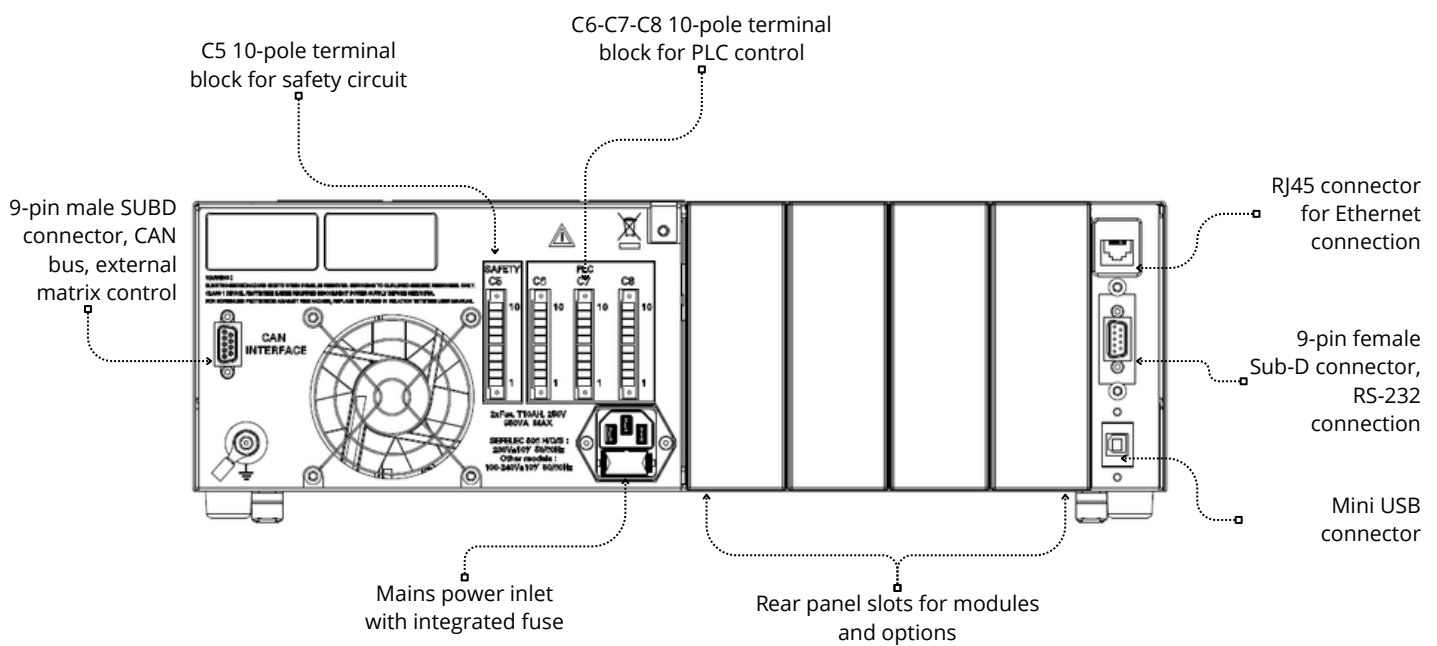
Dielectric Strength Function					
Voltage range		100 ... 5,000 VAC / 100 ... 6,000 VDC – positive pole connected to ground in DC			
Voltage generation accuracy		± (3% + 5 V) over the entire voltage range and for current below 10 mA			
Residual ripple in DC (according to IEC 61180)		< 3% RMS for current < 3 mA @ 6000 VDC			
Maximum capacitance of the tested sample		< 1 µF (discharge time < 10 s), discharge resistor in DC = 1.5 MΩ			
Voltage reading		Kilovoltmeter directly connected to output terminals Accuracy: ± (1.5% + 5 V), resolution: 6000 counts			
Short-circuit current		< 200 mA AC / < 20 mA DC			
Courant nominal		>100 mA de 800 à 5000 VAC sur charge capacitive >100 mA de 1500 à 5000 VAC sur charge résistive >20 mA de 400 à 6000VDC			
Fault detection modes		ΔI current variation / Max-Min current thresholds / No detection			
ΔI detection mode range		Adjustable amplitude from 1 mA to 100 mA ±(10% + 0.5 mA), in 1 mA steps In DC, range 1 mA – 5 mA for U < 3000 VDC Pulse: 10 µs ±20%			
Current threshold detection mode		Adjustable from 0.01 mA to 110 mA in 0.01 mA steps			
Total steady-state current measurement		Resolution: 11 000 counts via shunt directly in the test circuit			
Accuracy	AC total/real current	0.01 mA to 110 mA AC ± (2.5% + 20 µA) / ± (3% + 1 mA)			
	DC total current	0.01 mA to 110 mA DC ± (2.5% + 20 µA)			
Programming		Ramp-up & ramp-down: 0.0 to 9999.0 s, 0.1 s step, accuracy ±20 ms Hold: 0.1 to 9999.0 s, 0.1 s step, accuracy ±20 ms			
Insulation Resistance Function					
Test voltage		20 - 1000 VDC, précision ±(1% + 1V), pôle + à la terre			
Maximum current in measurement circuit		2 mA - 20% / +0%			
Maximum sample capacitance		< 100µF (temps de décharge < 10 sec.), Résistance de décharge 2,2 kΩ			
Display resolution		1,999 counts – Unit display in kΩ, MΩ, GΩ, TΩ			
Measurement range vs voltage		100V	250V	500V	1000V
	Standard version	100 kΩ to 20 GΩ	250 kΩ to 50 GΩ	500 kΩ to 100 GΩ	1 MΩ to 200 GΩ
	With 2 TΩ option	100 kΩ to 200 GΩ	250 kΩ to 500 GΩ	500 kΩ to 1 TΩ	1 MΩ to 2 TΩ
Accuracy in Normal mode		Standard version 200 GΩ: ± (1.5% + 1 digit) 2 TΩ option with test voltage ≤ 200 V DC: ± (2% + 1 digit) 2 TΩ option with test voltage > 200 V DC: ± (1% × Utest / 100 + 1 digit)			
Capacitance mode accuracy		Recommended for R > 1 GΩ: [Normal mode accuracy] ±100 kΩ from 1 MΩ to 200 GΩ			
Adjustment range		Programmable upper and lower ranges from 100 kΩ to 200 GΩ (or 2 TΩ with the option installed).			
Timing Programming		Ramp-up & ramp-down: 0.0 to 9999.0 s, 0.1 s step, ±20 ms Hold: 0.1 to 9999.0 s, 0.1 s step, ±20 ms			
Continuity Test Function					
Measurement Frequency		50 Hz or 60 Hz depending on the mains supply			
Test Current		5 to 32 A AC adjustable in 0.5 A steps (5 to 50 A AC with 50 A option)			
Generation Accuracy		± (1% + 100 mA) or ± (1% + 200 mA) with 50 A option			
Maximum Open Circuit Voltage		6 V AC ±10% 8 V AC ±10% with 50 A option			
Display Resolution		10,000 counts			
Unit / Resolution Indication		mΩ (0.001 Ω) / 0.1 mΩ or 0.01 V			
Resistance or Voltage Drop Measurement Accuracy		± (1.5% + 0.5 mΩ) or ± (1.5% + 0.03 V)			
Measurement Range		Resistance measurement: 0.1 to 1000.0 mΩ Voltage drop measurement: 0.01 to 9.99 V			
Thresholds		Programmable upper and lower limits from 0.1 mΩ to 1000.0 mΩ or 0.01 to 9.99 V			
Programming	Ramp Up / Ramp Down	0.0 to 9999.0 s in 0.1 s steps, accuracy ±20 ms			
	Hold	0.1 to 9999.0 s in 0.1 s steps, accuracy ±20 ms			

