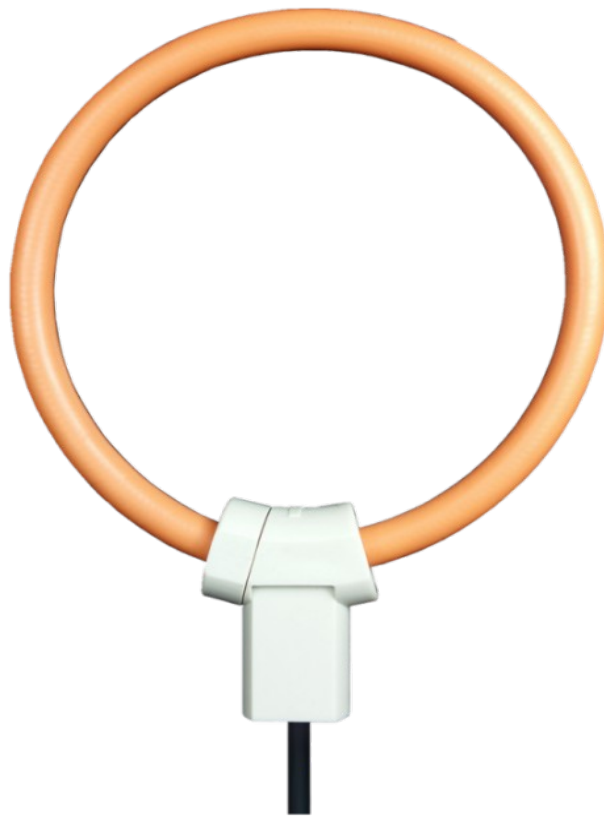


Instruction and operation manual

SUTO Current Clamp Sensor



Dear Customer,

Thank you for choosing our product.

The operating instructions must be read in full and carefully observed before you start up the device. The manufacturer cannot be held liable for any damage which occurs as a result of non-observance or non-compliance with this manual.

Should the device be tampered with in any manner other than a procedure which is described and specified in the manual, the warranty is cancelled and the manufacturer is exempt from liability.

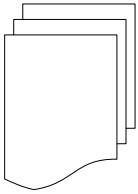
The device is destined exclusively for the described application.

SUTO offers no guarantee for the suitability for any other purpose. SUTO is also not liable for consequential damage resulting from the delivery, capability or use of this device.

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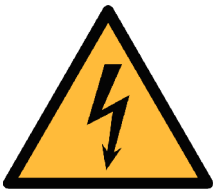
1. Safety instructions



Please check if this instruction manual accords to the product type.

Please observe all notes and instructions indicated in this manual. It contains essential information which have to be observed before and during installation, operation and maintenance. Therefore this instruction manual has to be read carefully by the technician as well as by the responsible user / qualified personnel.

This instruction manual has to be available at the operation site of the device at any time. In case of any obscurities or questions, regarding this manual or the product, please contact the manufacturer.



WARNING!

Voltage used for supply!

Any contact with energized parts of the product, may lead to an electrical shock which can lead to serious injuries or even death!

- Consider all regulations for electrical installations.
- The system must be disconnected from any power supply during maintenance work.
- Any electrical work on the system is only allowed by authorized qualified personal.



WARNING!

Permitted operating parameters!

Observe the permitted operating parameters, any operation exceeding this parameters can lead to malfunctions and may lead to damage on the instrument or the system.

- Do not exceed the permitted operating parameters.
- Make sure the product is operated in its permitted limitations.
- Do not exceed or undercut the permitted storage and operation temperature and pressure.
- The product should be maintained frequently, at least annually.

General safety instructions

- It is not allowed to use the product in explosive areas.
- Please observe the national regulations before/during installation and operation.

Remarks

- It is not allowed to disassemble the product.
- Always use spanner to mount the product properly.



ATTENTION!

Measurement values can be affected by malfunction!

The product must be installed properly and frequently maintained, otherwise it may lead to wrong measurement values, which can lead to wrong results.

Storage and transportation

- Make sure that the transportation temperature of the device is between -30 °C ... 80 °C .
- For transportation it is recommended to use the packaging which comes with the device.
- Please make sure that the storage temperature of the device is between -40 °C ... 80 °C .
- Avoid direct UV and solar radiation during storage.
- For the storage the humidity has to be $<90\%$, no condensation.

2. Application

The current sensor is designed to measure the current carried on a power conductor within the permissible operating parameters. These parameters can be found in the technical data section.

The current sensor is not developed to be used in explosive areas. For the use in explosive areas please contact the manufacturer.

3. Features

- Easy installation.
- Wide measuring range.
- Accurate current sensing.
- 4 mA ... 20 mA output signal.
- IP67 casing provides robust protection in the industrial environment.

