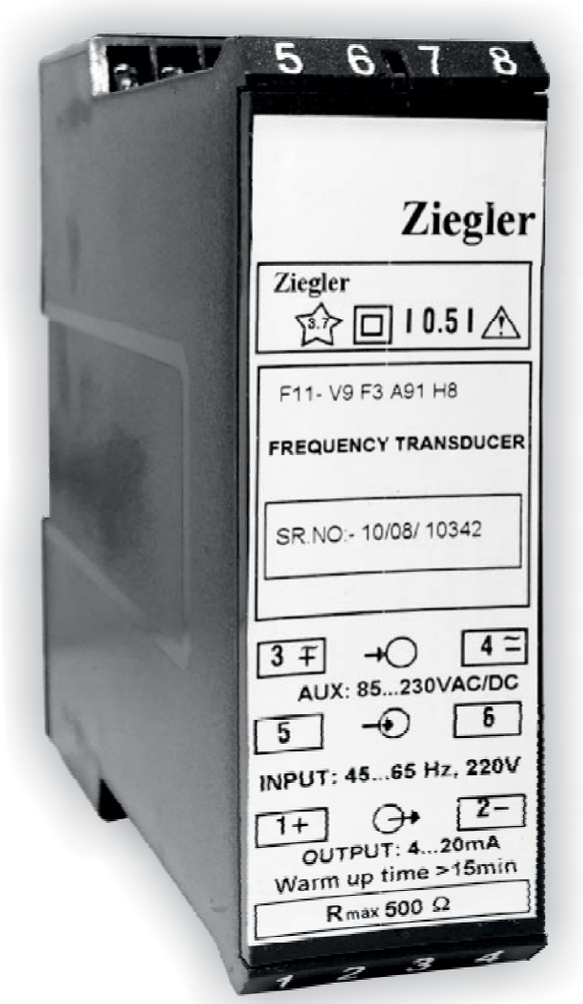
Ziegler

Redefine Innovative Metering

Operating Instructions

for Frequency Transducer Ziegler F11/F12



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

Contents

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

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 (Fig. 1)

Transducer (Fig. 1)

Fig.1

3. Brief Description :

The Ziegler F11/12me asuring transducer is used for Frequency measurement. The output signal is proportional to load-independent DC current or DC voltage.

4. Specification and ordering information

Description		Marking
Measuring transducer for frequency		F11/F12
Nominal input voltage 63.5, 100, 110, 120, 220, 230, 240, 380, 400, 415, 440 and 480 V Input voltage >300V : phase to phase connection to a three-phase supply only		V9
Measuring Range		
	45 - 55 Hz.	F1
	55 - 65 Hz.	F2
	45 - 65 Hz.	F3
	360 - 440 Hz.	F4
Final value of output signal	1mA ≤ Y2 ≤ 20mA	A91
	1V ≤ Y2 ≤ 10V	A92
Power Supply		
	AC 22 V ... 26 V	H1
45..50..	AC 99 V ... 121 V	H2
60..65 Hz	AC 108 V ... 132 V	H3
	AC 207 V ... 253 V	H4
	AC 360 V ... 440 V *	H5
DC and	DC / AC 24 V ... 60 V	H7
45... 400 Hz	DC / AC 85 V ... 230 V	H8
*> 300 V ; phase to phase connection to a three-phase supply only		

5. Technical Data

Measuring Input

Nominal frequency (Measuring range) : Acc. to specification on type label
Nominal voltage : Acc. to specification on type label

Measuring Output

Output signal : Acc. to specification on type label
Burden voltage : 10 V
External resistance : R_{ext} max. (KΩ) = 10 V / Y2 (mA)
Y2 = Full O/P value

Power Supply

Voltage : Acc. to specification on type label

Accuracy

Reference value : Measuring value Δf
Basic accuracy : F11 Class = 0.5
F12 Class = 0.2

Environmental conditions

Climatic range	:	Climate class 3Z acc. to VDI/VDE 3540
Operating Temperature	:	0 to +60°C
Storage Temperature	:	-20 to +70°C
Relative humidity of annual mean	:	≤ 75%
Warm up time	:	> 15 min

6. Mounting

The Ziegler F11/F12 can be mounted either on a top-hat rail or directly onto a wall or mounting plate.

Note **"Environmental conditions"** in Section **"5.Technical Data"** while determining the place of installation!

6.1 Top-hat rail mounting

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

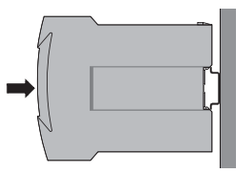


Fig.2 Mounting onto top-hat rail 35 x 15 or 35 x 7.5 mm.

6.2 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).

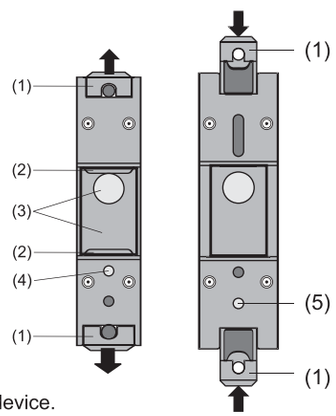


Fig.3. Rear of device.
(1) Screw hole brackets
(2) Top-hat rail clip, (3) Rubber buffers
(4) Latch for pulling thescrew hole brackets out
(5) Latch for pushing the screw hole bracket in.

