

Operating Manual STWA1AH

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- Electronic Current-Transducer with Analog Output

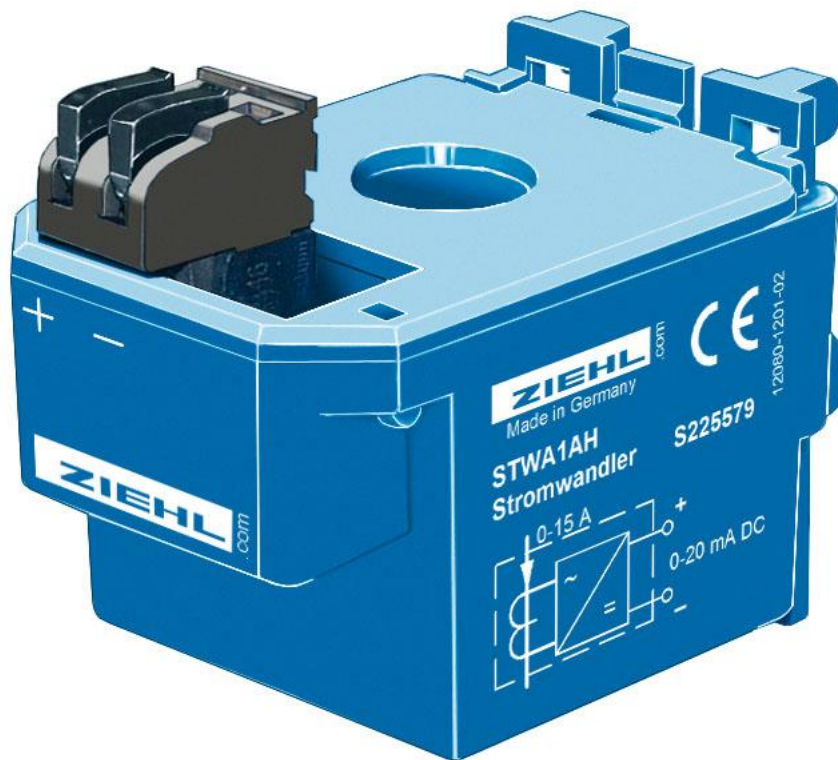


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1 Application and Short Description

The STWA1AH is a current-transducer for AC currents 0...15 A. With the STWA1AH the value of a current can be evaluated very economically and space-saving.

The output-signal 0...20 mA can be evaluated or displayed with components with analog inputs, e.g. PLCs or ZIEHL TR 210, STW 1000 V2 or MINIPAN.

2 Overview of Functions

- current-proportional analog output DC 0...20 mA = AC 0...15 A (insulated)
- electrical connection via screw less pluggable terminals
- no supply voltage required
- DIN-rail-mount or with screws
- plug-in current transformer (Ø 11 mm)
- max. overload 100 A continuously, 300 A max. 10 s

3 Detailed Description

The current-transformer STWA1AH is a measuring-transducer for AC-currents in the housing of a transformer. It has an analog output 0...20 mA corresponding with to 0...15 A current through the transformer. Multiple loops of the conductor through the transformer reduce the range accordingly, for instance to 0...5 A with 3 loops

For monitoring of currents of any value, the STWA1AH is simply looped into the secondary circuit of a big current-transformer (cable 3x through STWA1AH). The range corresponds to the primary current of the transformer, e.g. 0... 100 A at a transformer with 100/5 A.

The STWA1AH requires no supply-voltage. The analog output is insulated.

Attention!

There may be only one conductor through the transformer!

4 Assembly

The STWA2AH can be assembled as follows:

- just push it over the monitored conductor without fixing it
- with the included mounting clip:
 - on 35 mm DIN-rail according to EN 60 715
 - surface-mount with 2 screws (M4)

The connection has to be made assorting to the connection-plan or the type plate.

NOTE:

The devices may only be mounted by skilled workers. The according rules have to be obeyed.

