



Thin, flexible, clip-around ac current transducer in IP65 enclosure

IRF

The **IRF** is an industrially specified ac current transducer for permanent installation. The coil sensor is thin, lightweight, flexible and clip-around. The output from the transducer is an instantaneous voltage proportional to the measured current.

Typically the **IRF** is used with oscilloscopes, data acquisition cards, power analyzers and meters and in power quality applications.

The **IRF** is an ideal replacement for medium / large current, current transformers (CT's) and has the advantages that it is

- **easy to retrofit** - the coil is small, light-weight, and its length can be specified independently of the size of measured current
- **does not suffer from magnetic saturation**
- **non intrusive** - the coil draws no power from the circuit under test
- **has no danger of open circuit secondaries**
- **has low phase shift** at power frequencies (50/60Hz) and above
- **has a wide-bandwidth 0.6Hz to 1MHz** for measurement of sub and higher frequency harmonics and complex waveforms

Specifications

Rated current (rms)	500 A
	1000 A
	2500 A
	5000 A
	10,000 A
	25,000 A
	50,000 A
Rated output (Full scale FS)	±5.0Vrms (±7.07V peak)
Output limit	150% FS (±10.6V peak)
Supply voltage	12Vdc± 10% at 100.0mA
	-or- 24Vdc± 10% at 50.0mA
Operating temperature range	-5°C to +65°C
Bandwidth (-3dB)	0.6Hz to 1MHz
Phase shift @ 50Hz	0.9±0.1 degrees
Accuracy	±1.0% of reading (5% to 150% FS, 25°C)
Temperature coefficient	-0.01 (coil) ±0.012 (integrator) % / °C
Output load	> 1.0kΩ



Features

- **Panel mount IP65 diecast aluminium enclosure**
- **Traceable calibration**
 - Every transducer is supplied with traceable calibration at 50Hz.
 - Due to the excellent linearity of Rogowski coils (< 0.05%) the calibration is maintained throughout the current range.
- **Fully isolated measurement**
 - Power supply isolated to 1kVrms
 - Rogowski coil insulated to 2kVpeak. (10kV peak with sleeve fitted)
 - Established by a standard 'flash test' at 15kVrms, 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
- **2.5m cable connecting the coil to the electronic integrator**
 - Custom lengths available on request
- **1m dual core power supply cable**
- **0.5m BNC output cable**

Customising the IRF

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

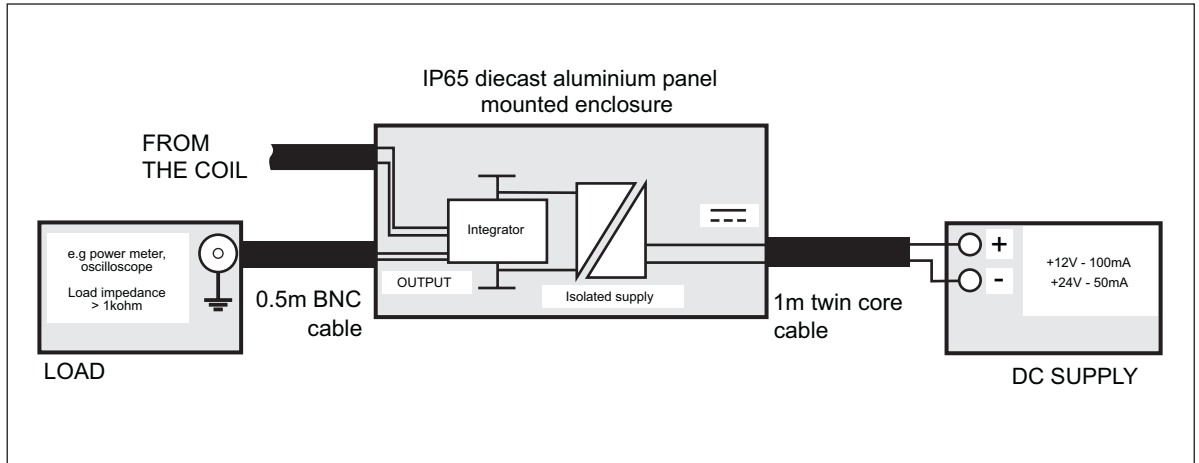
- Phase error requirements at different frequencies
- Extended coil / cable lengths
- Further current / output ratings
- Customised frequency response

