

Rogowski coil



Wide current ranges

- 5 A - 50,000 A

Description

- For both new construction and retrofit applications where regular solid or split core current transformers cannot fit, Eaton offers a complete selection of flexible Rogowski coil current transformers. These current transformers can be used in commercial grade applications such as control panels and panelboards. Additionally, they can be used for some industrial metering applications in switchboards, switchgear, and motor control centers when using a PXM350 or PXM1000 series model.
- Does not require an external power supply or integrator when used with PXM350 or PXM1000 meters

Applications

- Flexible rope style for retrofit applications
- Wide current sensing range
- High accuracy 0.5%
- Wide frequency response range

Table 1. Specifications.

Item	Specification
Inputs	
Frequency range	20 Hz - 5 kHz
Accuracy	0.5% IEEE C57.13 class 0.6
Current range	5 A - 50,000 A
Environmental	
Operating temperature	-20°C - 70°C (-4°F - 158°F)
Physical	
Lead lengths	6.5 feet (2 meters)
Leads	White = Positive (+), Brown = Negative (-), Bare-shield; 26 AWG
Cable	1000 V UL style 20940; External diameter 5mm; Wires 2 x 26 AWG
Polarity	Arrow towards load
Certifications	CE, RoHS, cURus (E359521)



Powering Business Worldwide

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Table 2. Current ranges.

Catalog	Output/1000 A @ 50Hz	Output/1000 A @ 60Hz	Calibrated range with PXM meters ²
CS-xx-x-1000-RC	100 mV	120 mV	5 A – 1200 A
CS-xx-x-2500-RC	40 mV	48 mV	12.5 A – 3000 A
CS-xx-x-5000-RC	20 mV	24 mV	25 A – 6000 A
CS-xx-x-12000-RC	8.3 mV	9.9 mV	60 A – 14400 A
CS-xx-x-50000-RC	2 mV	2.4 mV	250 A – 60000 A

- ¹ Note: xx-x denotes coil length-window size.
- ² When used with Eaton meters. Performance and range may vary when used with non-Eaton power meters or devices.
- ³ Standard leads are terminated with ferrules.

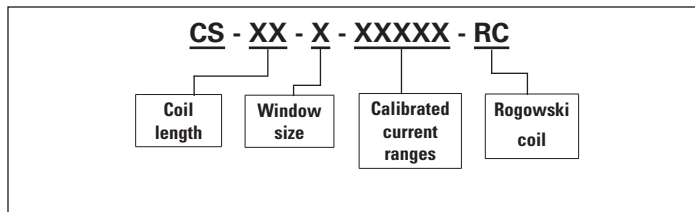


Figure 1. Catalog number string tree.

Table 3. Ordering information.

	Catalog number	Description
	CS-16-4-1000-RC	PXM 1000 16-inch long Rogowski coil CT with 4-inch window calibrated for 5 - 1200 A.
	CS-16-4-2500-RC	PXM 1000 16-inch long Rogowski coil CT with 4-inch window calibrated for 12.5 - 3000 A.
	CS-16-4-5000-RC	PXM 1000 16-inch long Rogowski coil CT with 4-inch window calibrated for 25 - 6000 A.
	CS-16-4-12000-RC	PXM 1000 16-inch long Rogowski coil CT with 4-inch window calibrated for 50 - 12,000 A.
	CS-16-4-50000-RC	PXM 1000 16-inch long Rogowski coil CT with 4-inch window calibrated for 250 - 50,000 A.
	CS-24-7-1000-RC	PXM 1000 24-inch long Rogowski coil CT with 7-inch window calibrated for 5 - 1200 A.
	CS-24-7-2500-RC	PXM 1000 24-inch long Rogowski coil CT with 7-inch window calibrated for 12.5 - 3000 A.
	CS-24-7-5000-RC	PXM 1000 24-inch long Rogowski coil CT with 7-inch window calibrated for 25 - 6000 A.
	CS-24-7-12000-RC	PXM 1000 24-inch long Rogowski coil CT with 7-inch window calibrated for 50 - 12,000 A.
	CS-24-7-50000-RC	PXM 1000 24-inch long Rogowski coil CT with 7-inch window calibrated for 250 - 50,000 A.
	CS-36-10-1000-RC	PXM 1000 36-inch long Rogowski coil CT with 10-inch window calibrated for 5 - 1200 A.
	CS-36-10-2500-RC	PXM 1000 36-inch long Rogowski coil CT with 10-inch window calibrated for 12.5 - 3000 A.
	CS-36-10-5000-RC	PXM 1000 36-inch long Rogowski coil CT with 10-inch window calibrated for 25 - 6000 A.
	CS-36-10-12000-RC	PXM 1000 36-inch long Rogowski coil CT with 10-inch window calibrated for 50 - 12,000 A.
	CS-36-10-50000-RC	PXM 1000 36-inch long Rogowski coil CT with 10-inch window calibrated for 250 - 50,000 A.
	CS-47-14-1000-RC	PXM 1000 47-inch long Rogowski coil CT with 14-inch window calibrated for 5 - 1200 A.
	CS-47-14-2500-RC	PXM 1000 47-inch long Rogowski coil CT with 14-inch window calibrated for 12.5 - 3000 A.
	CS-47-14-5000-RC	PXM 1000 47-inch long Rogowski coil CT with 14-inch window calibrated for 25 - 6000 A.
	CS-47-14-12000-RC	PXM 1000 47-inch long Rogowski coil CT with 14-inch window calibrated for 50 - 12,000 A.
	CS-47-14-50000-RC	PXM 1000 47-inch long Rogowski coil CT with 14-inch window calibrated for 250 - 50,000 A.

Installation instructions

Safety

WARNING

- **INSTALLATION SHOULD ONLY BE CARRIED OUT BY QUALIFIED PROFESSIONALS.**
- **SYSTEM BEING MONITORED SHOULD BE DENERGIZED.**

Installation

- Squeeze the black connector clasps and pull to open the Rogowski coil.
- Wrap the coil around the conductor or bus bar of each phase being measured. Point arrow toward load; coils will follow the flow of current.
 - Maximum bus current should not exceed Rogowski coil current range rating.
- Connect two ends of the coil until the clasps attach and are securely joined. The coil can be secured by a non-conductive material such as a zip tie or can be left hanging. *Note: Measurement accuracy may be compromised if coil latch is landed on conductor.
- Connect the leads of the coil into the current input terminals of device. If device does not support a shield input, leave shield unconnected. *Note: Extending or splicing leads can affect measurement accuracy. We do NOT recommend field extending or splicing leads.
- Rogowski coil accuracy is based on the conductor centered in the window. However, in practice, the coil typically hangs on the conductor and that can introduce measurement errors depending on the coil window size. Therefore, selecting the smallest window size is important.

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