DESIGN

FRONT PANEL



REAR PANEL





CONFIGURE YOUR SEFELEC 506-D

ACCESSORIES AND OPTIONS

Accessoires		Options	
SEFA-TE65-02	High-voltage probe and test lead – length 2 m	SEFO-5XRC	Remote control connection module
SEFA-TE58-02	High-voltage probe and test lead with remote control – length 2 m	SEFO-IEEE488	IEEE488-2 communication interface card
SEFA-CO175-02	Return lead with 4 mm plug – length 2 m	SEFO-5XREAR	Rear panel connection
SEFA-5XGUARD	Guard connection lead with 4 mm plug – length 2 m	SEFO-5X2TO	2 TΩ insulation measurement range
SEFA-CO180-02	High-voltage cable without termination – length 2 m	SEFO-5X500V	Insulation test voltage limited to 500 V
SEFA-P5X-HRC-02	High-voltage gun with remote control – length 2 m	SEFO-4WHV	4-wire detection for the device under test
SEFA-P5X-RT-02	Measurement return gun – length 2 m	SEFO-5X50A	50 A AC protective earth continuity test
SEFA-TE81-3202	2-wire 32 A protective earth continuity probe with remote control – length 2 m	SEFM-4IHV	Internal 4-channel high-voltage scanner module
SEFA-TE81-5002	2-wire 50 A protective earth continuity probe with remote control – length 2 m	SEFM-8IHV	Internal 8-channel high-voltage scanner module
SEFA-CO183-3202	2-wire 32 A protective earth continuity lead – length 2 m	SEFM-4IHC	Internal 4-channel high-current scanner module
SEFA-CO183-5002	2-wire 50 A protective earth continuity lead – length 2 m	SEFM-8IHC	Internal 8-channel high-current scanner module
SEFA-CO184-3202	Retractable 2-wire 32 A continuity probe – length 2 m	SEFM-4IHVHC	Mixed internal scanner module (4 HV + 4 HC channels)
SEFA-KR	19" rack mounting adapters		
SEFA-CO160	Red/Green safety lamp		
SEFA-5XLIGHT	Two-hand safety test start control		
SEFA-CO200	Test mains socket Schuko/FR – 1500 V max		
SEFA-CO200HV	Test mains socket Schuko/FR – 5000 V max		
SEFA-AO10	Two-hand safety test start control		

Discover also

More info at www.sefelec.com



SCANNER 64-SC

- High density: 8 to 512 Channels
- Maximum voltage 5kVAC 500VA and 6kVDC
- Insulation up to 200GΩ under 1000 VDC
- Earth continuity under 32A AC max.
- Compliant IEC 61010-2-034



Automatic wiring testers SYNOR 5000

- From 8 to 140,000 test points
- Continuity in 2 and 4 wires up to 10A
- Insulation up to 5000V DC
- Dielectric strength up to 4000V AC and 5500V DC
- Configuration: cabinet or compact case, mobile or remote



Measuring instruments SEFELEC 5X

- Dielectric strength 5 kVAC and 6 kVDC with 50 or 500VA power
- Insulation measurement under 1000VDC for measurements up to 2 TΩ
- Earth continuity testing under 32A or 50AAC