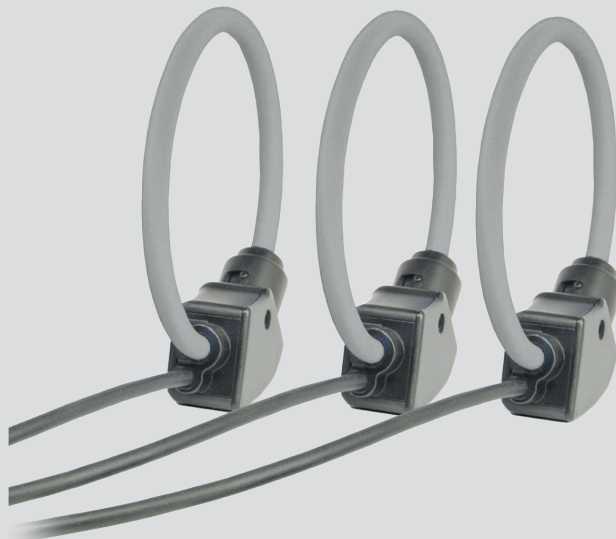




ROGOWSKI COILS **MFC150 series**

Data sheet

Janitza®

ROGOWSKI COILS

MFC150 series

General description

MFC150 is a flexible current transducer based on the Rogowski principle.

Due to its design, the flexible Rogowski coil proves to be the optimum solution for current measurement in environments with high demands on flexibility and adaptability. It can be used in a number of cases where traditional current transducers are less suitable.

The MFC150 coil is provided with a shield against the influence of external magnetic fields, therefore it grants a stable measurement from low currents to several kA.

Depending on the version (see part numbers), the MFC150 coil is equipped with a mini-DIN plug for direct connection to the RCM 201-ROGO residual current monitoring device.



Certification



Flexible Rogowski coil MFC150

- Suitable for current measurement in the range from mA up to several kA.
- High linearity over the measuring range
- Uniform measurement almost independent of the positioning of the conductor in the coil
- Delivered already calibrated
- Bayonet connector
- Thin coil diameter: approx. 8,3 mm (0.33 in)
- Useful in conjunction with large or awkwardly shaped ladders or in places that are difficult to access
- No danger from voltage peaks with open secondary circuit
- Not damaged by overloads
- Non-intrusive, no power drawn from the main
- Easy handling of the coil in the event of replacement
- Totally shielded

TECHNICAL DATA

Rogowski Coil

Environmental conditions	
Protection degree	IP67 (UL Recognized UL 61010-1)
Altitude	Up to 2000 m (1.24 mi) over sea-level
Operating temperature	-30 ... +80°C (-22 ... +176°F)
Storage temperature	-40 ... +80°C (-40 ... +176°F)
Relative humidity	0 ... 95%
Installation and use	Indoor

Coil	
Coil length	approx. 35 ... 300 cm (13.78 in ... 118.1 in) - see part numbers on page 4
Sensor internal diameter	approx. 9 ... 94 cm (3.54 in ... 37.0 in) - see part numbers on page 4
Coil diameter	8,3 mm ± 0,2 mm (0.33 in ± 0.008 in) - see part numbers on page 4
Jacket material	Thermoplastic polyurethane UL94-V0
Fastening	Bayonet holder
Weight	150 ... 500 g (0.33 ... 1.10 lb)

Electrical characteristic	
Nominal output rate	100 mV / kA @ 50 Hz (RMS values)
Max measurable current	100 kA
Coil resistance	70 ... 900 Ω
Accuracy class	Class 1-A1 according to IEC 61869-10
Positioning error	Better than ±1% of reading
Frequency	50/60 Hz
Overvoltage category	1000 V CAT III, 600 V CAT IV
Pollution degree	2
Insulation test voltage	7400 V _{RMS} / 5 seconds

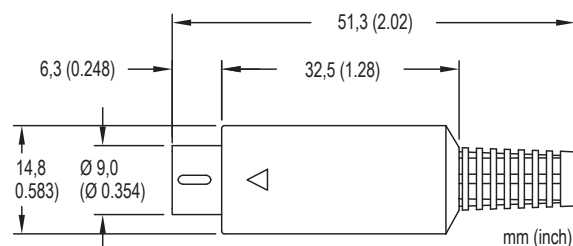
Connection cable	
Type	2 x 24 AWG shielded
Length	3/5/8 m (118/197/315 in)

