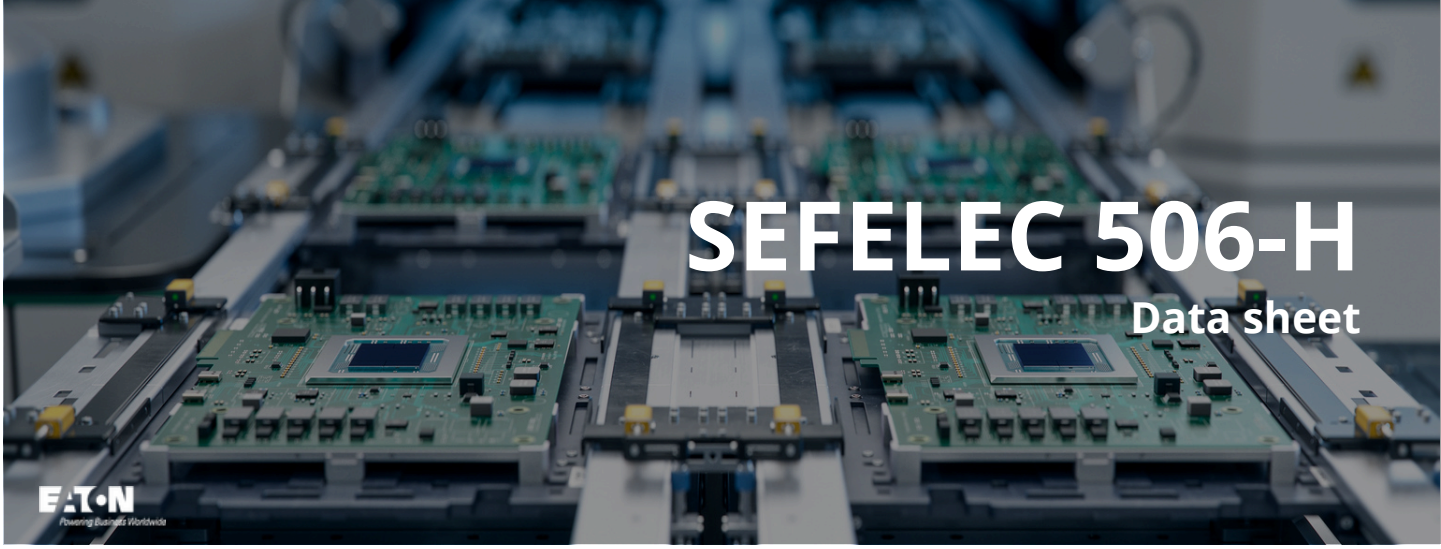


SEFELEC 506-H

Data sheet

DIELECTRIC STRENGTH TEST STATION

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. 20kg





ADVANTAGES OF THE SEFELEC 506-H

- **Dielectric strength:** Up to 5 kVAC 500 VA and 6 kVDC
- **Detection modes:** threshold current or current variation (ΔI)
- **Programmable test ramps:** Ramp-up, hold, and ramp-down
- **Burn-in function:** detection-free current mode
- **Embedded technologies ARM Dual-Core control & 3D NAND:** for enhanced accuracy, stability, and repeatability
- **Large internal memory:** For storing configurations and test results
- **Plug & Play solution:**
  - Real-time test visualization via 7" TFT touchscreen
  - Embedded DSP for increased test speed
  - Sequence mode to combine multiple successive tests
  - Automatic range selection
  - Control via Winpass software for test report generation
- **Compliance and safety:**
  - IEC 61010-2-034 (safety standard for insulation testers and dielectric strength test equipment)
  - Dual safety loop SIL2
- **Connectivity & Communication:**
  - Ethernet / RS232 / USB / PLC ports as standard
  - IEEE488-2 interface as an option
  - CAN bus for controlling extensions (scanners)

