BV1 - Phase sequence relay

Application
Supervision of phase loss, phase sequence and undervoltage in three-phase systems.

Function
Relay *BV1* measures amplitude and angle of three phase voltages. The angle of the phasors determine the phase sequence. Unbalance and phase loss are detected by the measurement of amplitude and angle.
The undervoltage trip setting is 70 % of Un fixed.
The underfrequency element trips if the frequency falls below 45 Hz.

Technical data

rated voltage Un:	110 V, 230 V, 400 V AC
frequency range:	45 - 66 Hz
hysteresis:	2% Un
power consumption:	3 VA (4 VA BA1-400)
thermal load carrying capacity:	continuously 1,3 x Un
returning time:	700 ms
minimum operating time:	700 ms

Output relays:

max. breaking capacity	
ohmic:	250 V AC/120 W DC
inductive:	500 V AC/75 W DC
rated current:	5 A
making current (16ms):	20 A

System data:

regulations:	VDE 0435 Teil 303
temperature range at storage and operation:	- 25°C bis + 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. 0,5 kg
mounting position:	any

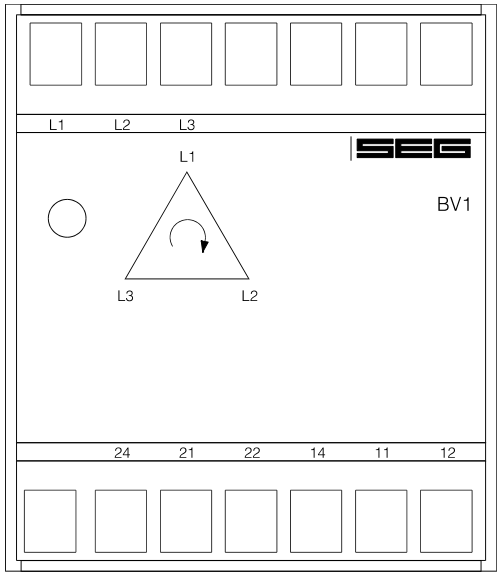


Fig. 1: Front plate

The unit *BV1* 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.

LED
LED is used to indicate operation without fault with steady light. At tripping or underfrequency the LED extinguishes.

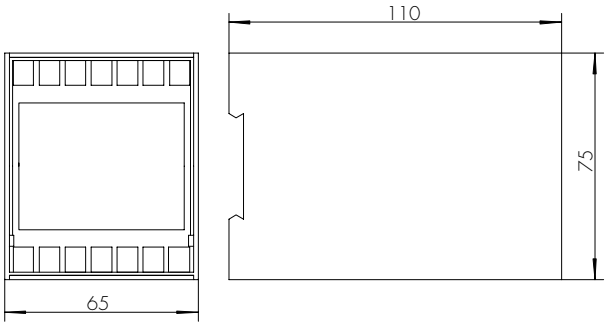


*Fig. 2: Dimensional drawing of **BV1***

CE

Auxiliary voltage supply

The unit ***BV1*** needs no separate auxiliary voltage supply. The supply voltage can be formed directly from the measuring quantity.

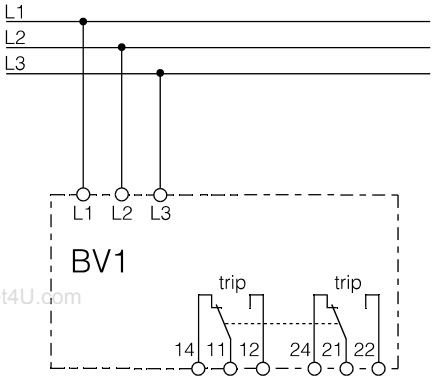
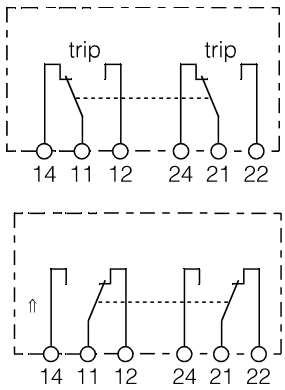


Fig. 3: Connection diagram



Unit dead, wrong phase sequence or tripped

Operation without a fault

Fig. 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.

Order key:

quantity			
	BV1	-	
	110 V AC		110
	230 V AC		230
	400 V AC		400

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