**A. T. M. S.** Proven Advanced Technology Solutions

# ROGOWSKI COIL CURRENT MEASUREMENT

by **Rocoil**

- **Flexible Rogowski-coil sensors.**
- **Wide range of Coils**
- **With or Without Integrator**
- **Accuracy 1%**
- **Low power consumption**


Rocoil manufactures a wide range of current detecting Rogowski coils which are easily « snap » closed around the conductor carrying the current to be measured. The alternating current in the conductor induces a voltage in the coil corresponding to the rate of change of the current in the conductor. This voltage is integrated to reproduce the current waveform, however complex. The output is independent of frequency, has an accurate phase response, and can be used with any form of indicator such as a voltmeter, oscilloscope or protection system. The sensitivity of the transducer, measured in Amps/Volt, can be varied over a range of five orders of magnitude.

The Rocoil 1000 Type coils, with « snap » in-line connectors have a range of lengths from 35 cm. and cross-sectional diameters from 6 mm. Depending on the integrator used these coils can measure low currents with a resolution as low as 1mA, if a screened coil is used, and also currents up to 1MA. The Type 4000 coils have an overlapping end-joining arrangement and are used where flexibility is important.

There are mains and battery powered integrators, in free-standing, wall mounted or DIN rail versions.

All instruments are built to order with customer-designated sensitivities.

Type 8000 with switched ranges in a diecast box

**The 8000 series**

This series offers a battery powered coil/integrator combination with coils up to 5m. in length, or as slim as 6mm. able to measure up to hundreds of kA. and withstand overranging indefinitely. The standard frequency response is from 2Hz to 2.5 kHz. The coil is permanently cabled to the integrator which is in a diecast case and is powered by a single P3 battery which will last for up to a year's continuous operation.

There is a version with three switchable sensitivities set to the customer requirements.

**8000 series Technical Characteristics**

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|---|---|
| Output Voltage | 1 V for Nominal Sensitivity |
| Overload Capability | Linear to 3 x Nominal Sensitivity |
| Noise | < 1 mV rms |
| Output Impedance | 51 Ω |
| Accuracy | 1% |
| Frequency Response | 20 Hz to 2 kHz |
| Phase Error @ 50 Hz | 2° |
| Battery Life vs Freq. Resp. | |
| @ 50 Hz | up to 1 year continuous |
| Freq. To 4 kHz | up to 6 months continuous |
| Freq. to 8 kHz | up to 3 months continuous |

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