GE
Grid Solutions

RogoFlex®

Electronic Current Transformer

High-voltage designs increasingly incorporate Intelligent Electronic Devices (IEDs) - making smart substations a reality. In the digital chain for current measurement, the RogoFlex® uses the latest sensor technologies for Low Power Instrument Transformer (LPIT) applications.

Flexible Current Sensors

Sensors are the basic elements of measurement. In order to obtain the highest accuracy for protection applications, the sensor should measure the current with the best linearity and repeatability. It should also be protected against the electromagnetic perturbations (EMC) of GIS substations.

Sensors are designed according to a GE patent, using flexible polymer pipes as wiring supports with a shielded double winding.

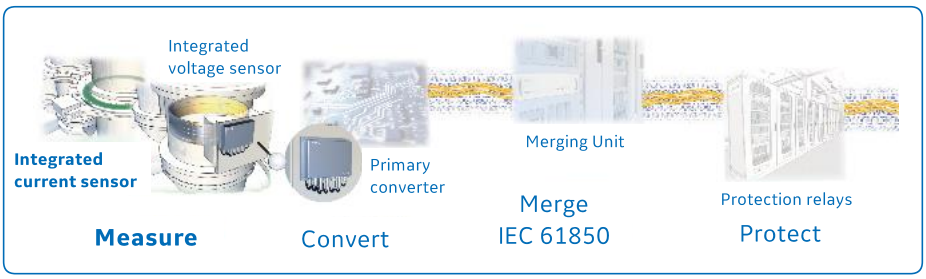
Compatible with all GIS Types

Thanks to their design, RogoFlex® sensors are flexible and the length of the « ring » can be calculated for each application, depending on the enclosure diameter.

These sensors are available for the whole GE GIS range. Thanks to their flexibility, RogoFlex® sensors can be retrofitted in existing substations without designing specific enclosures and with no need to remove HV parts. The sensors can be opened if needed (e.g. for inspection purposes). The open/close mechanism is rugged and locks the external tube.

High Immunity Against EMC

Based on a GE patent, the double wiring inside the sensor provides immunity to EMC. Moreover, there is a metallic shield around the windings. The signal cable uses twisted pairs and a specific shield.



Key Benefits

- Very flexible design, allowing installation in a huge variety of locations in the substation
- Sensor enclosures are smaller than conventional CT-space gains for substations
- High electromagnetic immunity

Technical Characteristics

(Associated with PC12 Primary Converter)

- Ambient temperature: -40°C up to 80°C
- Protection index: IP67, as per IEC standard
- Coupler material:
  Stainless steel and polymer
- EMC immunity standards
  IEC 61000-4-2,4,5,8,16 Level 4
  IEC 61000-4-3,6,17 Level 3
- Emissions standard: EN55022 Class A
- Communication standards
  IEC 61869 -1, -6, -7, -8, -9

Imagination at work

Less Maintenance

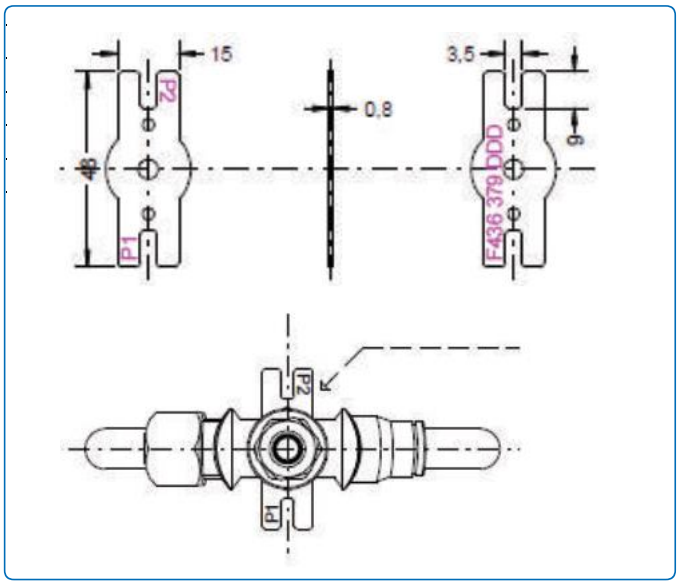
An external memory (EEPROM) is associated with the sensor, allowing all calibration values to be stored once the sensor is mounted. Thus, when a sensor is connected to the PC12 primary converter, the electronics automatically adjust the compensation gains related to calibration values found in the EEPROM.

Ratings (Sensor Associated with PC12)

Rated current	kA	Up to 200
Repeatability error	%	< 1
Linearity error	IEC Class %	0.2
Resistivity (for D = 336 mm)	Ω	approx. 10
Sensitivity*	mV/kA	48
FFT analysis harmonics (qualimetry channel only)	Harmonic rank	100
Frequency domain (sensor input)	Hz	0-10K
MTBF (acc. To MIL-HDBK-217F)	Hours	> 350 000

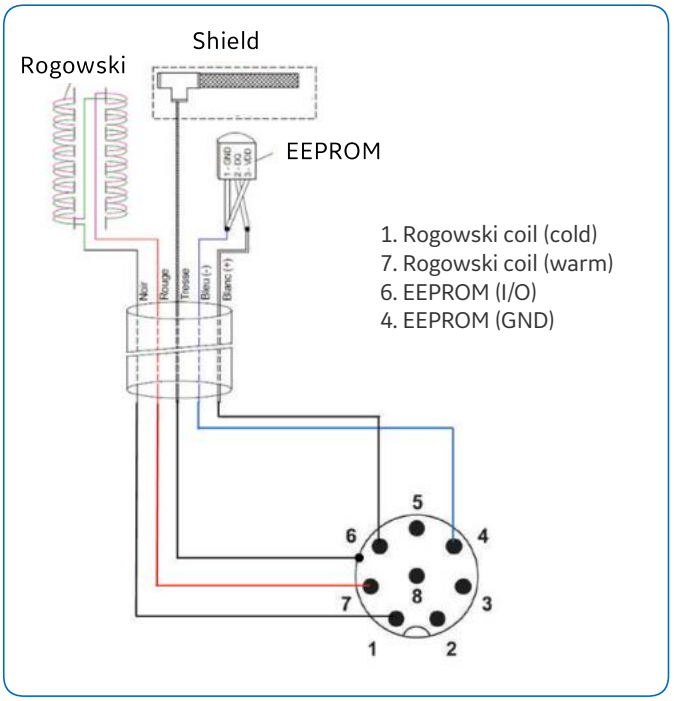
* Standard values; further data is available on request.

Mounting



Fixing point for RogoFlex sensors

Rogowski Coil Internal Wiring



Important note:

This product may not be sold on its own.
It must always be integrated in a global Low Power Instrument Transformers (LPIT) solution.

For more information please contact
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