



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

# RCTrms<sup>®</sup>

The RCTrms<sup>®</sup> is an industrially specified ac current transducer for permanent installation. It combines the benefits of a thin, flexible, clip-around Rogowski coil sensor with a signal conditioner providing true rms measurement of ac current.

The RCTrms<sup>®</sup> is specified with industry standard outputs either, 0-5V, or 4-20mA making it ideal for process control or system monitoring purposes.

Typically the RCTrms<sup>®</sup> is used with SCADA systems, PLC, data loggers and protection equipment.

### Applications include

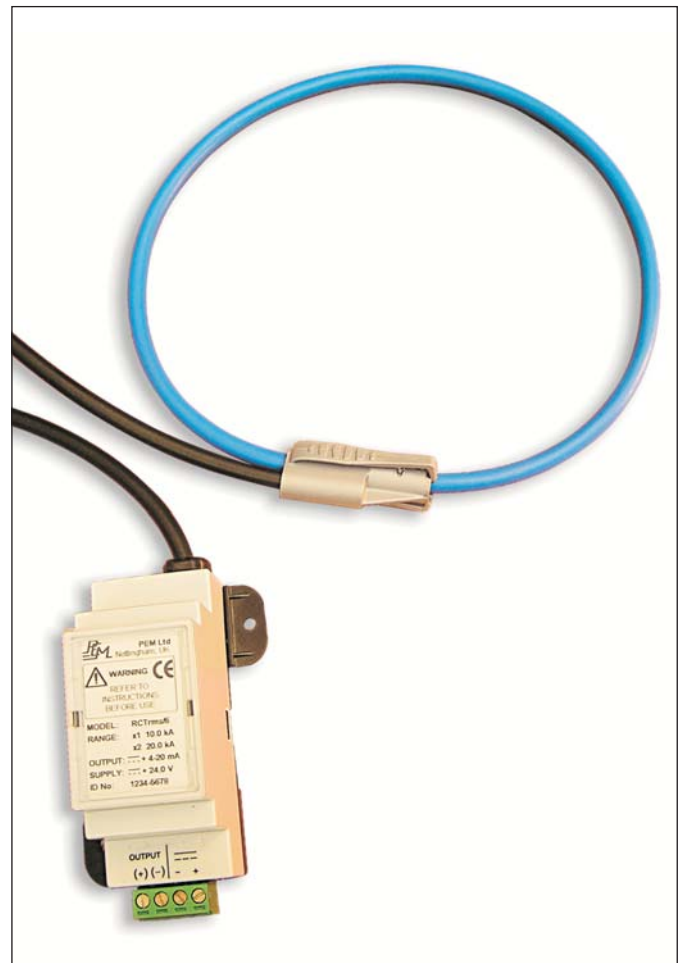
- welding applications
- large pumps and fans
- status alarming in production processes
- variable speed motor drives and other power converters
- current monitoring in low voltage distribution installations
- measuring current in bus-bar sets

### Specifications

Rated current (rms)	250 / 500 A
Range is switch selectable	500 / 1,000 A 1,000 / 2,000 A 2,500 / 5,000 A 5,000 / 10,000 A 10,000 / 20,000 A 25,000 / 50,000 A
Rated Output (Full scale FS)	0-5V dc -or- 4-20 mA
Output limit	150% FS (7.5V or 28mA)
Supply voltage	12Vdc ± 10% at 100.0mA -or- 24Vdc ± 10% at 50.0mA -or- 48Vdc ± 10% at 25.0mA
Operating temperature range	-5°C to +65°C
Bandwidth (-3dB)	2Hz to 100kHz
Max. Response time (10 to 90%)	1000ms
Accuracy	0-5V dc 1.0% at 25°C
error of reading from 10% to 100% FS	4-20mA -0.01 (coil) ±0.02 % / °C 1.5% at 25°C -0.01 (coil) ±0.03 % / °C
Output load	< 300Ω for 4 to 20mA > 10kΩ for 0-5V dc

### Features

- **Switch selectable dual range**
- **Traceable calibration**
  - Every transducer is supplied with traceable calibration at 50Hz.
- **Fully isolated measurement**
  - Power supply isolated to 1kVrms
  - Rogowski coil insulated to 2kV peak. Established by a standard 'flash test' at 4kVrms, 50Hz for 60 seconds
- **Easy to install, flexible, 'clip-around' coil sensor available in three standard lengths**
  - 300mm (11.8"), 500mm (19.7") and 700mm (27.6")
  - Custom lengths available on request
- **1m cable connecting the coil to the electronic integrator**
  - Custom lengths available on request
- **Small DIN rail or panel mount electronics enclosure**



### Customising the RCTrms<sup>®</sup>

For specifications outside those detailed on the specification sheet please contact PEM e.g.