4. Technical Data

4.1 General

CE		
Measuring range	10 A ... 1000 A (AC)	30 A ... 3000 A (AC)
	S554 0156 S554 0155	S554 0157 S554 0158
Fundamental frequency	40 Hz ... 70 Hz	
Operating temperature	-30 °C... 80 °C	
Protection class	IP67 (Clamp sensor) IP20 (Electronics)	
Clamp diameter	100 mm	150 mm
Weight	250g	

4.2 Electrical Data

Power supply	21 VDC ... 27 VDC
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4.3 Output-Signals

Analogue output	4 ... 20 mA DC equal to 0 ... max. AC current
Output ripple factor	5%

4.4 Accuracy

Accuracy	0.5% of reading 0.25% of range
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5. Installation

Please make sure that all components listed below are included in your package.

Qty	Description	Item no.
1	Current clamp sensor	S554 0155 / S554 0156 S554 0157 / S554 0158
1	Instruction manual	No P/N



ATTENTION!

Wrong measurement is possible if the sensor is not installed correctly.

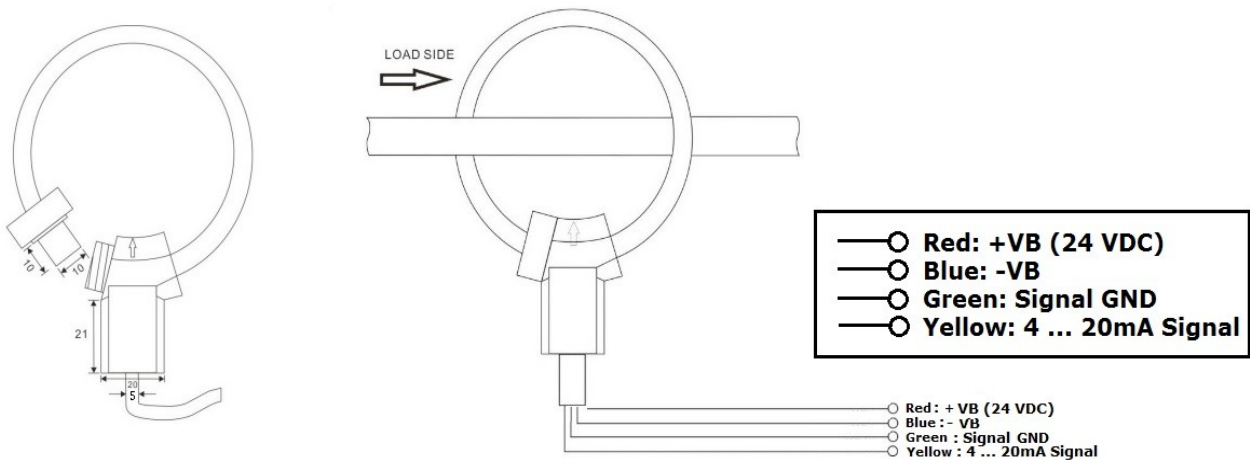
The current sensor is for indoor use only! At an outdoor installation, the sensor must be protected from solar radiation and rain.

5.1 Installation Procedure

The following steps explain the procedure of an appropriate installation.

Installation of the current sensor

1. Fit the coil around the isolated conductor in a way that the conductor remains in the center of the coil ring.
2. Bring the coil ends together and lock it with the screw ring



5.2 Electrical connection

There are two different types of current meter:

- model S554 0155 / S554 0158 with open wire end. For electrical connection please have a look to the table below:

Wire colour	Signal
Red	+ VB (24 VDC)
Blue	- VB
Green	Signal GND
Yellow	4 mA ... 20 mA Signal

- model S554 0156 / S554 0157 come with connector to S 551. For the electrical connection please use the ports 3 or 4 of the S 551.

6. Signal outputs

The sensor has an analog output range of 4 mA ... 20 mA. It is a 2-wire passive analog output. This output is scaled to:

- 4 mA = 0 A
- 20 mA = 1000 / 3000 A

7. Maintenance

- Keep the sensor clean and free of surface contamination.
- Clean the sensor with a soft cloth damp with a water and neutral soap only.
- Make sure the product is dry before use.
- Do not use or leave the product in particularly dirty or dusty environment.



ATTENTION!

Do not use corrosive chemical products, solvents or aggressive detergents to clean the sensor.

8. Disposal or waste



Electronic devices are recyclable material and do not belong in the household waste.

The sensor, accessories and its packings must be disposed according to your local statutory requirements. The dispose can also be carried by the manufacturer of the product. For more information, please contact the manufacturer.

9. Warranty

SUTO provides a warranty for this product of 24 months covering the material and workmanship under the stated operating conditions from the date of delivery. Please report any findings immediately and within the warranty time. If faults occurring during the warranty time SUTO will repair or replace the defective unit, without charge for labour and material costs but there is a charge for other service such as transport and packing costs.

Excluded from this warranty is:

- Damage caused by:
 - Improper use and non-adherence to the instruction manual.
 - Use of unsuitable accessories.
 - External influences (e.g. damage caused by vibration, damage during transportation, excess heat or moisture).

The warranty is cancelled:

- If the user opens the measurement instrument without a direct request written in this instruction manual.
- If repairs or modifications are undertaken by third parties or unauthorised persons.
- If the serial number has been changed, damaged or removed.

Other claims, especially those for damage occurring outside the instrument are not included unless responsibility is legally binding.

Warranty repairs do not extend the period of warranty.

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