Logicbus

RC150

ROGOWSKI COILS

An air-cored toroidal winding is placed around the conductor, the magnetic field produced by the current induces in the coil a voltage proportional to the rate of change of current.
Integrating this voltage the output become proportional to the current (as for a current transformer).
Coil length variates from 25 to 300 cm for a cord diameter up to 8 mm

TECHNOLOGY

- The junction point is insensitive to both the position of the internal conductor and to currents carried by external conductors
- Coil and cable shielded against electromagnetic noise

ENGINEERING

- Cross section reduced up to approx. 8mm
- High fl exibility

CALIBRATION

- Better than 1% accuracy, even close to the junction point
- Accessible calibration point for easy recalibration, if required

OPTIMAL LOCK

- Secure lock even in presence of vibration and/or pull-ups
- Stable lock ensuring repeatability in measurement

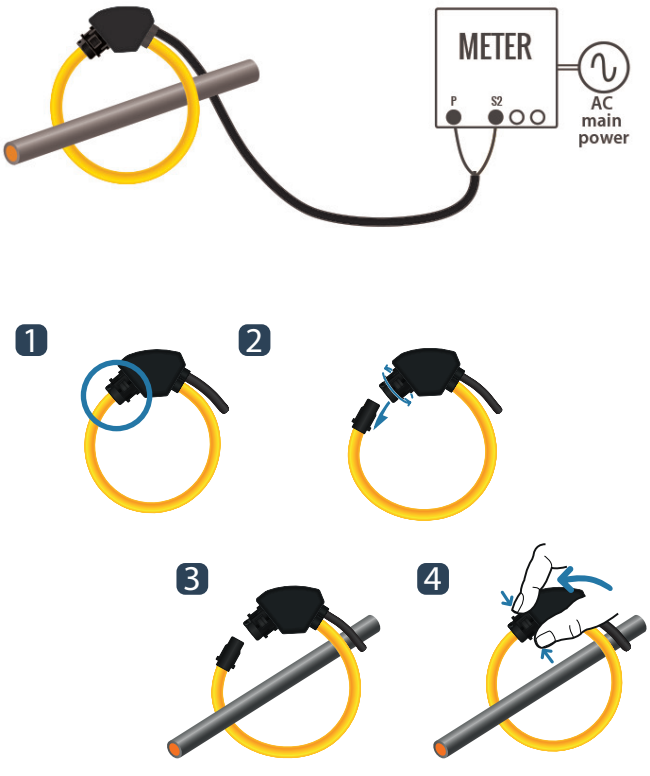
INSTALLATION

- Limited access applications
- Non-Intrusive Current Measurement

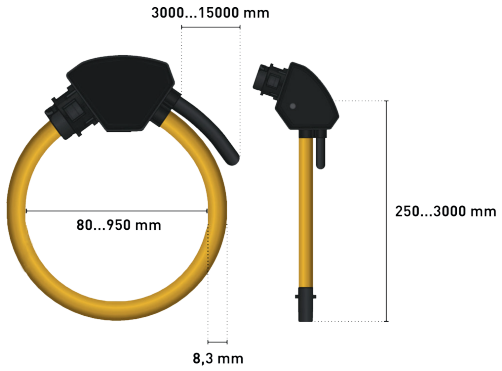
TYPICAL APPLICATIONS

- Very high current monitoring
- Harmonics and transients monitoring
- DC ripple measurement
- Power monitoring and control systems
- Measuring devices, lab instrumentation
- Welding machine control

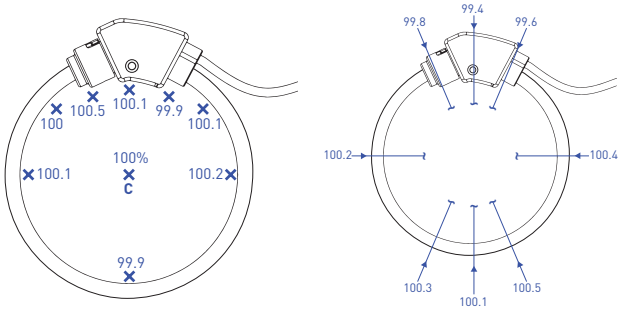
INSTALLATION



DIMENSION



ACCURACY RANGE



C (center based conductor)

