

# GridKey SlimSensor

# GridKey's new flexible Rogowski coil current sensor for Low Voltage Substation Monitoring Accuracy

#### **Internal Conductor Position Insensitivity**

Slimsensor has a unique split coil design which allows Class 1 accuracy regardless of internal conductor position. This sets it apart from conventional split rope Rogowski sensors, where sensitivity variations of several percent are possible near the opening.



#### Tolerant to external magnetic fields

SlimSensor is unique in that it rejects the A.C. magnetic fields from current in adjacent conductors much better than conventional rope Rogowski coils, allowing it to be installed in a tight bundle of currentcarrying conductors without affecting the accuracy. Rope Rogowski sensors can couple several percent of an adjacent conductor's current.



#### **Ease of Installation**

#### Formed for single handed installation

The Slimsensor is pre-formed so that the two clips align with one another. An installer with PPE can simply squeeze the two ends together to connect.



#### Install on a live conductor when appropriate

Every SlimSensor is individually HiPot tested in manufacture to 10kV (with up to 1mm gap) to ensure the sensor is safe even when positioned around an uninsulated hazardous live conductor, though it is most commonly fitted around an insulated phase conductor. It can be fitted without a system shutdown, subject to the use of the correct PPE for live working.

#### Designed to fit between feeder cables

With the pre-formed shape of the sensor combined with a minimal clip design, the SlimSensor can be inserted between tightly arranged feeder cables



## Supplied ready for the MCU318

For connection to the Gridkey MCU318, three SlimSensors are connected together into a single plug-and-play connector, which contains an electronic datasheet that is read by the MCU318 to identify the specific sensors and their calibration data. The cable can be supplied in lengths of 2m, 4m and 6m making the whole installation process quick and simple.



# Specifications

Safety Sensor type

#### Metrology

Accuracy class

Rated current (I<sub>pr</sub>) Rated thermal short term current (I<sub>th</sub>) Output signal (proportional to frequency) Line frequency **Protection, Environmental & Compatibility** IP category Operating temperature range Storage temperature range Altitude Flammability

## Mechanical

Minimum required clearance between conductors Cable Length Aperture Weight BS EN 61010-1: 2010, BS EN 61010-2-032: 2012 Type B sensor as defined in BS EN 61010-2-032:2012, 300V Category IV, Pollution degree 2

Class 1-A3 (calibrated), Class 2-A3 (uncalibrated) EN IEC 61869-10: 2018 720A 30kA, 3s 180 mV AC at rated current & 50Hz 50/60Hz

IP67 (IEC 60529) - 20°C to 55°C - 25°C to 70°C (<93% RH, non-condensing) Up to 2000m UL94 V0 rated materials and approved to BS EN 61010

14mm2m, 4m, 6mØ50mm maximum conductor diameter223g (including 6.0m cable on single sensor)

Dimensions in mm

## About GridKey

GridKey is a collaboration between Sentec, the smart grid and metering specialists and Lucy Electric, experts in the design, development, manufacture and integration of a wide range of sensor and data exploitation systems.

For more information about GridKey please contact us:

Website: www.gridkey.co.uk Email:info@gridkey.co.uk

Phone: +44 (0)1268 850000

KEY

Lucy Electric