



BZ1-P – Speed relay

Manual BZ1-P (Revision A)

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Application

Speed supervision of gensets

Function

Via the connected pickup, the BZ1 detects the speed of the genset to be supervised. The relay is provided with three independently adjustable elements for ignition speed, under- and overspeed. At nominal speed of the machine the pickup frequency can be calibrated to 100 % fn by means of potentiometer CAL. At output CAL-A2 a current of 0 - 20 mA in proportion to the speed is available for indication of speed.

Technical data

Auxiliary voltage	
Terminals (A1 - A2):	12 V DC, 24 V DC \pm 40 %
Rated pickup-frequency:	1-10 kHz; UP = 4 Vss - 90 Vss
Hysteresis:	2 % of fn
Power consumption:	4 VA
Therm. load carrying capacity:	continuous 1,4 x Un
Returning time:	<500 ms
Minimum operating time:	<500 ms
Output current CAL:	0 - 20 mA DC, Ri \leq 100 Ω , 100 % fn = 15 mA

Output relays:

Max. breaking capacity	
Ohmic:	1250 VA AC/150 W DC
Inductive:	500 VA AC/75 W DC
Rated current:	5 A
Making current (16ms):	20 A

System data:

Regulations:	VDE 0435 part 303
Temperature range at storage and operation:	- 25°C to + 70°C

Mechanical stress:

Shock:	class 1 acc. to DIN IEC 255-21-2
Vibration:	class 1 acc. to DIN IEC 255-21-1
Degree of protection:	IP 40 at closed front cover
Weight:	approx. 0.3 kg
Mounting position:	any

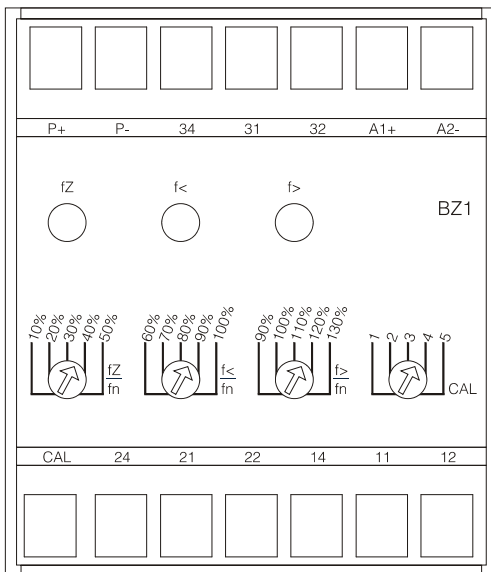


Figure 1: Front plate

The unit BZ1 is designed to be fastened onto a DIN-rail acc. to DIN EN 50022 same as all units of the BASIC LINE.

The front plate of the unit is protected with a sealable transparent cover (IP40). Please remove the transparent cover with a screw driver to adjust the relay.

LEDs

The LED fZ lights up at ignition speed. During operation without fault LEDs fZ and f< light up. The LED f> lights up at overspeed. The LED f< extinguishes at underspeed.

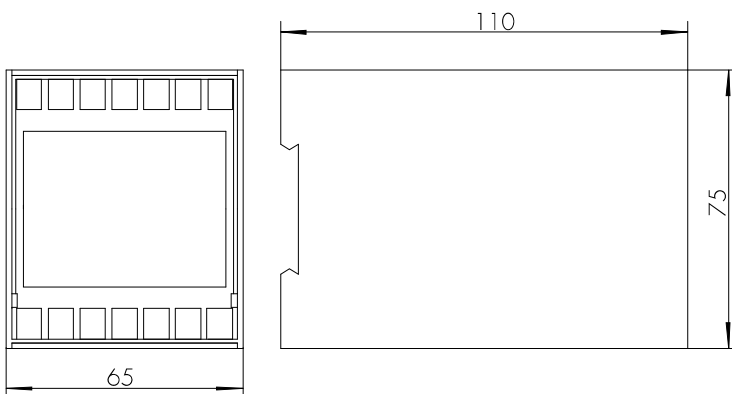


Figure 2: Dimensional drawing of BZ1

Auxiliary voltage supply

The unit BZ1 needs a separate auxiliary voltage supply. The supply voltage will be connected to terminals A1 - A2.

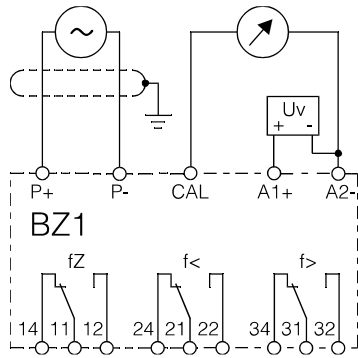


Figure 3: Connection terminals

Note:

For connection of the pickup a two-wire screened cable is used, the screen of which is earthed at the pickup side.

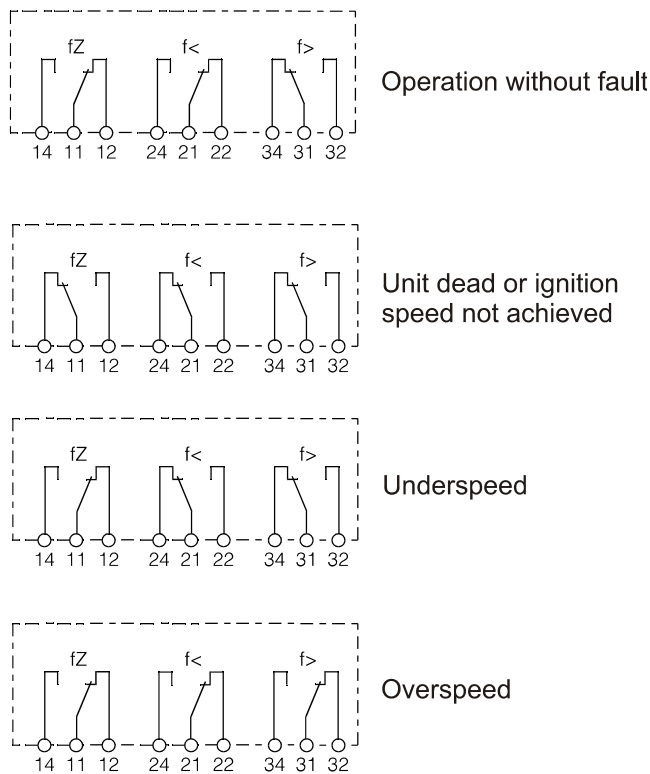


Figure 4: Contact positions

Connection terminals

The connection up to a maximum of 2 x 2.5 mm² cross-section conductors is possible. For this procedure the transparent cover of the unit has to be removed.

Setting ranges

fZ:	10 - 50 % fn
f<:	60 - 100 % fn
f>:	90 - 130 % fn
fn (CAL):	1 - 10 kHz

Order form

Speed relay		BZ1		
Generator	50/60 Hz AC		G	
Pick-up	1 kHz ... 10 kHz		P	
Auxiliary voltage	12 V/DC			12
	24 V/DC			24

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