clarke-hess
COMMUNICATION RESEARCH CORP.
manufacturer of precision test and measurement equipment

Model M151 Current Source

- Current 8 mA to120 (AC/DC)
- Frequency 15 Hz to 1 kHz
- Best accuracy 0.035 %
- Simulated current and transconductance amplifier
- Built-in process multimeter
- Output capability: 8 Vpk
- RS232, IEEE488

The Model M151 is a stable high current calibrator up to 120 A. Basic accuracy is 0.035 %. It can be controlled via RS232 or GPIB interface. The Model 151 can function in a simulated amplifier mode to increase the current capability of any multifunction calibrator. It is suitable for power meter calibration because it can be synchronized with the input signal not only in amplitude but also in frequency and phase. The current terminals are isolated up to 450 Vpk against case (protective earth).
The Model M151 is a sophisticated instrument with its own internal recalibration procedure. The procedure enables one to adjust any deviation directly from the front panel.
The unit is also designed for checking the parameters of amp meters. With the optional current coil it can be used for calibration of clamp meters.

Specifications (1 year accuracy, reference temperature)

Range	*% of value + % of range*	*Maximal voltage*	*% of value + % of range*	*% of value + % of range*	*Maximal voltage*	*Maximal voltage*
	DC		15 - 40 Hz 70 - 1000 Hz	40 – 70 Hz	15 – 400 Hz	400 - 1000 Hz
0.008000 - 0.300000 A	0.025 + 0.01	8 V	0.03 + 0.02	0.025 + 0.01	5.5 V	3.5 V
0.30001 - 1.00000 A	0.025 + 0.01	8 V	0.03 + 0.02	0.025 + 0.01	5.5 V	3.5 V
1.00001 - 2.00000 A	0.025 + 0.01	8 V	0.03 + 0.02	0.025 + 0.01	5.5 V	3.5 V
2.00001 - 5.00000 A	0.025 + 0.01	5 V	0.03 + 0.02	0.025 + 0.01	3.5 V	3.5 V
5.0001 - 10.0000 A	0.03 + 0.015	5 V	0.04 + 0.02	0.03 + 0.015	3.5 V	3.5 V
10.0001 - 30.0000 A	0.035 + 0.015	5 V	0.05 + 0.02	0.035 + 0.015	3.5 V	3.5 V
30.0001 - 60.0000 A	0.035 + 0.015	5 V	0.05 + 0.02	0.035 + 0.015	3.5 V	3.5 V
60.0001 - 120.000 A	0.035 + 0.015	5 V	0.05 + 0.02	0.035 + 0.015	3.5 V	3.5 V

Multimeter Specifications

Function	*Range*	*% of value + % of range*
AC voltage < 1 kHz	0 - 20 V	0.02 % + 0.02 %
AC voltage > 1 kHz	0 - 20 V	0.05 % + 0.05 %
DC voltage	±20 V	0.01 % + 0.01 %
AC current < 1 kHz	0 - 200 mA	0.02 % + 0.02 %
AC current > 1 kHz	0 - 200 mA	0.05 % + 0.05 %
DC Current	±200 mA	0.01 % + 0.01 %
Frequency	1 Hz - 10 kHz	0.005 % + 0.00 %

General specifications

Warm-up time:	15 min
Output terminals isolation:	up to 450 Vpk against GND (protective earth)
Distortion of output signal:	< 0.1 %
Frequency accuracy:	0.005 %
Frequency resolution:	0.001 Hz below 500 Hz 0.01 Hz above 500 Hz
Frequency synchronization:	internal, external, power supply
Simulated amplifier gain:	0.5 … 10 A/V (transconductance amplifier) 50 … 1000 A/A (current amplifier)
Remote control:	RS232, IEEE488 (SCPI)
Power supply:	115/230 Vac, 50/60 Hz
Reference temperatures:	+20 °C … +26 °C
Working temperatures:	+5 °C … +40 °C
Storage temperatures:	-10 °C … +55 °C
Dimensions:	W 538 mm, H 283 mm, D 540 mm
Weight:	42 kg

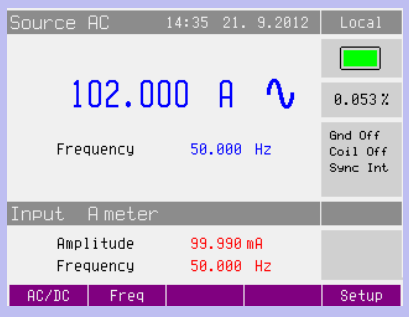
Content of delivery

Current Calibrator M151
RS 232 Cable
User's manual
Power Cord

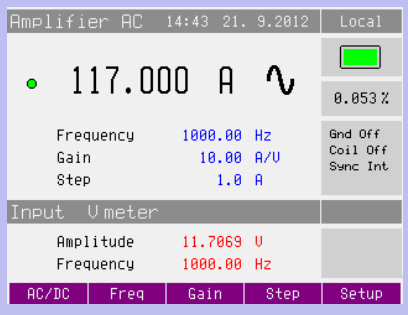
Options

Option 151-25 (25 turn current coil)
IEEE488/IEEE488

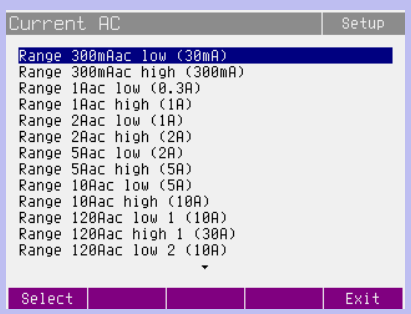
AC current source



Simulated transconductance amplifier



Recalibration



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