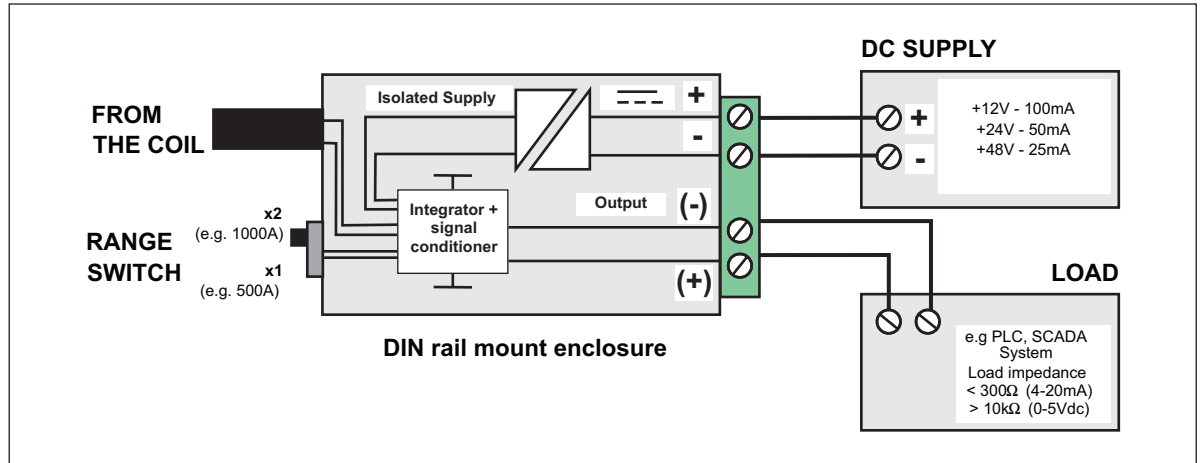
- IP65 electronic enclosure
- Extended coil / cable lengths
- Further current / output ratings e.g. 0-10Vdc
- Faster response time
- Customised frequency response

### Standards and Approvals

- CE Marked
- Complies with EN 61010:2001
- PEM Ltd is an ISO9001:2000 registered company
- EMC EN 61326



## Connections



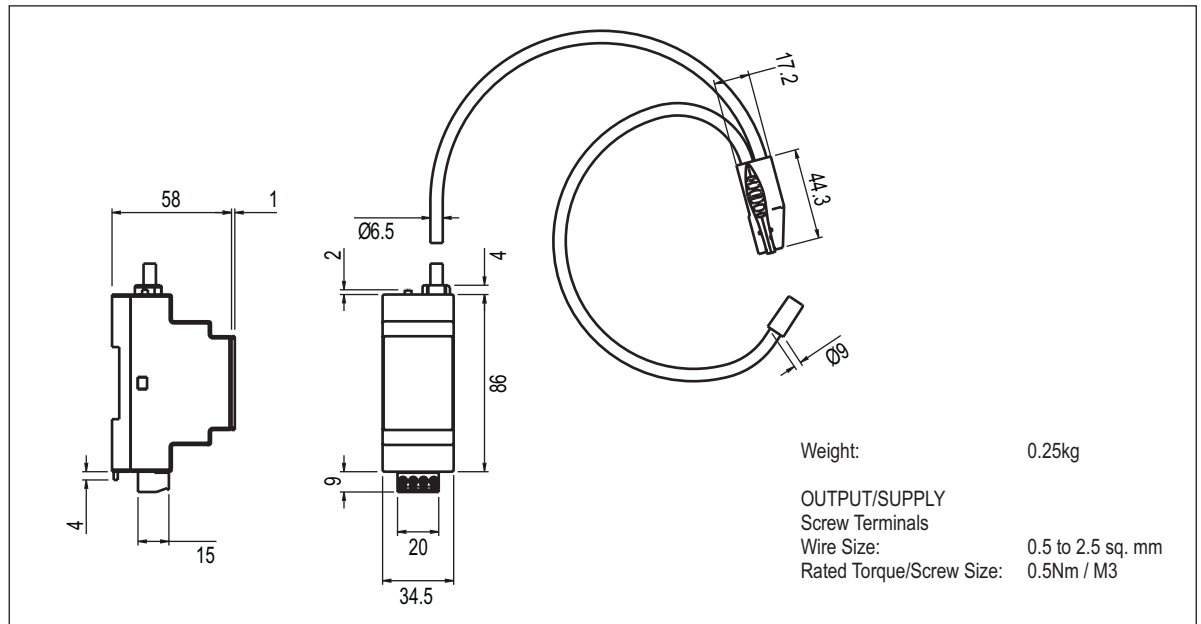
## Order Code

RCTrms	Current range	Output	Power supply	Coil length
2	250/500 A	420 - 4 to 20mA	D12 - +12V dc	300 - 300 mm
3	500/1000 A	005 - 0 to 5Vdc	D24 - +24V dc	500 - 500 mm
4	1000/2000 A		D48 - +48V dc	700 - 700 mm
5	2500/5000 A			
6	5000/10000 A			
7	10000/20000 A			
8	25000/50000 A			

For example an RCTrms/6/420/D12/500 has a switch selectable current ranges of 5000 and 10000A, a 4 to 20mA output, +12V dc supply and a 500mm (19.7") circumference Rogowski coil.

Customised versions are available on request. If your requirement is outside that listed in this datasheet please contact Power Electronic Measurements Ltd.

## Dimensions



## Further information

Further technical advice available at [www.pemuk.com](http://www.pemuk.com). For all questions, queries or specifications outside those listed please contact Power Electronic Measurements Ltd.



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