

Instruction and operation manual

Current sensor



Dear Customer,
thank you for choosing our product.

The operating instructions must be read in full and carefully observed before starting 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.

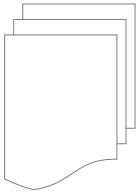
The device is destined exclusively for the described application.

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

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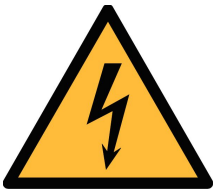
1. Safety instructions



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 a 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.

The current sensor is mainly used in compressed air systems in industrial environment.

3. Features

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

4. Technical Data

4.1 General

CE	
Measuring range	10... 1000 A AC
Fundamental frequency	40... 70 Hz
Max. clamp capacity	100 mm ± 2 mm
Operating temperature	-30°C... 80°C
Material	Thermoplastic polyurethane UL94-V0
Protection class	IP67
Dimensions	100 mm diameter
Weight	250 g

4.2 Electrical Data

Power supply	10... 32 VDC
Load impedance	$\leq 300 \Omega$
Current consumption	$\leq 30 \text{ mA}$
Service voltage	$\leq 1000 \text{ CAT III, } 600 \text{ V Cat IV}$

4.3 Output-Signals

Analogue output	4... 20 mA DC max. output: 21.6 mA DC
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4.4 Accuracy

Accuracy	0.1 % F.S.
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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	0554 0055/ 0554 0056
1	Instruction manual	No P / N

Please consider that enough space exists at your site for a adequate installation as described in this manual.



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 and deinstallation.

Installation of the current sensor

1. Before start with the installation of the current sensor, please make sure that the conductor is not on!
2. Fit the coil round the conductor.
3. Bringing the coil ends together.
4. Lock the coil by turning the ring.

Remarks

- Coil must not fit tightly around the conductor.

Removal of the current sensor

1. To open the coil, turn the ring in reverse.
2. Pull out the coil ends.

5.2 Electrical connection

There are two different types of current meter:

- model 0554 0055 with open wire end. For electrical connection please have a look to the table below:

Wire colour	Signal
green	Positive supply voltage
brown	Negative supply voltage
white	Current output
shield (or black)	Electrically connected to negative supply voltage

- model 0554 0056 including connector to S 551. For the electrical connection please use the pole 3 or 4 of the S 551.

6. Signal outputs

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

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

It is not possible to use an other scale for the analog output.

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 device, the 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 this please contact the manufacturer.

9. Warranty

SUTO iTEC GmbH 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 iTEC GmbH 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.



ATTENTION!

Batteries have a reduced warranty time of 12 month.

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