5 Technical Data

Analog Output

Monitoring range	0...15 A
Analog output	DC 0...20 mA
Adjustment time	<0.5 s
Error (from 10% / I_{nom})	<3% from FS (at 100 Ω), <5% 50...200 Ω <7% ..300 Ω
Error with other load	5% / 100 Ω (max.500 Ω)
Temperature coefficient	<0.06% / K
Ripple at 50 Hz	<2.5% at 300 Ω , <4.5% at 100 Ω , <7.5% at 50 Ω

Frequency

Functional range	30 ... 400 Hz
Nominal frequency	50 Hz
Error	$\leq 0.2\%$ / Hz

Overload Capacity

continuously	100 A
max. 10 s	300 A

Test Conditions

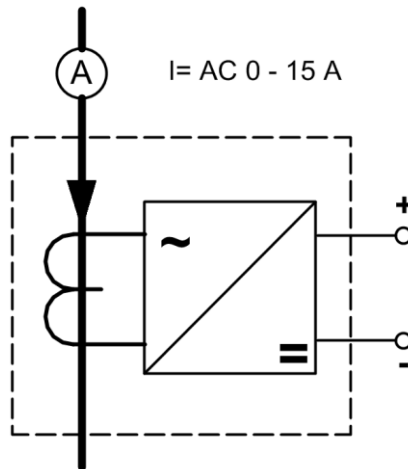
Rated impulse withstand voltage	EN 61010 4000 V
Overvoltage category	III
Pollution degree	2
Rated insulation voltage U_i	250 V
On-period	100 %
Rated ambient temperature range	0 ... 55 °C
EMC-immunity	EN 61326 (industrial electromagnetic environment)
EMC-emission	EN 61326 CISPR 11 class B
Vibration resistance EN 60068-2-6	2...25 Hz ± 1.6 mm 25...150 Hz 5 g

Housing

Wire connection	design H
protection terminals	each 1 x 0.08 mm ² to 1.5 mm ²
Mounting position	IP 20
Weight	any ca. 90 g

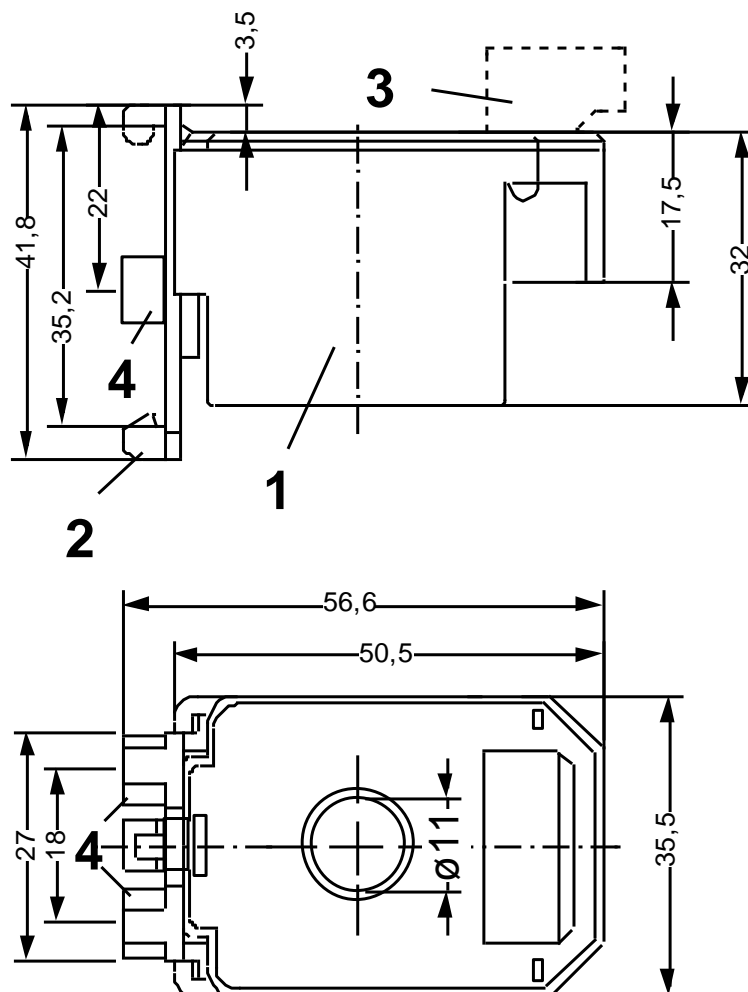
Subject to technical changes

6 Connection Plan



7 Design H

Dimensions in mm



- 1 - Base
- 2 - Clip for DIN-rail
- 3 - Terminal (pluggable)
- 4 - Surface-mount (M4)