



SEFELEC 1500M

The EATON Tera-Ohmmeter / Pico-Ammeter

SEFELEC 1500M features and benefits:

Tera-ohmmeter from 1000 Ω to 2000 T Ω

Pico-ammeter from 20,00 pA to 20,00 mA

Measurement voltage (adjustable volt by volt) from 1 V to 1500 VDC

Up to 100kV with an external DC source

7" TFT Multi touch screen 16 M colors

ARM-Dual core control & Nand 3D technology inside for more accuracy, stability and repeatability

DSP measurement speeds the test

WIFI inside for wireless connection to industrial networks

IEC 1010-2-034 new safety standard compliant

*Ethernet / RS232 / USB / PLC / 0-10 V / CAN native
IEEE488-2 interface in option

*SIL2 double safety loop

*Automatic and manual range selection

*Large internal memory for configurations and measurement data storage

*Measurement speed selectable from 1 to 10 readings/sec

*Humidity and temperature measurement

The SEFELEC 1500M is a new generation EATON Tera-Ohmmeter / Pico-Ammeter, based and controlled by ARM-Dual Core and DSP technologies providing the best stability and repeatability. The high accuracy and measurement speed are suitable for quality control or incoming inspection departments.

The M Ω x km function makes the SEFELEC 1500M easy to use for cable manufacturers.

The new SEFELEC Series HMI, with its 7" dual-touch TFT screen, offers simple and intuitive operations.



Powering Business Worldwide

SPECIFICATIONS

General Specification				Tera-Ohmmeter specification			
Mains	100/240 VAC ±10 % 50 to 60 Hz / single phase			Measurement range	from 100 Ω to 2 000 TΩ		
Mains protection	Temporized double fuse T10AH 250 V				9 measurement current ranges		
Input Power	700 VA max.			Temperature coefficient	± 0.1 %/°C		
Temperature range	Storage	Operation		Display resolution	2 000 digits		
	-10°C à +60°C	0°C à +45°C		Test voltage (ex.)	10 V	100 V	1 500V
	Specified accuracy after 1/2 hour warm-up and RH<50 %				from 10 ³ to 2.10 ¹³ Ω	from 10 ⁴ to 2.10 ¹⁴ Ω	from 3.10 ⁵ to 2.10 ¹⁵ Ω
Altitude	Up to 2 000 m			Accuracy	± [current range accuracy + (50/Test Voltage) % + 1 digit] of read value		
Relative humidity	80 % max. @ 31°C			Threshold	x2. High and low from 100 Ω to 2020 TΩ		
Weight	approx. 15 kg			Pico-Ammeter specification			
Dimensions	Height	Width	Depth	Resolution	10 fA to 20 mA in 10 ranges / automatic or manual range selection		
	131 mm	440 mm	455 mm	Range	Minimum value	Resolution	Accuracy @ 25°C
Output voltage				20,00 pA	0.50 pA	10 fA	0.3 % reading + 500 fA
Voltage adjustable volt by volt from 1 VDC to 1500 VDC				200,0 pA	19.8 pA	100 fA	0.2 % + 0,3 pA
Accuracy	± (0.5 % + 0.5 V)			2,000 nA	0.198 pA	1 pA	0.2 % + 2 pA
Short circuit current	20 mA (±10%) can be limited to 3 mA			20,00 nA	1.98 nA	10 pA	0.2 % + 20 pA
Dynamic stability	> 1.10 ⁻⁶ for mains variation of ±15 %			200,0 nA	19.8 nA	100 pA	0.2 % + 200 pA
Nominal current	from 1 V to 10 V	from 11 V to 1000 V	from 1000 V to 1500 V	2,000 μA	0.198 μA	1 nA	0.2 % + 2 nA
	1 mA (±0.5 mA)	10 mA (±10 %)	5 mA (±10 %)	20,00 μA	1.98 μA	10 nA	0.2 % + 20 nA
Polarity	Positive pole to HV terminal Negative pole to guard terminal Possibility to ground positive or negative high voltage pole			200,0 μA	19.8 μA	100 nA	0.2 % + 200 nA
				2,000 mA	0.198 mA	1 μA	0.2 % + 2 μA
Voltage ripple	± 100 mV peak to peak for 10 mA output current			20,00 mA	1.98 mA	10 μA	0.2 % + 20 μA
Noise 0,01Hz à 10H z	100 μV max (20°C)			Nota: 1 pA = 0.001 nA = 0.000 001 μA = 0.000 000 001 mA = 1x10 ⁻¹² A			
Temperature coefficient	0.001 %/°C			Display resolution	2 000 digits		
Max D.U.T. capacitance	< 1 mF			Range selection	Automatic or manual range selection		
Discharge resistance	2.2 kΩ			Input impedance	Range	Impedance	
Test time					20 mA	9 Ω	1 %
					2 mA	90 Ω	1 %
					Others	9 kΩ	1 %
Rise, Fall, Hold times	from 0.1 to 9999 sec. or permanent mode			Threshold	x2. High and low from 00.00 pA to 20.00 mA		
Measurement speed				External voltage source	up to 100 kVDC with BAPA option RLHT50 or RLHT70 limitation resistors for sources > 10 kVDC		
3 speeds selectable from front panel	Slow	Normal	Fast				
	1 reading/sec	3 readings/sec	10 readings/sec				

