

# GridKey SlimSensor Datasheet

Unlocking the smartgrid - A collaboration between Lucy Electric and Sentec

## Why choose the GridKey SlimSensor?

The GridKey system includes a family of high-accuracy current sensors that are quick and easy to install without the need to disconnect power.

With the Monitoring and Control Unit (MCU) the sensors form part of the innovative GridKey Low Voltage Substation Monitoring System. GridKey will revolutionise substation monitoring, providing continuous real time data on all feeder cables and is designed to connect LV monitoring to the Smart Grid.

GridKey SlimSensors are rugged enough to survive 20 years of continuous use indoors or outdoors

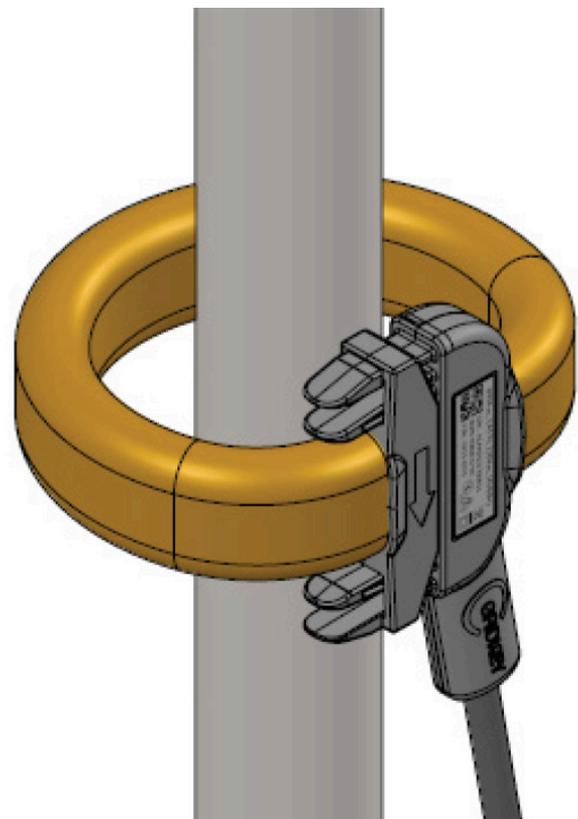
(IP65) and provide up to Class 1 metrology accuracy. With a unique footprint suitable for installation in most substation locations, Sensors are available with cable lengths of 2m, 4m and 6m to accommodate most common installations. Our SlimSensor is the most accurate flexible current sensor of its type.

**Easy to fit and compact** – Custom-designed for monitoring LV substations. Fitting our sensors is straightforward and quick; the flexible geometry and small size mean substations, where access is restricted and more traditional sensor technologies are problematic can now be instrumented efficiently. The sensor clips around the conductor with no need to disconnect supply saving time, cost and customer inconvenience. Fitting is carried out without the need for tools or extensive training and typical installation time is less than 1 minute per sensor. The SlimSensor are specifically designed to fit on tightly-packed feeder cables; requiring only 14mm of cable separation.

**Robust and durable** – Our sensors will continue to operate in conditions where other sensors fail, such as fault currents and in external locations.

Based on a proprietary technology, and using proven low cost manufacturing processes, the sensors will continue to perform accurately throughout their lifetime. The unit is sealed and fully weatherproofed to operate for 20 years inside a substation or on a pole-mounted install.

**No calibration or maintenance** – Once fitted, there is no need for further site visits. The GridKey system produces accurate current data in all conditions, is tolerant of interference from adjacent current sources and unlike some alternatives is insensitive to the position of the sensor around the conductor. It produces accurate readings up to 2000A providing valuable data for use in diagnosis and root cause analysis of overload and catastrophic failures.

