

# 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 CALegration

## Technical Data

### General Data

|                          |                                                                                                                  |
|--------------------------|------------------------------------------------------------------------------------------------------------------|
| Power Supply             | 88 VAC/DC <sub>min</sub> ... 264 VAC/DC <sub>max</sub> (Operation)<br>... 440 VAC/DC <sub>max</sub> (Protection) |
| Power Consumption        | ≤ 50 VA (typical)<br>≤ 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)<br>-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             | 1 mA - 6.000 A 1 mA                                    |                                                |                             |
| Accuracy               | better than 0.2 % at the final range value             |                                                |                             |
| Distortion Factor      | ≤ 0.8 %                                                |                                                |                             |
| Stability              | better than 0.03 % (30 min)<br>better than 0.1 % (1 h) |                                                |                             |
| Load Regulation        | ≤ 0.01 % from 0 % - 100 % load                         |                                                |                             |
| Power Factor of Load   | 1 ... 0,1 ind.                                         |                                                |                             |
| Bandwidth              | 30 Hz ... 1 kHz (-3 dB)                                |                                                |                             |
| Efficiency             | ≥ 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)<br>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                            |