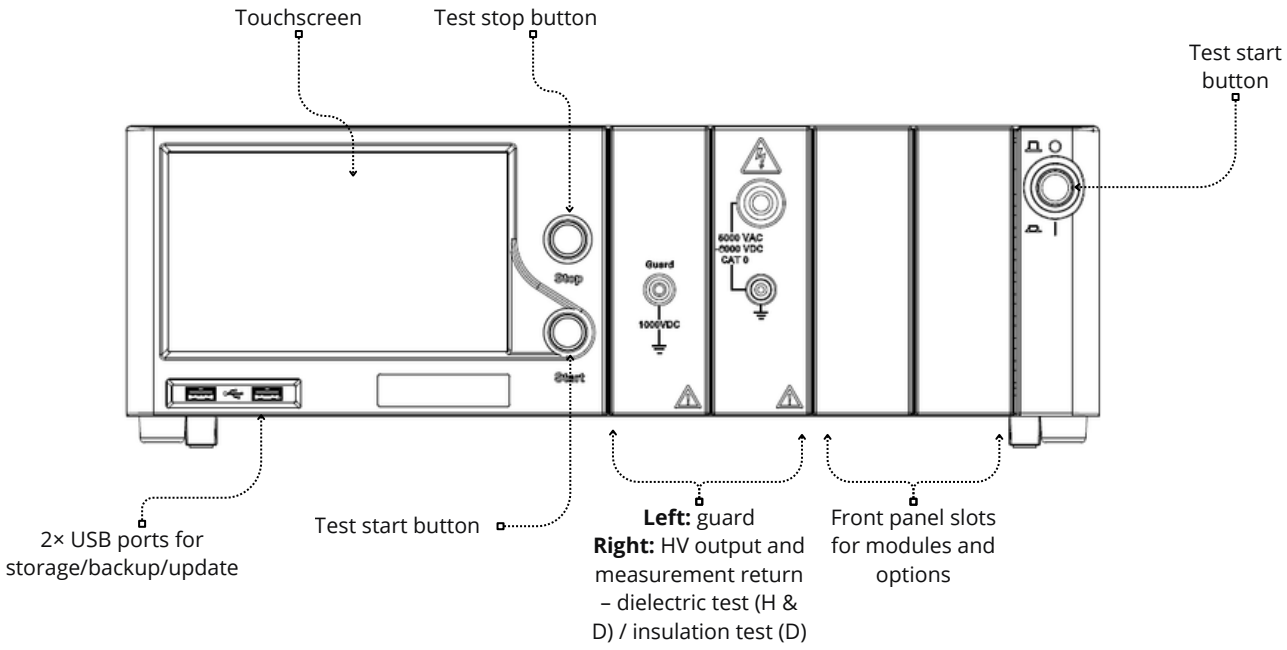
SEFELEC 506-H

TECHNICAL SPECIFICATIONS

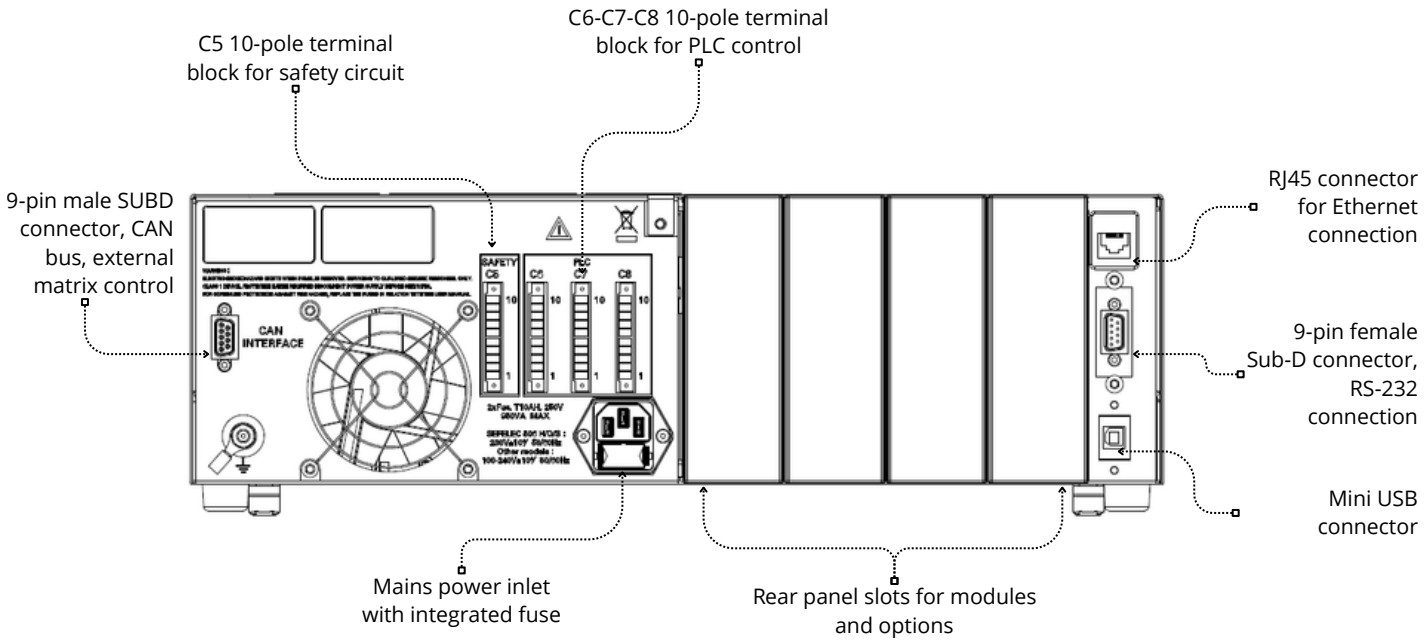
Tension de sortie		
Signal		50 Hz or 60 Hz sinusoidal
Adjustment range		100 V to 5,000 V AC 100 V to 6,000 V DC
DC Polarity		Generator positive terminal connected to ground
Dynamic stability		for ΔVmains = ±10%, measurement voltage variation < ±3%
Residual ripple in DC (according to IEC 61180)		< 3% RMS for a current < 3 mA @ 6000 VDC
Generator accuracy		± (3% + 5 V) for a current < 10 mA within the AC or DC setting ranges
Maximum test sample capacitance		< 1 µF (discharge time < 10 s)
Discharge resistance		1.5 MΩ in DC – Discharge of the tested element and internal capacitances
Voltage Measurement		
Measured using a kilovoltmeter connected directly to output terminals		
Accuracy		± (1,5% + 5 V)
Resolution		6000 counts
Current		
Rated current		from 800 to 5000 VAC on capacitive load > 100 mA from 1500 to 5000 VAC on resistive load > 100 mA from 40 to 6000 VDC > 20 mA
Short-circuit current		≥ 200 mA AC / ≥ 100 mA DC
Fault Detection		
Fault indication via LCD display message, LED indicators, and audible signal Breakdown voltage and IMAX fault current are stored **Current Variation Mode (ΔI)** The ΔI detector automatically subtracts the normal current flowing through the test sample (I = U/Z) from the current that appears suddenly during a fault (breakdown): I' = I + Ifault		
Amplitude setting		from 1 mA to 100 mA ± (10% + 0.5 mA) in 1 mA DC steps In DC: range 1 mA–5 mA only for U < 3000 VDC
Pulse width		>10 µs ± 20%
Current Threshold Mode IMAX: Adjustable amplitude from 0.01 mA to 110 mA in 0.01 mA steps		
Upper threshold > 0.000 mA, lower threshold = 0.000 mA		High Threshold > 0.01 mA and Low Threshold set to 0.00 mA If the measured current is greater than or equal to the threshold, the test is declared FAIL: TRIP. If the current is below the High Threshold, the test is declared PASS.
Lower threshold > 0.000 mA and upper > lower		Low Threshold > 0.01 mA and High Threshold > Low Threshold If the measured current is within the range defined by the thresholds, the test is PASS; outside this range, the test is declared FAIL.
Current Threshold Mode IMIN: It is possible to define a minimum current flowing through the test sample. The IMIN value is adjustable from 0.0 mA to 109 mA. Using IMIN mode ensures that the sample under test is properly connected to the equipment. **No Detection Mode:** In this case, no current monitoring is performed (burn-in mode). The generator is protected against overheating.		