Standard compliance	
Standards	EN 61010-1, EN 61010-2-032, EN IEC 63000

Connector

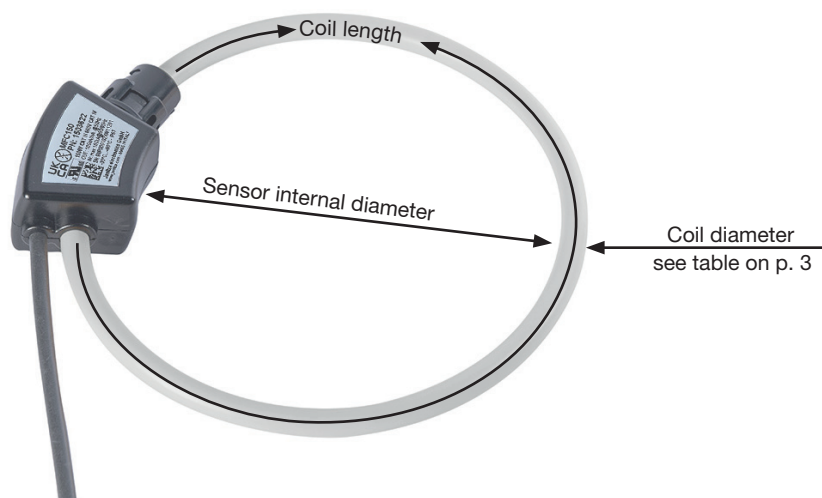
Part numbers 15.03.622 - 626

Connector	
Type	Male mini-DIN plug, 4 pins, for direct connection to RCM 201-ROGO, Type MDP-004
Insulator material	PBT glass filled, rated UL94V-0
Insulator color	Black
Contacts material	Brass
Shield material	Copper alloy, tin plated



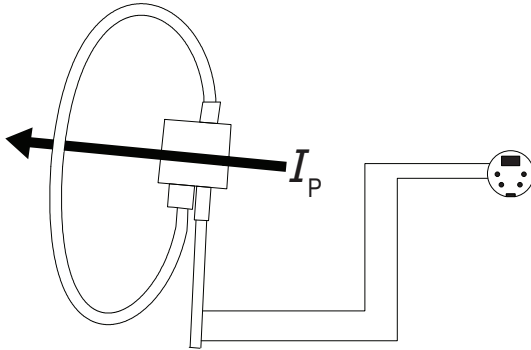
PART NUMBERS

Part no.		Inner diameter of the sensor (approx.)		Coil length (approx.)		Cable length (approx.)	
With connector	Without connector	cm	inch	cm	inch	m	inch
15 03 622	15 03 635	9	3.5	35	13.8	3	118
	15 03 655	9	3.5	35	13.8	5	197
	15 03 685	9	3.5	35	13.8	8	315
	15 03 687	11	4,3	40	15.8	5	197
	15 03 688	11	4,3	40	15.8	8	315
	15 03 686	11,5	4.5	45	17,7	3	118
15 03 623	15 03 636	17,5	6.9	60	23.6	3	118
15 03 624	15 03 637	27	10.6	90	35.4	3	118
15 03 625	15 03 638	36	14.2	120	47.2	3	118
15 03 626	15 03 639	55	21.7	180	70.9	3	118
15 03 627		75	29.5	240	94.5	3	118
15 03 628		94	37.0	300	118.1	3	118

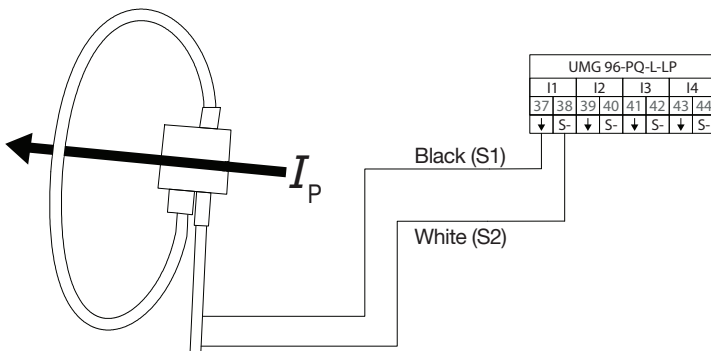


CIRCUIT DIAGRAM

Connection drawing with connector



Connection drawing without connector



The connecting cable is shielded.
The shield is already connected to the blue wire and insulated with black shrink tubing. The connection cable therefore consists of a black and a white wire, which are fitted with wire end sleeves.

Janitza electronics GmbH
Vor dem Polstück 6 | 35633 Lahnau
Germany

Tel. +49 6441 9642-0
info@janitza.com | www.janitza.com

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