

180

Electrical Safety Analyzer

Technical Data



The handheld 180 Electrical Safety Analyzer is a lightweight, portable device for testing electrical systems, medical devices, and physiological instrumentation. The device includes the AAMI test load and has 5 jacks for patient applied parts testing.

Small enough to fit in a briefcase, the analyzer works well as a bench-top instrument in the laboratory or a portable testing device in the mobile engineer's toolbox. With its uncomplicated design, the 180 is simple to use. A single master function switch, directly labeled with the test to be performed, leads the user through a complete measurement procedure.

The analyzer uses simple, yet sophisticated, electronics for true RMS measurement of current and voltage. The 180 also performs dual-lead leakage and resistance tests.

Key features

- Handheld
- Self-switching 120 V/240 V operation
- 15 A and 20 A capabilities
- FIVE patient applied parts jacks
- Dual-lead testing

Specifications

Operating mains voltage range	90 V ac to 240 V ac
Current capacity for DUT	Line 90 V to 140 V: 20 A for 5 min, 15 A for 30 min; line over 140 V: 10 A
Line voltage measurement	
Range	90 V to 240 V
Accuracy	± 3 % of reading ± 1 LSD
Load current measurement	
Range	1 A to 19.99 A
Accuracy	± 5 % of reading ± 1 LSD
Leakage current measurement	
Range	0 µA to 1999 µA
Accuracy	DC and 25 Hz to 1 kHz: ± 1 % of reading ± 1 µA; 1 kHz to 100 kHz: ± 2.5 % of reading ± 1 µA; 100 kHz to 1 MHz: ± 5 % of reading ± 1 µA
Measurement type	True-rms
	Input impedance per AAMI ES1-1993
Isolation test	
Isolation source voltage	110 % of mains, ± 5 % of reading
Current limit	1 mA @ 120 V ac
Resistance measurement	
Range	0.01 Ω to 19.99 Ω
Accuracy	± 1 % of reading ± 1 LSD
Resolution	0.01 Ω
Current source	10 mA dc
Environmental requirements	
Operating temperature	15 °C to 40 °C (59 °F to 104 °F)
Storage temperature	-20 °C to 65 °C (-4 °F to 149 °F)
Relative humidity	90 % max
Mains voltage range	90 V to 240 V
General information	
Display	LCD 3.5 digit
Dimensions (LxWxH)	13.3 cm x 18.4 cm x 5.4 cm (5.25 in x 7.25 in x 2.1 in)
Weight	Max weight 1 kg (2.25 lb)

Ordering information

Model

ESA180-US 90-265V Electrical Safety Analyzer

Standard accessories

1751000 Users Manual

600/100FG Test Lead, 8 ft, Black

Optional accessories

97148 Soft-Sided Vinyl Carrying Case

600/100FG Chassis Cable, Coil Cord, 8 ft Extended

600/101FG Chassis Cable, Coil Cord, 16 ft Extended

600/200FG External Leakage Cable, Coil Cord, 8 ft Extended

600/201 External Leakage Cable, Coil Cord, 16 ft Extended

1800001 North American 220 V Adapter Kit

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Fluke Biomedical is the world's leading manufacturer of quality biomedical test and simulation products. In addition, Fluke Biomedical provides the latest medical imaging and oncology quality-assurance solutions for regulatory compliance. Highly credentialed and equipped with a NVLAP Lab Code 200566-0 accredited laboratory, Fluke Biomedical also offers the best in quality and customer service for all your equipment calibration needs.

Today, biomedical personnel must meet the increasing regulatory pressures, higher quality standards, and rapid technological growth, while performing their work faster and more efficiently than ever. Fluke Biomedical provides a diverse range of software and hardware tools to meet today's challenges.

Fluke Biomedical Regulatory Commitment

As a medical test device manufacturer, we recognize and follow certain quality standards and certifications when developing our products. We are ISO 9001 and ISO 13485 medical device certified and our products are:

- CE Certified, where required
- NIST Traceable and Calibrated
- UL, CSA, ETL Certified, where required
- NRC Compliant, where required

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