Continuous Current Measurement		
Current measurement via shunt directly in the test circuit		
Resolution		11 000 counts
Current accuracy	AC (total / real)	0,001 mA to 9,999 mA AC ± (2,5 % + 20 µAAC) / ± (3 % + 1 mAAC)
	DC (total)	0,001 mA to 9,999 mA DC ± (2,5 % + 20 µADC)
Timing		
PERMANENT Mode		The rise time is taken into account during the measurement. The output voltage corresponds to the set value. Shutdown in case of fault or when the red front panel button is pressed.
MANUAL Mode		No timing is applied during the measurement. Manual control via the up and down arrows on the display. Shutdown in case of fault or when the red front panel button is pressed.
AUTO Mode		The test consists of three successive phases: Linear rise to the desired value (Rise), Holding at the programmed value (Hold), Gradual return to 0 (Fall).
Programming	Ramp up / Ramp down Hold	0.1 to 9999.0 sec in 0.1 sec steps accuracy ± 20 ms
Timing accuracy		+/- 20 ms

DESIGN

FRONT PANEL



REAR PANEL



SEFELEC 506-H



CONFIGURE YOUR SEFELEC 506-H

ACCESSORIES AND OPTIONS

Accessories	
SEFA-TE65-02	High-voltage probe and measuring cable – length 2 m
SEFA-TE58-02	High-voltage probe and measuring cable with remote control – length 2 m
SEFA-CO175-02	Return cable with 4 mm plug – length 2 m
SEFA-CO180-02	High-voltage cable without termination – length 2 m
SEFA-P5X-HRC-02	High-voltage gun with remote control – length 2 m
SEFA-P5X-RT-02	Measurement return gun – length 2 m
SEFA-KR	Adapters for 19" rack mounting
SEFA-CO160	Red/Green safety lamp
SEFA-5XLIGHT	Two-hand control for test start
SEFA-CO200	Schuko/FR test socket, max. 1500 V
SEFA-CO200HV	Schuko/FR high-voltage test socket, max. 5000 V
SEFA-AO10	Two-hand control for test start

Options	
SEFO-5XRC	Remote control connection module
SEFO-IEEE488	IEEE488-2 communication card
SEFO-5XREAR	Rear panel connection
SEFO-4WHV	4-wire detection of the device under test
SEFM-4IHV	Internal 4-channel high-voltage scanner module
SEFM-8IHV	Internal 8-channel high-voltage scanner module

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

EN-SEFELEC 506-H 06/2026 The information contained in this document is subject to change by EATON without prior notice – Non-contractual photographs.