

RCTrms-3ph

Industrially specified true rms ac current transducer



RCTrms-3ph - Thin, flexible, clip-around, ac current transducer with true rms measurement

The RCTrms-3ph is a 3-Channel ac current transducer for permanent installation. Simple to install and easy to retrofit it combines the benefits of a thin, flexible, clip-around Rogowski (sense) coil with a signal conditioner providing accurate, true rms measurement, of ac current.

The RCTrms-3ph has an industry standard 4-20mA or 0-5V output making it ideal for process control, status alarming or system monitoring purposes. Typically the RCTrms is used with SCADA systems, PLCs, data loggers

The RCTrms-3ph is a 3-Channel ac current transducer providing a 4 to 20mA or 0 to 5V output proportional to the true RMS of the primary current and has the advantages of:

- Easy to retrofit
- Simple to install in applications where space is limited
- The size of the Rogowski coil can be specified independently of the primary current
- Does not suffer from magnetic saturation
- Ideal for process control, status alarming or system monitoring in a wide variety of applications, from arc furnaces to power distribution.

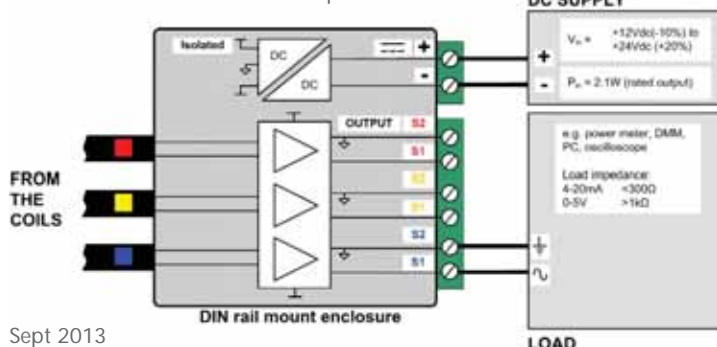
RCTrms-3ph

Specifications

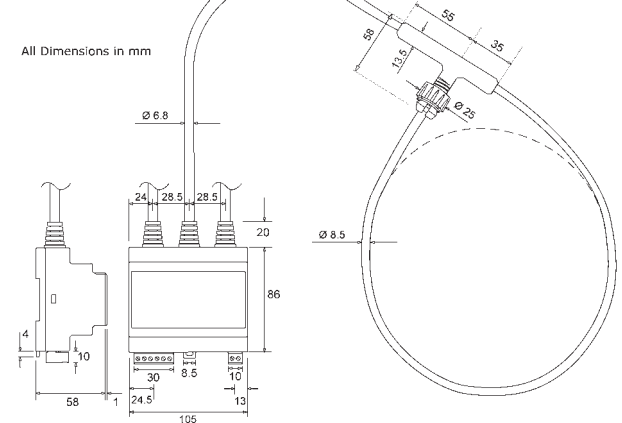


| | | | |
|------------------------------------|--|-------|--------|
| Rated current (rms) | 100A | 2000A | 10000A |
| | 250A | 2500A | 16000A |
| | 500A | 3000A | 20000A |
| | 800A | 4000A | 25000A |
| | 1000A | 5000A | 40000A |
| | 1600A | 8000A | 50000A |
| Rated output (Full scale FS) | 4 to 20mA - or - 0 to 5V output | | |
| Output limit | 150% FS (28mA or 7.5Vdc) | | |
| Supply voltage (Wide input) | 12Vdc (-10%) to 24Vdc (+20%) | | |
| Input power | 2.1W (at rated output) | | |
| Operating temperature range | -5°C to +65°C (Integrator) -20°C to +80°C (Coil and cable) | | |
| Bandwidth (-3dB) | 2Hz to 100kHz | | |
| Max. Response time (10 to 90%) | 1000ms | | |
| Accuracy (typ.) | ± 1.0% of reading (0 - 5V) ± 1.5% of reading (4 - 20mA) (10% to 150% FS, 25°C) | | |
| Output load | <300Ω for 4 - 20mA output >1kΩ for 0 - 5V output | | |
| Coil Length | 300mm, 500mm or 700mm <i>Custom lengths available</i> | | |
| Cable Length (coil to electronics) | 1m or 2.5m <i>Custom lengths available</i> | | |

Connections



Dimensions



Features

- Traceable calibration
 - Every unit is supplied with a traceable calibration certificate
 - No magnetic materials means excellent linearity <math><0.1\%</math> reading
- Fully isolated measurement
 - Isolated power supply 2kVdc
 - Coil rated at 2kVpeak (withstand test is 4kVrms /50Hz/ 60 sec)
- Small DIN rail (or panel mount) enclosure – UL94 V-0 rated

Options

- Isolated BNC-BNC cable split option
 - Between coil and electronics to enable ease of installation e.g. threading through existing conduit. Standard cable permanently fixed.

Standards and Approvals

- CE marked
- Complies with EMC EN 61326-1 2006
- Complies with IEC61010-1:2001

Order code RCTrms-3ph

The RCTrms-3ph order code can be generated as follows:

| Output | Rated current (A) | Cable length (m) | Coil length (mm) | Options |
|--------------------|-------------------|------------------|------------------|-----------------------|
| 420 (4 to 20mA) | 250 | 1 | 300 | BC BNC Cable Split |
| | 500 | 2.5 | 500 | |
| | - | - | 700 | |
| 005 (0 to 5Vdc) | 50000 | Custom lengths | Custom lengths | |

For example: RCTrms3ph/420/2000/1/700 has a rated primary current 2000A, 4-20mA Output, 1m cable 700mm coil no options

Further information

The RCTrms-3ph can be configured to suit a great many applications. If your requirement is outside that listed in this datasheet please contact us to discuss your application.

More detailed technical advice is available at www.pemuk.com



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