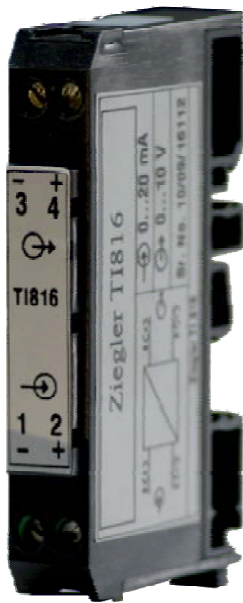# Operating Instructions Passive
DC Signal Isolator
Ziegler TI 816

The signal isolator fulfils the protection requirements according to EMC guideline (89/336/EWG).

4. Versions

There are two versions of the DC signal isolator Ziegler TI816 available.

Description	Output signal A	Order code
Passive DC signal isolator input signal E:0...20 mA, with 1 isolation and transmission channel, in carrying rail housing N12	0...20/4...20mA	816-5110
	0...10 V	816-5111

5. Technical data

Input signal E $\rightarrow$

DC current:	0...20/4...20mA
Max. permissible current:	50 mA
Voltage limiter:	18 V ± 5% (with zener diode)
Voltage drop:	< 2 V (for 500 Ω burden)
Overshoot:	< 20 µA(typical 5 µA)

Output signal A $\rightarrow$

DC current **or** : DC voltage:	0...20/4...20mA or 0...10V
Limit:	Approx. 30mA[1] Approx. 15V[2]
Max. burden:	500 Ω[1]
Internal resistance:	500 Ω[2]
Residual ripple:	< 20 mV ss
Time constant:	Approx. 5 ms

Accuracy data

Error limits:	< ± 0,1%[1] (reference value 20 mA, linearity error included) < ± 0,2%[2] (reference value 10 V, linearity error included)

Ambient conditions

Climatic rating:	Climate class 3Z acc. to VDI/VDE 3540
Operating temperature:	-20 to + 65 °C
Storage temperature:	-40 to + 85 °C
Annual mean relative humidity:	≤75% Standard climatic rating
Seismic test:	5 g, < 200 Hz, 2 h in each of 3 directions
Shock test:	**50 g,** 10 shocks in each of 3 directions

[1]With current signal
[2]With voltage signal

1. Read first and then ...

The proper and safe operation of the device assumes that the operating instructions are **read carefully** and the safety warning given in the various Sections

6. Mounting

7. Electrical connections

are observed.

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

Signal isolator (Fig.1)

Fig. 1

3. Brief description

The signal isolator Ziegler TI 816 serves to electrically insulate an analogue DC signal in the range 0...20 mA which depending on version is then converted to a current/voltage signal (0...20/4...20 mA or 0...10V) It does not require a seperate power supply.

6. Mounting

The Ziegler TI816 isolator is suitable for mounting on two different types of standard rails:
- onto the G-type rail EN 50 035-G32
  or
- onto the top-hat rail EN 50 022-35 x 7.5

> ℹ️ Note **"Ambient conditions"** in Section "5. Technical data" when determining the place of installation!

Simply clip the signal isolator onto the carrying rail acc. to Fig. 3 or Fig. 4.
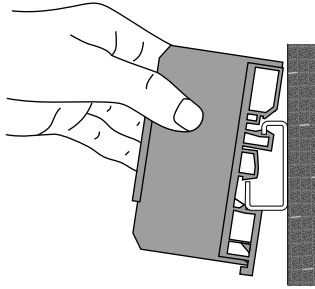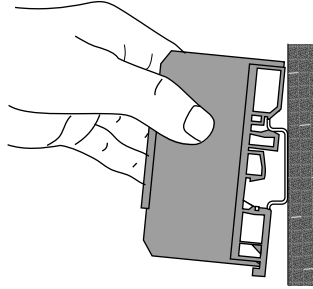

Fig. 3. Mounting onto the G-type rail.

Fig. 4. Mounting onto the top-hat rail.

7. Electrical connections

Easily accessible screw terminals are provided at the front of the signal isolator (Fig. 6) which accept wire gauges up to 2.5 mm² (standard wire) or 4 mm² (non-standard wire).

TYPE 816 – 5111

2(+)	4(+)	⊕ 0...20 mA
1(-)	3(-)	⊕ 0...10 V
		Sr. No. : 08/07/07549

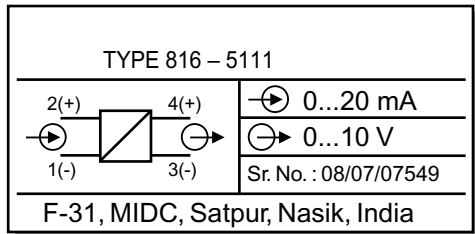F-31, MIDC, Satpur, Nasik, India

Fig. 5. Example of a nameplate

Connect the input and output leads E and A according to Fig. 6.

Fig. 6. Terminal allocation.
E = Input signal, A = Output signal.

8. Commissioning and maintenance

The device is in operation as soon as the input signal E is connected.

The signal isolator requires no maintenance.

9. Releasing the signal isolator

When dismantling the Ziegler TI 816

... from **G rails** proceed according to Fig. 7. Firstly press the signal isolator upwards (manipulation 1) and tip it upwards at the same time (manipulation2).

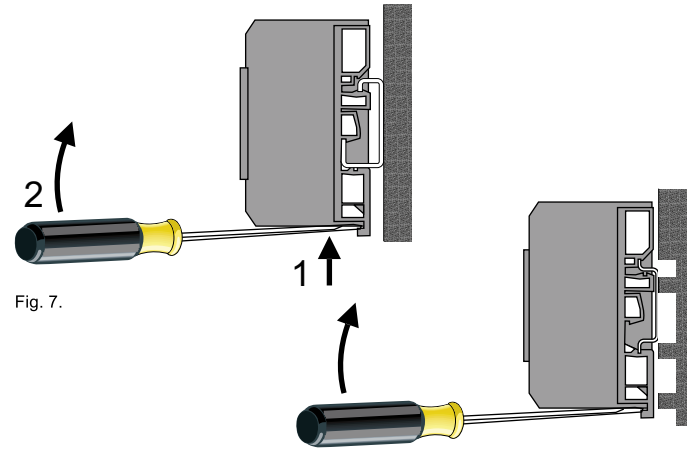... from **top-hat rails** proceed according to Fig. 8. Tip the signal isolator upwards.

Fig. 7.
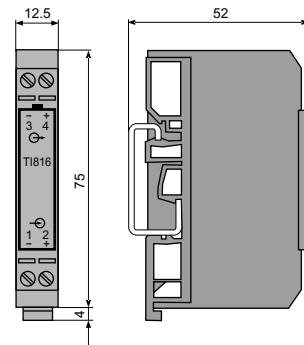

Fig. 8.

10. Dimensional drawings

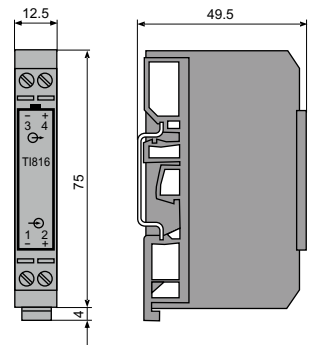Fig.9.Ziegler TI816on G-type rail EN 50 035 - G 32.

Fig.10.Ziegler TI816 on top-hat rail EN 50 022 - 35 x 7.5 m.m.