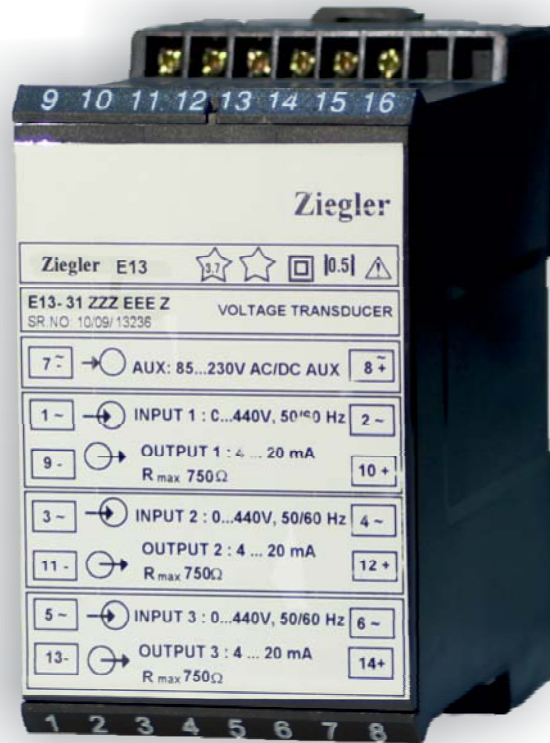


## Operating Instructions AC Current or AC Voltage Ziegler E13



9 10 11 12 13 14 15 16

Ziegler

Ziegler E13

E13- 31 ZZZ EEE Z VOLTAGE TRANSDUCER  
SR.NO. 10/09/13236

7 - → ○ AUX: 85...230V AC/DC AUX 8 +

1 - → ○ INPUT 1 : 0...440V, 50/60 Hz 2 -

9 - → ○ OUTPUT 1 : 4 ... 20 mA  
R<sub>max</sub> 750Ω 10 +

3 - → ○ INPUT 2 : 0...440V, 50/60 Hz 4 -

11 - → ○ OUTPUT 2 : 4 ... 20 mA  
R<sub>max</sub> 750Ω 12 +

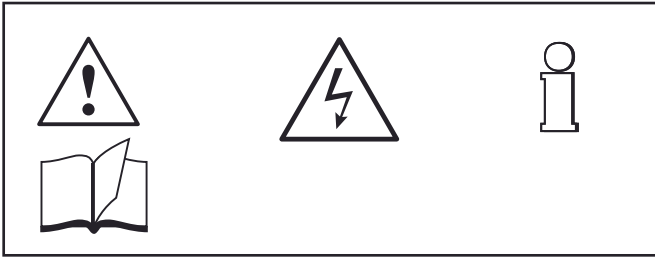
5 - → ○ INPUT 3 : 0...440V, 50/60 Hz 6 -

13 - → ○ OUTPUT 3 : 4 ... 20 mA  
R<sub>max</sub> 750Ω 14 +

1 2 3 4 5 6 7 8




Safety precautions to be strictly observed are marked with following symbols in the operating instructions :



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## 1. Read first and then



The proper and safe operation of the device assumes that the Operating Instructions are read and the safety warning given in the various sections

5. Mounting  
6. Electrical Connections

The device should only be handled by appropriately trained personnel who are familiar with it and authorised to work in electrical installations.

## 2. Scope of supply (Fig. 1)

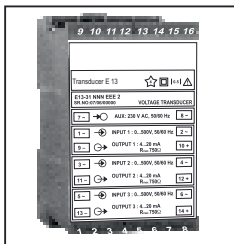


Fig.1

## 3. Brief Description :

The Transducer **E13** measuring transducer is used where a sine wave AC current or voltage is to be converted into a DC signal proportional to the measured value (load-independent current or voltage). This transducer is having three independent channels, electrically isolated from each other.

## 4. Technical Data (Refer Fig.5)

### Measuring Input

Nominal frequency : Refer printed label on transducer.  
Nominal input Current or Voltage : Refer printed label on transducer (measuring range)

### Measuring Output

DC Voltage : 0....10/1....5 V

Load Capacity 20 mA

External Resistance -  $R_{ext} (K\Omega) > \frac{U_A [V]}{20mA}$

$U_A$  = Full Output Value

DC Current : 0....1mA to 0....20mA / 4....20 mA

Burden Voltage 15 V

External Resistance -  $R_{ext.max.} [K\Omega] = \frac{15V}{I_{AN} [mA]}$

$I_{AN}$  = Full Output Value

Output signal : Refer printed label on transducer

Burden Voltage : 15 V

External resistance :  $R_{ext.max.} (K\Omega) = 15V / Y2(mA)$

Power Supply  $Y2 = \text{Full O/p value}$

Voltage : Refer printed label on transducer

### Accuracy

Reference value : Output span

Basic accuracy : Class 0.5

### Environmental conditions

Climatic range : Climate class 3Z acc. to VDI/VDE 3540


Operating Temperature : -25°C to +55°C

Storage Temperature : -40 to +70°C

Relative humidity of annual mean : ≤75%

## 5. Mounting

The Ziegler **E13** can be mounted either on a top-hat rail or directly onto a wall or mounting plate.