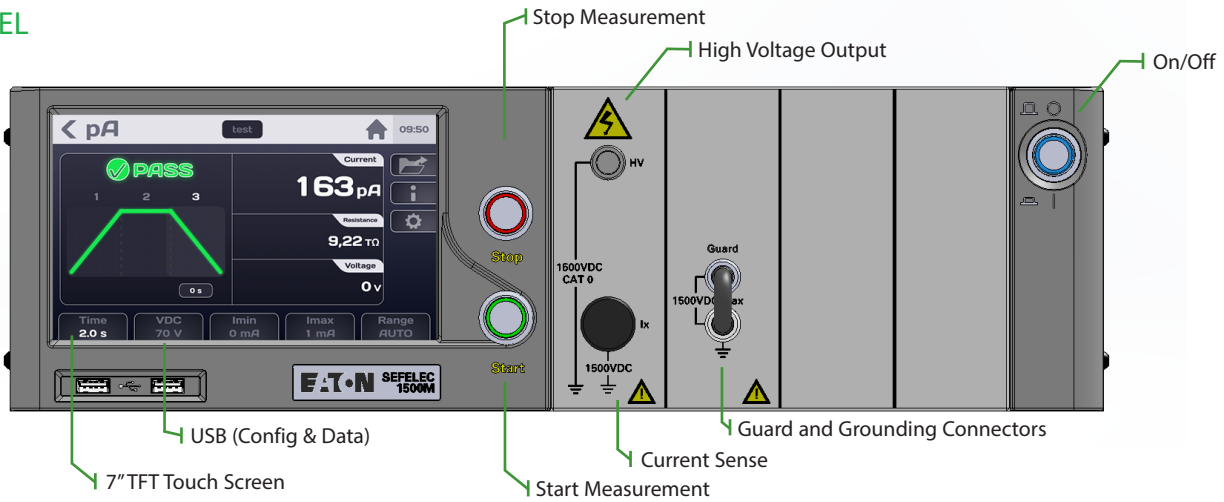
Options

SEFO-IEEE	IEEE488-2 communication interface
SEFO-1500REAR	Rear connections
SEFO-CO160	Green/red safety lamp

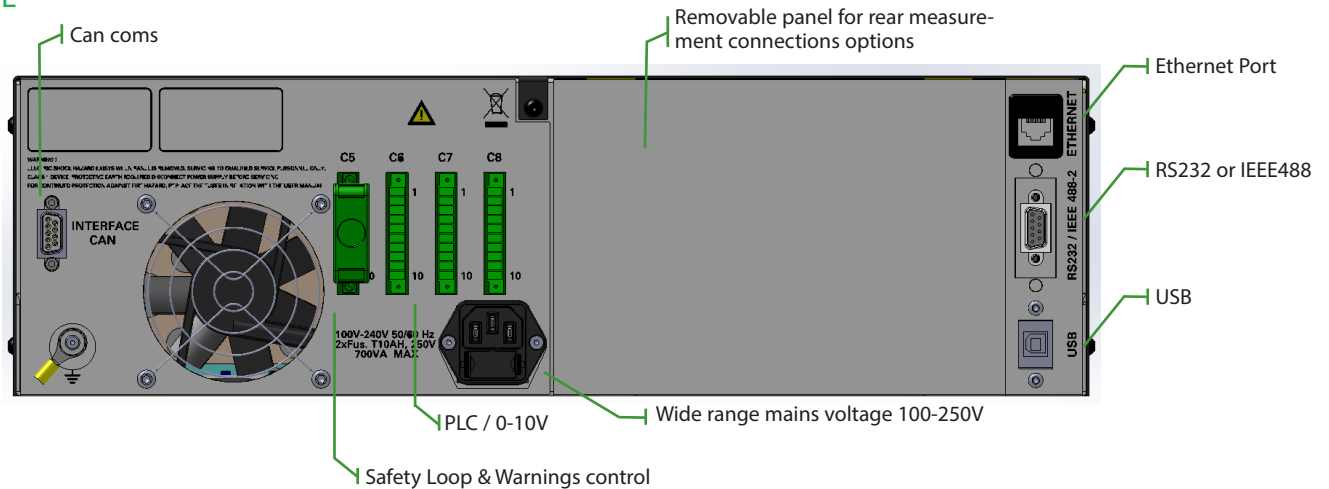
Accessories

SEFA-SE15	Sense cable end with probe - 1,5 meter + Lemo Connector
SEFA-HV15	High Voltage cable, end with 4mm plug - 1,5m + Lemo Connector
SEFA-HVSE15-10	Set of 2 x 10m length cable for test bench integration
SEFA-KR	SEFELEC Series 19" Rack Mounting Adaptors
SEFA-1500MHRT	Humidity and Temperature measurement probe for SEFELEC Series / USB

FRONT PANEL



REAR PANEL



To interact with the SEFELEC 1500M, please visit: Eaton.com

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 Printed in FR
 August 2018

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