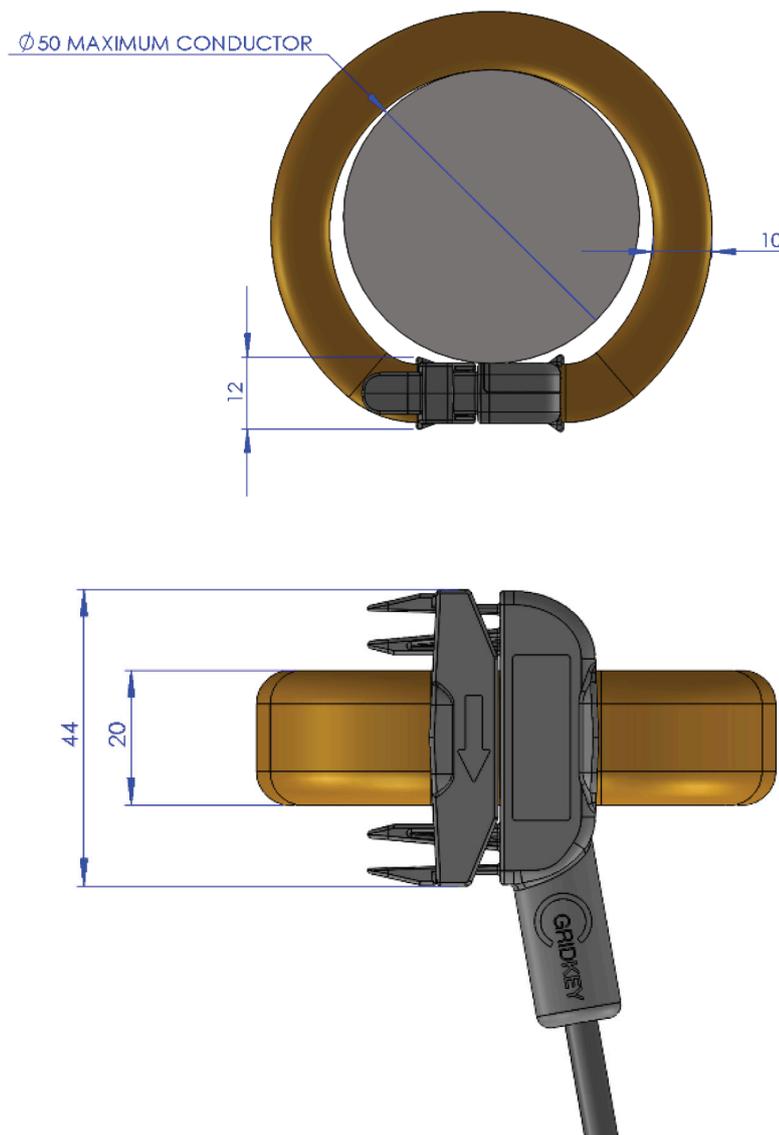


## The GridKey SlimSensor

### Our sensors key features and benefits:

- ✓ Quick and easy to fit – one-handed installation on tightly packed cables.
- ✓ Designed for retrofit and live fit.
- ✓ Low cost of installation and ownership – no calibration, no maintenance required.
- ✓ Most accurate flexible current sensor; not position sensitive, no cross coupling.
- ✓ Robust, durable – designed for 20 years continuous indoor or outdoor life (IP65).
- ✓ Monitor all feeder cables simultaneously: **Measure to manage a smarter grid.**

### Dimensions (mm)



## Metrology

Measurement Standards	IEC Standard 60044-8
Electrical safety standards	BS EN 61010-1: 2001, BS EN 61010-2-032: 2002
Sensor Type	Type B sensor as defined in BS EN 61010-2-032:2002, Category IV, Pollution degree 3
Accuracy Class	Class 1 (calibrated), Class 2 (uncalibrated)
Rated current	600 A
Maximum current	2000 A
Output Strength	150 mV ac at rated current
Line Frequency	50 Hz

## Protection, Environmental & Compatibility

Surge protection	IEC61000 6 kV
Operating temperature range	- 20°C to 55°C (<93% RH, non-condensing)
Storage temperature range	- 25°C to 70°C
Altitude	Up to 2000 m

## Mechanical

Minimum required clearance between conductors	14 mm
Cable Length	2 m, 4 m, 6 m
Aperture	50 mm maximum conductor diameter
Weight	N/A
IP category	IP65 IEC 60529

**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:**

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For more information contact your Hiko representative  
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