CRC

Flexible Rogowski series current sensors

WARNING!

- Carefully read the manual before the installation or use.
- This device is to be installed by qualified personnel, complying to current standards, to avoid damages.
- Before any maintenance operation on the device, remove supply inputs.
- The manufacturer cannot be held responsible for electrical safety in case of improper use of the equipment.
- Products illustrated herein are subject to alteration and changes without prior notice.

Introduction

The CRC rogowski sensor is an alternating current measurement device. Unlike current sensors with ferromagnetic core, the linearity of the Rogowski sensor makes it specifically indicated to measure high currents. Thanks to a wide measurement range, CRC current sensors cover a wide current range.
The CRC measures the load currents of an electrical system and send the data to meters.
The CRC flexible current sensors can be connected to EMS-96 and EMA-90N or EMA-11N. The CRC flexible sensor range is specially designed for existing installations restricted by strict integration constraints or with high-intensity currents. The lack of a ferromagnetic core makes the Rogowski sensor linear even with high currents.

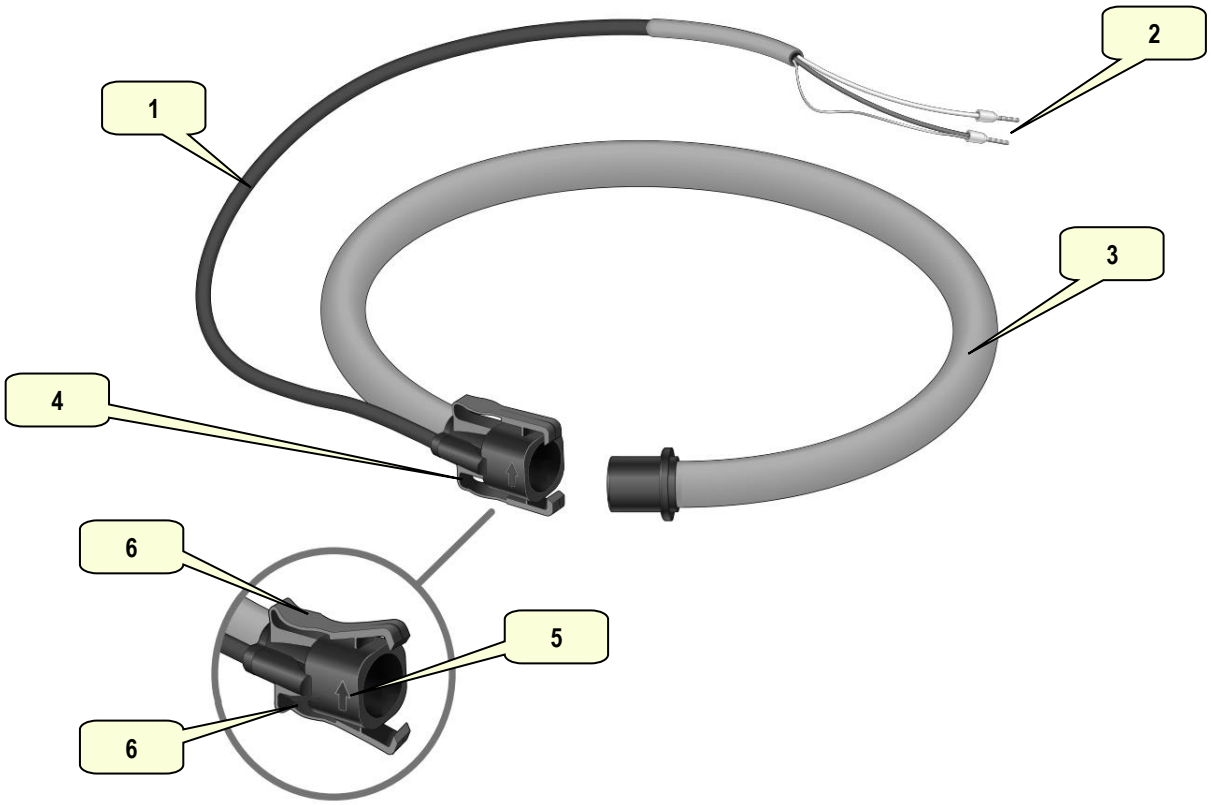
Mouting

Precautions:

- The conductor should not be near the opening/closing mechanism to avoid compromising measurement accuracy.
- The coil should not pinch the conductor to avoid compromising measurement accuracy.
- The coil-phase correspondence must be correct.

