MTE Meter Test Equipment

CheckSource 2.3

Fully Electronic Phantom Load

CheckSource 2.3 is a three-phase current source for currents up to 6 A. The test currents will be generated with the same frequency and a user-defined phase shift to the voltages applied to the voltage inputs. Alternatively the test currents can also be generated with a user-defined frequency.

Advantages of the CheckSource 2.3

- Three-phase portable precision type source with single-phase mains supply
- Phase currents can be generated individually
- User friendly graphical LCD display to define currents, phase angles (symmetrical / asymmetrical) and frequency
- Remote control of source by RS 232 interface
- Currents are generated with high accuracy and stabilized by digital and analogue control

Basic technical data:

Three-phase generation of current based on a single-phase mains connection to the unstabilized mains supply
(88 min ... 264 max VAC, 45 ... 65 Hz)

- Current: 3 x 1 mA … 3 x 6 A
- Phase angle: -180° … +180°
- Frequency: 40 Hz … 70 Hz
- Output power: 3 x 8 VA

CheckSource 2.3 is integrated into a robust hard plastics housing, the total weight is below 5 kg

Options

Software CALSOFT

Technical Data

General Data

Power Supply	88 VAC/DC$_{min}$ … 264 VAC/DC$_{max}$ (Operation) … 440 VAC/DC$_{max}$ (Protection)
Power Consumption	≤ 50 VA (typical) ≤ 65 VA (maximum)
Housing	Hard plastic housing
Dimensions (W x H x D)	273 mm x 178 mm x 247 mm (housing closed)
Weight	≤ 5 kg (excl. accessories)
Voltages Synchronization	10/17 V … 300/520 V
Temperature	-10°C … +50°C (Operation) -20°C … +60°C (Storage)
Operation Frequency	45 Hz … 65 Hz

Current Source

Range	3 x 1mA – 3 x 6A		
	Internal Range	Output Power	Peak Current / Peak Voltage
	1 mA … 6 mA	8 mVA at the final range value	9.33 mA / 2.1V
	6 mA … 60 mA	80 mVA at the final range value	93.3 mA / 2.1V
	60 mA … 0.6 A	0.8 VA at the final range value	933 mA / 2.1V
	0.6 A … 6 A	8 VA at the final range value	9.33 A / 2.1V
Resolution Accuracy Distortion Factor	1 mA - 6.000 A 1 mA better than 0.2 % at the final range value ≤ 0.8 %		
Stability	better than 0.03 % (30 min) better than 0.1 % (1 h)		
Load Regulation Power Factor of Load Bandwidth Efficiency	≤ 0.01 % from 0 % - 100 % load 1 … 0,1 ind. 30 Hz … 1 kHz (-3 dB) ≥ 75 %		
Phase Angle	Range	Accuracy	Resolution
	-180.0° - +180.0°	± 0.2° for frequency-stable reference voltages	0.1°
Frequency (Generation)	Range	Accuracy	Resolution
Mode LINE	40 Hz … 70 Hz synchronized to input voltages		
Mode NUM	40 Hz … 70 Hz	± 0.01 Hz	0.01 Hz

Safety Requirements

CE	
Isolation protection	according EN 61010-1
Degree of protection (acc. IEC 60529:2-2001)	IP 54 (housing closed) IP 40 (housing open)
Storage temperature	-20°C ... +55°C
Relative humidity	≤ 85 % at Ta ≤ 21°C
Relative humidity at 30 days / year	≤ 95 % at Ta ≤ 21°C