Note "Environmental conditions" in section "4. Technical Data" while deciding the place of installation!

### 5.1 Top-hat rail mounting

Simply clip the device onto the Top-hat rail (EN 50 022) (See Fig. 2)

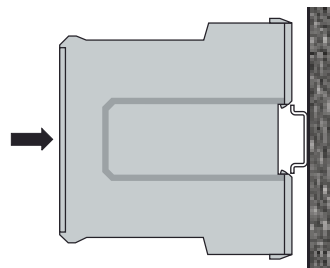


Fig.2 Mounting onto top-hat rail 35 x 15 or 35 x 7.5 mm.

## 5.2 Wall mounting

The screw hole brackets (1) can be released and pulled out by pressing on the latch (4). They can be pushed in after pressing the latch (5).

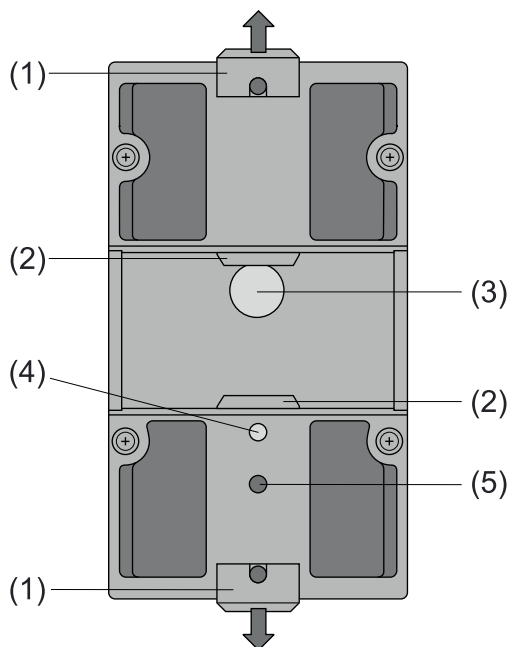
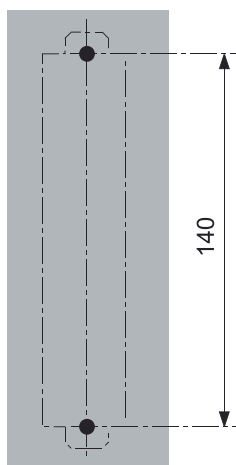


Fig.3. Rear of device.

- (1) Screw hole brackets
- (2) Top-hat rail clip
- (3) Rubber buffers
- (4) Latch for pulling the screw hole brackets out
- (5) Latch for pushing the screw hole bracket in.



Fixing the housing to a wall or mounting plate using two 4 mm diameter screws. Drill holes as shown in the drilling pattern (Fig.4)

Fig.4. Drilling Pattern

## 6. Electrical connections

Make connection as per printed label on transducer (Fig.5, example of a nameplate)



Make sure that the measuring input cables are not live (potential-free) when making the connections !



Note that,.....

... the data required to carry out the prescribed measurement must correspond to those marked on the nameplate of the Transducer **E13** (⊖ measuring input, ⊕ measuring output and →○ power supply. See Fig.5)

... the total loop resistance connected to the output (receiver plus leads) does not exceed the maximum permissible value  $R_{ext}$ !

See "**Measuring output**" in section "4. Technical data" for maximum values of  $R_{ext}$ !

... the measurement output cables should be twisted pairs and run as far as possible away from heavy current cables !

In all other respects, observe all local regulations when selecting the type of electrical cable and installing them!

<b>Transducer E 13</b> ☆☆☆ I 0.5 I ⚠		Manufacturer
E13-31333EEE2 SR. NO. 06/01/1008		Type
7 ~    →○    8 ~ 230V, 50/60 Hz		Works No..
1 ~    →○    2 ~ 0...5A, 50/60 Hz		→○ Power Supply
9 -    →○    10 + 4...20 mA $R_{max}$ 750Ω		Input 1 →○ Measuring range & quantity Nominal Frequency
3 ~    →○    4 ~ 0...5A, 50/60 Hz		Output 1 →○ Output signal External resistance
11 -    →○    12 + 4...20 mA $R_{max}$ 750Ω		Input 2 →○ Measuring range & quantity Nominal Frequency
5 ~    →○    6 ~ 0...5A, 50/60 Hz		Output 2 →○ Output signal External resistance
13 -    →○    14 + 4...20 mA $R_{max}$ 750Ω		Input 3 →○ Measuring range & quantity Nominal Frequency
		Output 3 →○ Output signal External resistance

Fig.5. Declaration of type label

## 7. Meaning of symbol



Warning of a danger point  
(Attention, refer to the user manual)



Earth (ground) terminal.



Double or reinforced insulation

## 8. Commissioning and maintenance

Switch on the power supply and the measuring input  
During the operating, you can disconnect the output and connect a test equipment  
e.g. For a functional test.