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

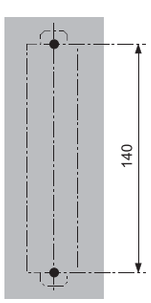


Fig.4. Drilling Pattern

7. Electrical connections

Connect the leads acc. to the Instructions on nameplates (Fig.5, example of a nameplate)

Make sure that the measuring input cables are not live when making the connections ! Take care of current transformers.

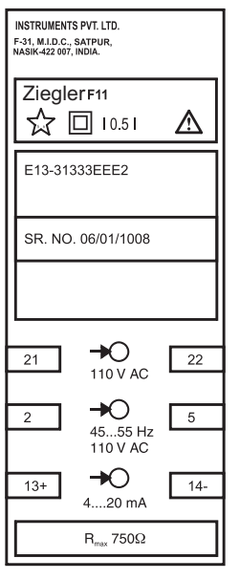
Also note that, ...
... the data required to carry out the prescribed measurement must correspond to those marked on the nameplate of the Ziegler F11/F12
(⊖→ measuring input, ⊖→ measuring output and →○ power supply. See Fig.6)

... 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 "5.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!

Manufacturer	
Type destination ; Test mark	
Works No..	
→○	Power Supply
Input	Measuring range Measured quantity
⊖→	Nominal Frequency
Output	Output signal
⊖→	External resistance



8. Commissioning and maintenance

Switch on the power supply and the measuring input. It is possible during the operation to disconnect output Line an to connect a check instrument.
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. 5.

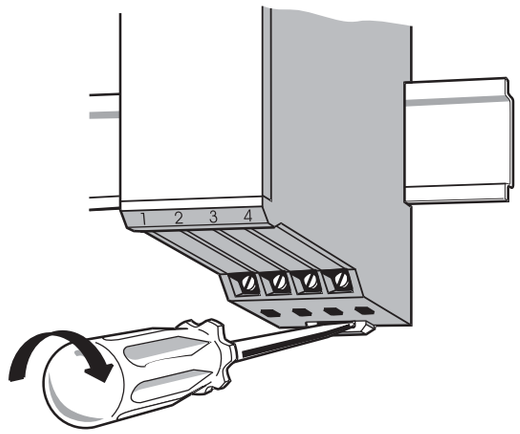


Fig. 5

10. Dimensional Drawings

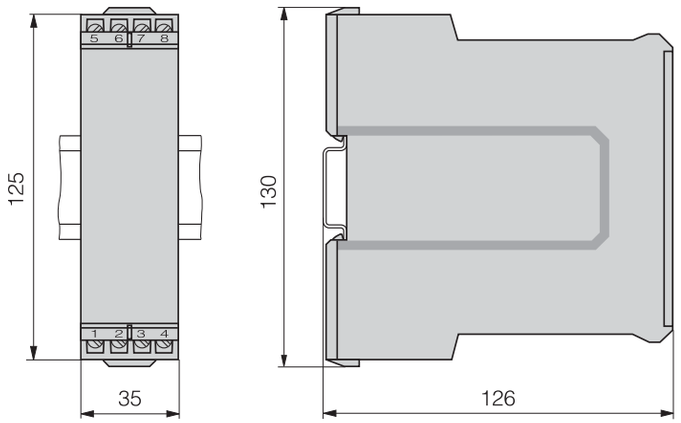


Fig.6 Transducer clipped onto a top-hat rail (35 x 15 mm or 35 x 7.5 mm) acc. to EN 50022

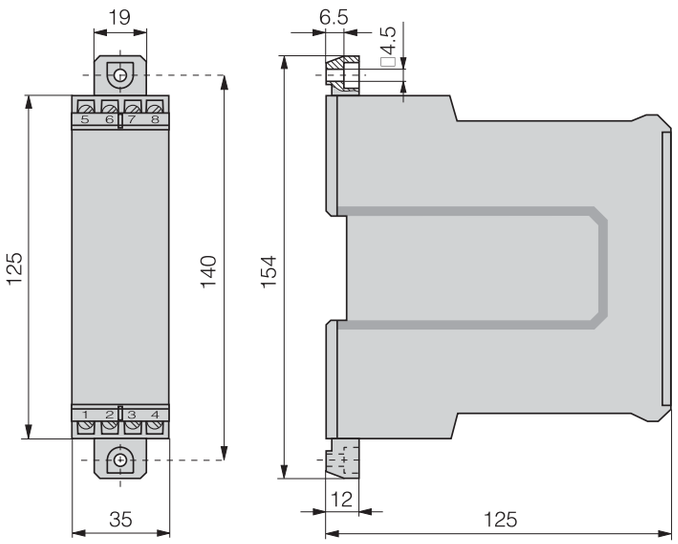


Fig.7 Transducer with the screw hole brackets pulled out for wall mounting

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