

## 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.

**Powertek**

# 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

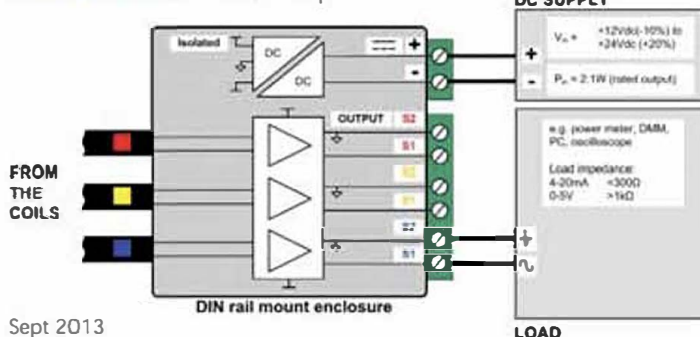
Accuracy (typ.) ± 1.0% of reading (0 - 5V)  
± 1.5% of reading (4 - 20mA)  
(10% to 150% FS, 25°C)

Output load <300Ω for 4 - 20mA output  
>1kΩ for 0 - 5V output

Coil Length 300mm, 500mm or 700mm  
Custom lengths available

Cable Length (coil to electronics) 1m or 2.5m  
Custom lengths available

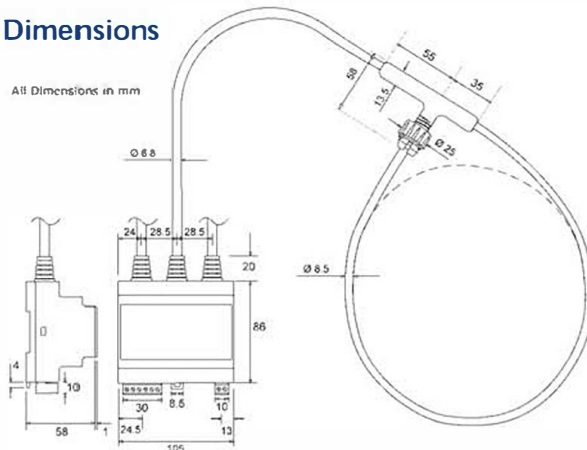
### Connections



Sept 2013

### Dimensions

All Dimensions in mm



### Features

- Traceable calibration
  - Every unit is supplied with a traceable calibration certificate
  - No magnetic materials means excellent linearity < 0.1% 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 (1 to 20mA)	250 500	1 2.5	300 500 700	8C BNC Cable Split
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](http://www.pemuk.com)

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