No maintenance is required.



## 9. Releasing the transducer

Release the transducer from a top-hat rail as shown in Fig. 6

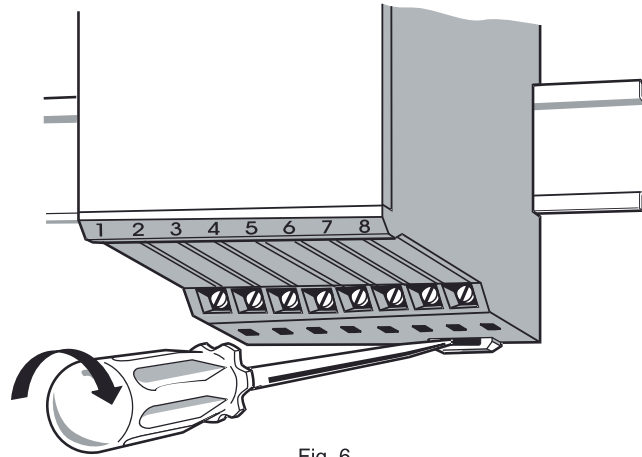


Fig. 6

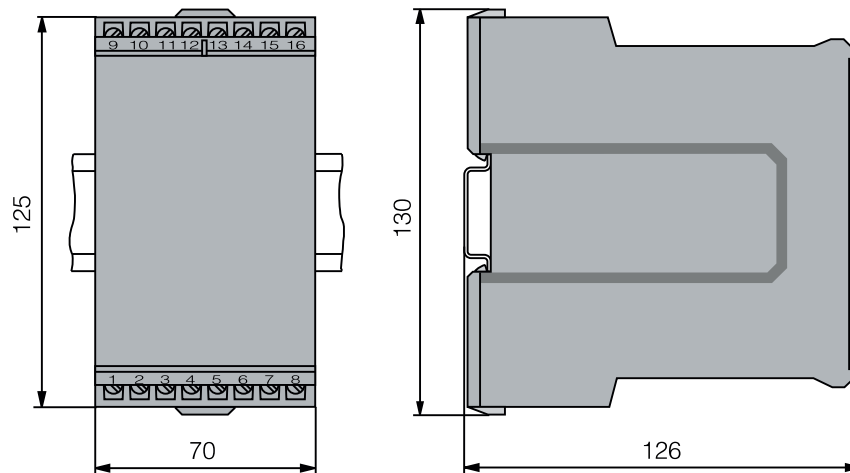


Fig.7 Transducer clipped onto a top-hat rail (35 x 15 mm or 35 x 7.5 mm) acc. to EN 50022

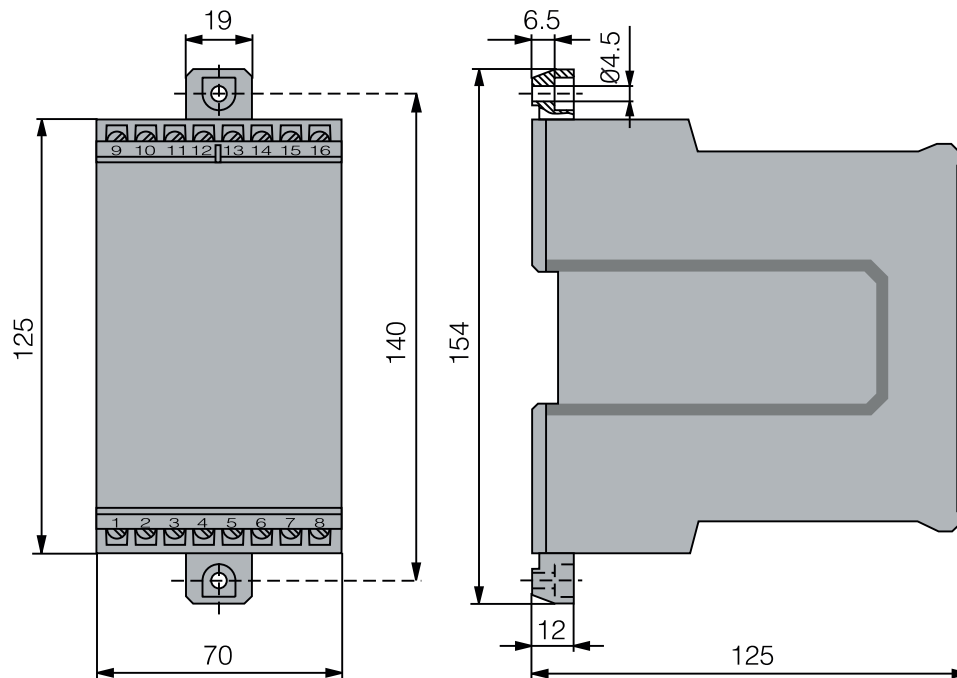


Fig.8 Transducer with the screw hole brackets pulled out for wall mounting

## ZIEGLER INSTRUMENTS

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