

## ARU-B100-D125/SP2; ARU-B100-D125/SP5; ARU-B100-D125/SP7

### Rogowski coil for the electronic measurement of AC current



### Installation guide

To ensure safe operation of the transducer and to be able to properly use all features and functions, please read these instructions carefully!

#### Intended use of equipment

Flexible clip-around Rogowski coil for the electronic measurement of alternating current with galvanic separation between the primary circuit and secondary circuit. The product must only be used in indoor area.

#### Safety and warning notes

Safe operation can only be guaranteed if the transducer is used for the purpose it has been designed for and within the limits of the technical specifications.

Ensure you get up-to-date technical information that can be found in the latest associated datasheet under [www.lem.com](http://www.lem.com).

#### Caution! Risk of danger

Ignoring the warnings can lead to serious injury and/or cause damage! The electric measuring transducer may only be installed and put into operation by qualified personnel that have received an appropriate training. The corresponding national regulations shall be observed during installations and operation of the transducer and any electrical conductor. The transducer shall be used in electric/electronic equipment with respect to applicable standards and safety requirements and in accordance with all the related systems and components manufacturers' operation instructions.



#### Caution! Risk of high voltage

To reduce the risk of electric shock, always open or disconnect circuit from power-distribution system (or service) of building before installing or servicing current transformers;

Not suitable for Class 2 wiring methods and Not intended for connection to Class 2 equipment.



**Caution! Avoid fitting or removing uninsulated conductors that conduct dangerous voltages - they can cause electrical shocks, electrical burns or flashover.**

When operating the transducer, certain parts of the system may carry hazardous live voltage (e.g. primary conductor). The user shall ensure to take all measures necessary to protect against electrical shock. The transducer is a build-in device containing conducting parts that shall not be accessible after installation. A protective enclosure or additional insulation barrier may be necessary.

The current transformers may not be installed in equipment where they exceed 75 percent of the wiring space of any cross-sectional area within the equipment;

Restrict installation of current transformer in an area where it would block ventilation openings;

Restrict installation of current transformer in area of breaker arc venting.



Equipment protected throughout by double insulation or reinforced insulation.

#### Installation

When using a bare bus bar, please make sure that all sharp edges have necessary mechanical protections in order not to damage insulation of the ARU coil.

In order not to degrade the accuracy, do not stress the coil applying any kind of mechanical constraint (twisting, pressing, punching, strong bending...)

- To open the ARU Rogowski coil, turn the bayonet catch (1) to the left (anti-clockwise) and draw the coil cable out of the enclosure (2).
- Make sure that the arrow on the ARU label (4) is pointing towards the load
- Guide the Rogowski coil around the power cable (3) (Fig. 1).

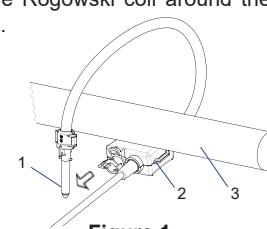


Figure 1

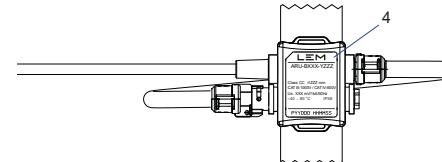


Figure 2

Arrow indicating current direction (4) must be outside the loop when closed.

- Slide the coil cable into the enclosure (2). (Fig. 3)
- Turn the bayonet (1) catch to the right until the end of the measuring coil audibly latches (Fig.4)
- The bayonet fastening (1) can be sealed with the housing (2) and then becomes tamper-proof.

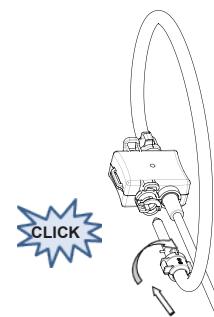


Figure 3

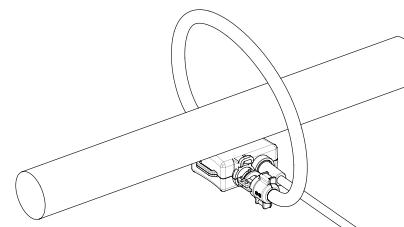
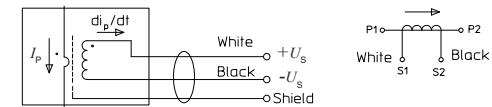


Figure 4

- Connect the secondary cable of the ARU Rogowski coil to the input terminals of your electronics.



#### Insulation characteristics

Maximum Primary voltage,	600 V AC
Overvoltage CAT IV and pollution degree 3	
Maximum Primary voltage,	600 V AC
Overvoltage CAT III and pollution degree 2	
RMS voltage for AC insulation test	7.4 kV
50Hz / 1 min	
Impulse withstand voltage 1.2/50 $\mu$ s	12.8 kV
Case material according to UL94	V0
Protection degree	IPX8

#### Specification

The Rogowski coil can measure any primary current as there is no saturation effect.

Secondary voltage @ 50 Hz	100 mV/1kA
Frequency	50/60 Hz
Rated primary current	1000 A
Ratio error (centered)	0.5 %
Ambient operating temperature	-40 ... 80 °C
Relative humidity	0 ... 90 %
Altitude above sea level	2000 m

#### Standards

Compliant with: IEC 61010-2-32: 2012,  
IEC 61010-1:2010/AMD1: 2016;  
Class 0.5 acc. according to IEC 61869-10:2017.

#### At the heart of power electronics

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