

Rogowski-Coil

Dynamic Ratings

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Improved Partial Discharge Sensitivity

Overview

Partial discharge (PD) activity is a leading indicator of insulation failure in high voltage insulation system and in particular high voltage transformer insulation. PD measurement in industrial environments requires noise filtering. The Dynamic Ratings Rogowski Coil (RC) is a polarity sensitive, air-core, high frequency current transformer (HVCT) that allows for advanced noise rejection based on pulse polarity when used in conjunction with BAU+ sensor. With this added level of filtering, the monitor can utilize lower frequencies in the detection which provides deeper “visibility” of PD within the windings without the concern associated with external PD sources.



Applications

RCs are used in conjunction with Dynamic Ratings’ BAU+ Sensors. Pulse polarity from both sensors is compared to determine signal direction. The RC attaches to the pre-amplifier located in the BAU+ sensor via the IP67 rated connector. The RC coil signal is transmitted through the second coaxial cable to the PD monitor. The Rogowski Coil amplifier is powered by the PD monitor utilizing the same coaxial cable.

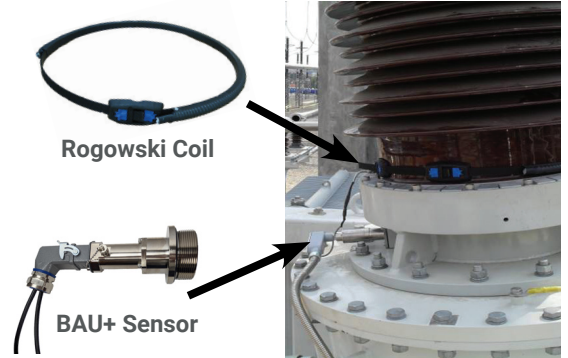
Benefits

- RCs use materials proven to resist UV deterioration.
- RCs are easy to install and are non-intrusive. A buckle strap is provided to allow quick installation.
- RCs are available in multiple sizes to fit a wide variety of bushing diameters.
- IP67 connections are well-suited for harsh environments.

Selecting the Proper RC Coil

RCs are fitted to the base of the bushing below the bottom skirt/shed. RC sensors are selected by length to encircle the circumference of a bushing’s porcelain base.

The total length of the sensor needs to consider the buckle length of 6 inches. Hence, an RC-2.0 should be selected for an application where the circumference is 762 mm / 2.5 ft.



How to Order

Part Number	Description
RC-1.6*	488 mm / 1.6 ft in length (circumference)
RC-2.0*	610 mm / 2 ft in length (circumference)
RC-2.5*	762 mm / 2.5 ft in length (circumference)
RC-3.0*	914 mm / 3.0 ft in length (circumference)
RC-3.5*	1070 mm / 3.5 ft in length (circumference)
RC-4.0*	1220 mm / 4.0 ft in length (circumference)
RC-4.5*	1370 mm / 4.5 ft in length (circumference)
RC-5.0*	1520 mm / 5.0 ft in length (circumference)
RC-5.5*	1680 mm / 5.5 ft in length (circumference)
RC-6.0*	1830 mm / 6.0 ft in length (circumference)
RC-6.5*	1980 mm / 6.5 ft in length (circumference)

* One sensor is supplied per part number. One sensor is used per bushing.

The sensor must be used with a BAUplus-xx-A bushing sensor with a pre-amplifier and should be ordered at the same time.

RG 58A/U Coax cable is needed to connect from the pre-amplifier to the monitoring instrument. Coax cable must be ordered separately.

Customer to provide a drawing of the transformer bushing to be monitored to ensure the appropriate sensor size.



An ISO 9001, ISO 14001, ISO 27001, ISO 45001 Certified Company.

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Request a quote from your regional office.

