

RCTrms

Industrially specified true rms ac current transducer



RCTrms - Thin, flexible, clip-around, ac current transducer with true rms output

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

The RCTrms is an ac current transducer providing a 4 to 20mA output proportional to the true rms of the primary current and has the advantages:

- 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
- Intrinsically safe
- Ideal for process control, status alarming or system monitoring in a wide variety of applications, from arc furnaces to power distribution.

PENI
Power Electronic Measurements

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
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Output limit	150% FS (28mA)
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Supply voltage (Wide input) 12Vdc (-10%) to 24Vdc (+20%)

Input power	0.7W (at rated output)
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Operating temperature range -5°C to $+65^{\circ}\text{C}$ (*Integrator electronics*)
 -20°C to $+80^{\circ}\text{C}$ (*Coil and cable*)

Bandwidth (-3dB) 2Hz to 100kHz

Max. Response time (10 to 90%) 1000ms

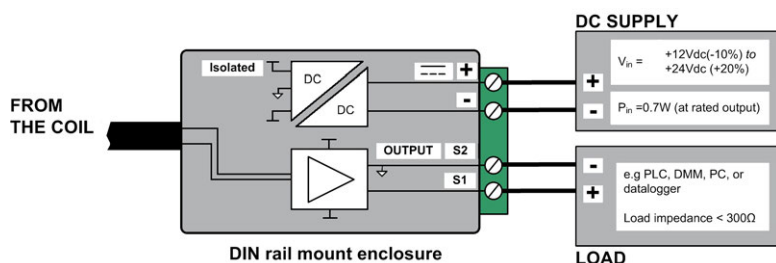
Accuracy (typ.) ±1.5% of reading
 (10% to 150% FS, 25°C)

Output load $< 300\Omega$

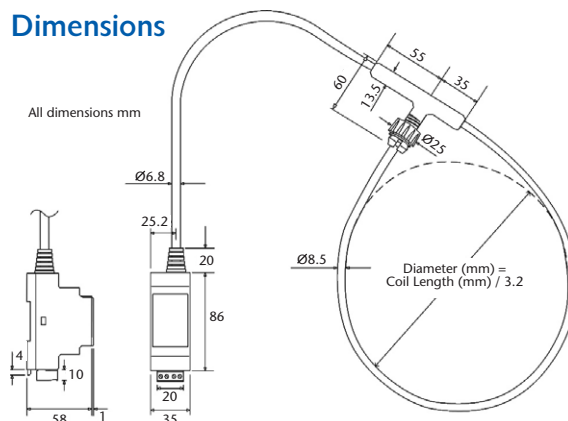
Coil Length 300mm, 500mm or 700mm
Custom lengths available

Cable Length (coil to electronics)	1m or 2.5m <i>Custom lengths available</i>
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Connections



Dimensions



Features

- **Traceable calibration**
 - Every unit is supplied with a traceable calibration certificate
 - No magnetic materials means excellent linearity <0.2% of 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
- **IP65 die-cast aluminium panel mount enclosure**

Standards and Approvals

- CE marked
- Complies with EMC EN 61326-1 2006
- PEM Ltd is an ISO9001:2008 registered company
- Complies with IEC61010-1:2001

Order code RCTrms

The RCTrms order code can be generated as follows:

Rated current (A)	Cable Length (m)	Coil Length (mm)	Options
250A	1m	300mm	BC-BNC
500A	2.5m	500mm	Split in Cable
...	...	700mm	
50000A	<i>Custom lengths</i>	...	IRF-Die-cast
		<i>Custom lengths</i>	<i>aluminium enclosure</i>

For example: RCTrms /2000/1/300 has a rated primary current 2000A, 1m cable, 300mm coil and no 'options'

Further information

The RCT 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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