HIGH PERFORMANCE ROGOWSKI COILS

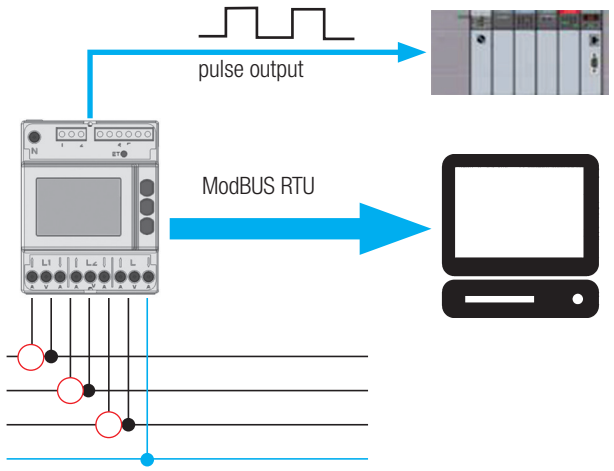
RC150

Rogowski coils have been used for the detection and measurement of electric currents for decades. They are based on a simple principle where an “air-cored” coil is placed around the conductor in a toroidal fashion and the magnetic field produced by the current induces a voltage in the coil. The voltage output is proportional to the rate of change of current. This voltage is integrated, thus producing an output proportional to the current. By using precision winding techniques, especially developed for the purpose, the coils are manufactured so that their output is not influenced by the position of the conductor within the toroid, and to reject interference from external magnetic fields caused, for example, from nearby conductors. Basically, a Rogowski coil current measuring system consists of a combination of a coil and conditioning electronics. Rogowski coil current transducers are used for the AC measurement.

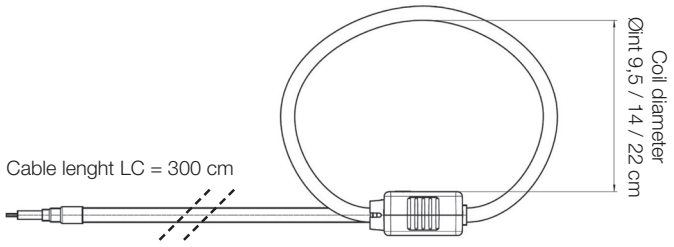
TECHNICAL FEATURES

GENERAL DATA	
Coil lenght	From 25 to 300 cm
Coil diameter	From 8 ±0,2 mm to 57 cm
Cable lenght	3 m
Lock	Bayonet
Protection Degree	IP67
Material	UL94-V0
Operating temperature	-30..+80°C
Weight	da 150 a 500 g
ELECTRICAL DATA	
Output level (RMS)	100 mV / 1 kA @50 Hz (standard)
Transducer resistance	70..900 Ω (RC150) 300..2.000 Ω (RC190)
Accuarcy	Better than ±1% reading valuer (conductor diameter 15 mm)
Frequency	From 40 Hz a 20 kHz
Working voltage	1.000 Vrms CAT III, 600 Vrms CAT IV, pollution degree 2
Test voltage	7.400 Vrms / 1 min
STANDARD	
Marking	CE
Norms	EN 61010-1, EN 61010-031, EN 61010-2-031, EN 61010-2-032

APPLICATION NOTE



ROGOWSKI COIL KIT / SPARE PARTS



ORDER CODE

Code	Description
RC150-025-100-3M	Rogowski Coil L=25cm Øint.8cm,100mV/1KA-50Hz,cable L=3mt.
RC150-035-100-3M	Rogowski Coil L=35cm Øint.11cm,100mV/1KA-50Hz,cable L=3mt.
RC150-040-100-3M	Rogowski Coil L=40cm Øint.12cm,100mV/1KA-50Hz,cable L=3mt.
RC150-060-100-3M	Rogowski Coil L=60cm Øint.19cm,100mV/1KA-50Hz,cable L=3mt.
RC150-090-100-3M	Rogowski Coil L=90cm Øint.28cm,100mV/1KA-50Hz,cable L=3mt.
RC150-120-100-3M	Rogowski Coil L=120cm Øint.38cm,100mV/1KA-50Hz,cable L=3mt.
RC150-180-100-3M	Rogowski Coil L=180cm Øint.57cm,100mV/1KA-50Hz,cable L=3mt.
RC150-RIC-KIT30	Rogowski Coil Kit Spare Parts RC150 L= 30cm Ø int. 9,5 cm, 100mV/1KA-50Hz,cable L=3mt.
RC150-RIC-KIT45	Rogowski Coil Kit Spare Parts RC150 L= 45cm Ø int. 14 cm, 100mV/1KA-50Hz,cable L=3mt.
RC150-RIC-KIT70	Rogowski Coil Kit Spare Parts RC150 L= 70cm Ø int. 22 cm, 100mV/1KA-50Hz,cable L=3mt.
RC150-025-100-5	Rogowski Coil L=25cm Øint.8cm,100mV/1KA-50Hz,cable L=5mt.
RC150-040-100-5	Rogowski Coil L=40cm Øint.11cm,100mV/1KA-50Hz,cable L=5mt.

Technical data, diagrams and drawings in this catalog are indicative only and not binding