12.000 VAC
16.000 VDC

Technical data	F1-1D / F1-1Q
Test voltage:	400 .. 6.000 VAC 500 .. 12.000 VAC 500 .. 8.000 VDC (option) 600 .. 16.000 VDC (option)
Nominal power:	500 VA
Tripping current:	0 .. 1 / 10 / 40 mA
Interface:	RS232-C
Mains voltage:	230 V / ±10% / 49 .. 51 Hz*
Size:	19" / 10 HU
Weight:	approx. 30 kg

Front view F1-1D

Front view F1-1Q

Rear view F1-1D, F1-1Q

Modular high-voltage testing device

Depending on the version and extension status, the devices provide flexible deployment possibilities during manual and automated use for high-voltage and insulation resistance testing on systems, subassemblies or components. For more detailed technical data, please see the table on back.

	Description	Size	Article no.
High-voltage test device	incl. TouchMe control unit	19" / 10 HU	F1-1D
High-voltage test device	for automatic use	19" / 10 HU	F1-1Q

Extension modules for the test devices

	Technical data	For device type	Article no.
DC voltage	Test voltage: 500 .. 8.000 / 16.000 VDC Tripping current: 0 .. 1 / 10 / 40 mA	F1-1D, F1-1Q	F1-1D E01
Insulation resistance	0.1 .. 1 / 10 / 35 MΩ + Autorange	F1-1D, F1-1Q	F1-1D E02
Digital additional outputs	Six additional digital outputs for activation of an external switching matrix.	F1-1D, F1-1Q	F1-1C E06
Ethernet	Alternative interface to RS232-C	F1-1D, F1-1Q	F1-1D E10
USB	Alternative interface to RS232-C	F1-1D, F1-1Q	F1-1D E12
Software package	Elution*Device* software package	F1-1D, F1-1Q	N2-1A Z7D
Device driver	On request		
Calibration	Supplied with Elabo works calibration protocol	F1-1D, F1-1Q	F1-1D E99

The description of the accessories can be found starting on page 108.
Please also see our sample configurations starting on page 36.
*other mains frequency on request
Technical specifications subject to change without notice.

Device features F1-1D / F1-1Q

Device		F1-1D	F1-1Q
Application fields			
Automatic use		●	●
Manual use		●	
Operation			
Touch Display 6.5"		●	
Interface		●	●
Start button		●	
Reset button		●	●
Interfaces			
RS 232-C		●	●
Ethernet		○	○
USB		○	○
USB accessory interface		●	
Digital interface 1		●	●
Digital interface 2		○	○
2 safety circuits		●	●
Connections			
HV test probes, rear		●	●
Warning lights		●	●
Non-heating apparatus socket		●	●
Test functions			
High voltage AC		●	●
High voltage DC		○	○
Insulation resistance measurement		○	○
Test voltages			
Test voltage AC 1		400 .. 6.000 V	
Test voltage AC 2		500 .. 12.000 V	
Test voltage DC 1[1]		500 .. 8.000 V	
Test voltage DC 2[1]		600 .. 16.000 V	
Residual ripple DC[1]		< 3 % with R > 3 MΩ	
Positioning rate for ramp		10 .. 3.500 V/s	
Adjustment inaccuracy		Typ. 30 V	
Measurement error, voltage		1% of meas. ± 3 digit	
Current ranges			
Measurement range 1 / resolution		0 .. 40 mA / 100 µA	
Measurement range 2 / resolution		0 .. 10.0 mA / 10 µA	
Measurement range 3 / resolution		0 .. 1.000 mA/ 1 µA	
Current tripping		Active current – Apparent current – Crest value – Delta I	
Accuracy Apparent current	measurement range 1	0.5 % of meas. +/- 2 digit	
	measurement range 2	0.5 % of meas. +/- 5 digit	
	measurement range 3	0.5 % of meas. +/- 20 digit	
Accuracy Peak value	measurement range 1	1.0 % of meas. +/- 5 digit	
	measurement range 2	1.0 % of meas. +/- 5 digit	
	measurement range 3	1.0 % of meas. +/- 20 digit	
Accuracy Active current	measurement range 1	1.0 % of meas. +/- 16 digit	
	measurement range 2	1.0 % of meas. +/- 16 digit	
	measurement range 3	1.0 % of meas. +/- 40 digit	
Accuracy DC	measurement range 1[1]	0.5 % of meas. +/- 2 digit	
	measurement range 2[1]	0.5 % of meas. +/- 2 digit	
	measurement range 3[1]	0.5 % of meas. +/- 2 digit	
Insulation resistance measurement[1]			
Test voltage DC 1		500 .. 8.000 V	
Test voltage DC 2		600 .. 16.000 V	
Measurement range 1		0.1 .. 1.00 MΩ	
Measurement range 2		1 .. 10.0 MΩ	
Measurement range 3		10 .. 35 MΩ	
Autorange		0.1 .. 35 MΩ	
Accuracy at 500 V		3% of meas. ± 1 digit	
Accuracy at 1.000 V		1% of meas. ± 1 digit	

12.000 VAC
16.000 VDC

Flexibility is of prime importance with Elabo. That is why two versions of the devices in this line of equipment are available. Depending on the purpose, universal use or fully automated operation are possible.

Technical main data		
Nominal power	500 VA	
Short-circuit current	>100 mA	
Mains voltage	230 V +/- 10%	
Mains frequency	49 .. 51 Hz*	
Dimensions Depth 360 mm	19" / 10 HU	
Weight	30 kg	29 kg
Permissible relative humidity	25 .. 75 % rel.	
Operating temperature	10 .. 50 °C	
Test time	0.1 .. 999.9 sec. / constant testing	
Burn-Mode current[1]	approx. 100 mA	
Feedback threshold[1]	0.7 .. 1 x U_{Test}	

● Standard ○ Optional
[1] Extension module required
*other mains frequency on request
Technical specifications subject to change without notice.