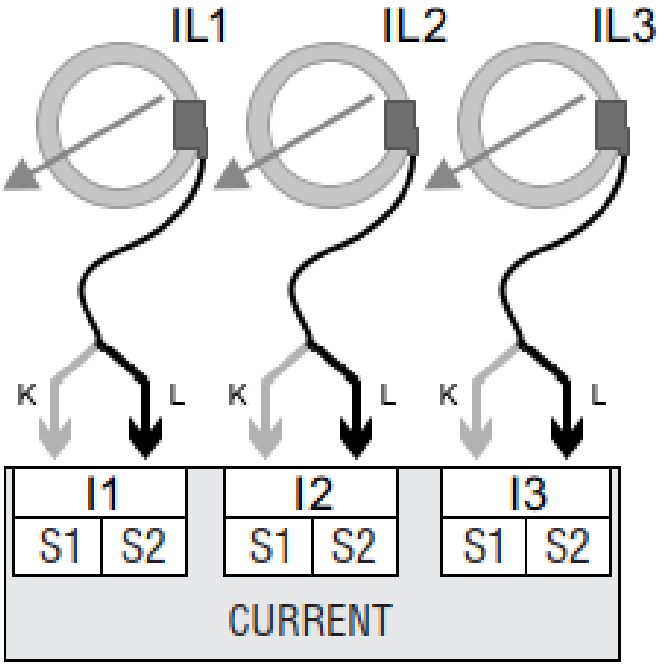
Installation

- Connect CRC sensors to the meters.
- Press the opening/closing mechanism pressure points and open the coil.
- Place the coil around the conductor making sure the opening/closing mechanism arrow matches the current direction.
- Close the coil.



Description	
1	Meter connection cable
2	Cables: • white (positive), • coloured (negative with pre-crimped shielding)
3	Coil
4	Coil opening/closing mechanism
5	Arrow that indicates the current direction in the conductor
6	Pressure points to open the coil

Connection diagrams



Connection with EMS-96 or EMA-90N or EMA-11N, K=white, L=brown

Code key

CRC	400	100	AC05	2M
Model	Coil Lenght (mm)	Secondary output: 100mV/kA @ 50Hz	Accuracy: ±0,5%	Cable lenght (m)

Dimensions

Code	Coil leght (mm)	External coil diameter (mm)	Maximum conductor diameter (mm)
644061 Multi-Rogowski 250	250	92	68
644062 Multi-Rogowski 300	300	108	84
644063 Multi-Rogowski 400	400	139	115
644064 Multi-Rogowski 500	500	171	147
644065 Multi-Rogowski 600	600	203	179
644066 Multi-Rogowski 700	700	235	211
644067 Multi-Rogowski 800	800	267	243
644068 Multi-Rogowski 900	900	299	275
644069 Multi-Rogowski 1000	1000	330	306
644070 Multi-Rogowski 1100	1100	362	338
644071 Multi-Rogowski 1200	1200	394	370

Technical characteristics

Electrical features	
Primary current	15÷3500A Please refer to "*Rogowski full scale change"* paragraph for more informations
Output signal	100 mV/kA @50 Hz
Operating frequency	45 to 65 Hz
Accuracy	±0,5%
Linearity	±0.2%
Position sensitivity	±2% (primary conductor near the opening/closing mechanism)
External field influence	max ±0,5%
Temperature drift	±0.07% per °C
Internal resistance	30 Ω/400 mm
Material	
Coil and connection cable	Thermoplastic rubber, self-extinguishing degree V-0 (UL 94)
Opening/closing mechanism	PA6, self-extinguishing V-0 (UL 94)
Coil colour	Orange
Protection degree	IP52

Connection cable	
Type	1000V (UL style 20940)
External diameter	5 mm
Cables	2, section 0.1288 mm² (26 AWG)
Length	2 m (customizable upon request)
Overvoltage	
Category	Cat. III 1000 V @50/60 Hz Cat. IV 600 V @ 50/60 Hz
Dielectric strength	
Insulation voltage	7.4 kVAC for 1 minute
Insulation type	Double electrical insulation
Ambient conditions	
Operating temperature	-20…+70 °C
Storage temperature	-20…+70 °C
Relative humidity	10…95%
Maximum altitude	2000m
Pollution degree	2
Compliance	
Reference standards	2014/35/EU (Low Voltage) EN61010-1
Approvals	CE c UL US

Further informations

Rogowski full scale change
The CRC flexible current sensors full scale can be modified using the specific menu of the connected device: How to set using EMS-96 or EMA-90N or EMA-11N: Setup → Measure → Wiring/Convention → Rogowski full scale Measurement range with different full scale selection with accuracy ±0,5%: 175 mV: 15 - 1750 A 350 mV: 35 - 3500 A 700 mV: 70 - 700 A ***Note:*** *The meters may be able to measure correctly out of range but the accuracy is not guaranteed.*

Further reading

Information	Document	Code
Multifunction meter installation and use instructions	EMS-96 installation and use instructions	EMS-96 IM1200-U-M
Network analyzer power quality installation and use instructions	EMA-90N installation and use instructions	EMA-90N IM128-U-M
Network analyzer power quality installation and use instructions	EMA-11N installation and use instructions	EMA-11N IM136-U-M

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