Standards and Approvals

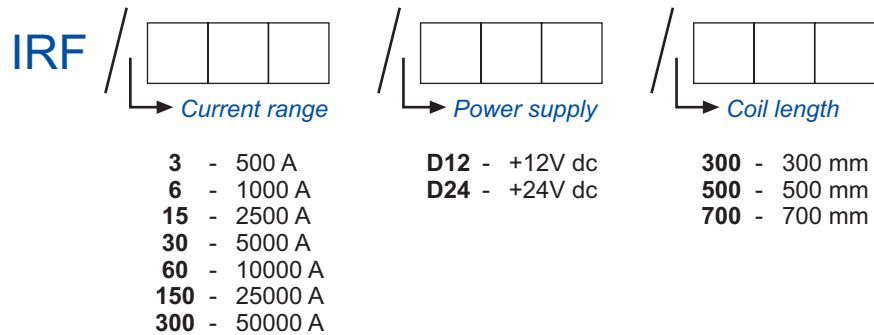
- CE Marked
- PEM Ltd is an ISO9001:2000 registered company
- EMC EN 50081-1/2
EN 50082-2



Connections



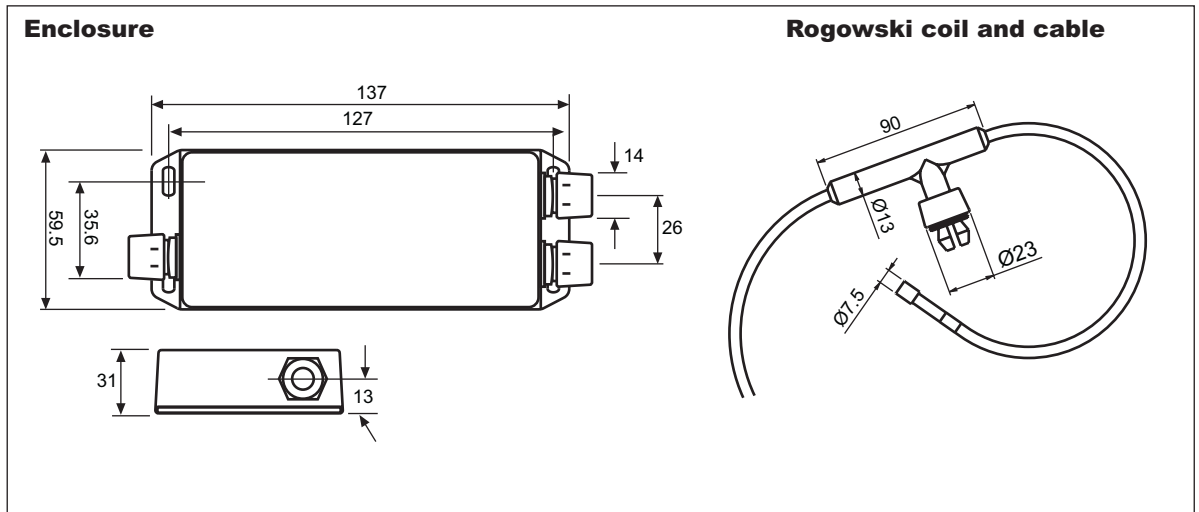
Order Code



For example an IRF/6/D12/700 has a current ranges of 1000, +12V dc supply and a 700mm (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. For all questions, queries or specifications outside those listed please contact Power Electronic Measurements Ltd.



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