

Basic Range



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 U_n fixed.

The underfrequency element trips if the frequency falls below 43.5 Hz.

Technical data

Rated voltage U_n	: 110 V, 230 V, 400 V AC
Frequency range	: 40-66 Hz
Hysteresis	: 2% U_n
Power consumption	: 3 VA (4 VA BA1-400)
Thermal load carrying capacity	: continuously $1.3 \times U_n$
Returning time	: 700 ms
Minimum operating time	: 700 ms

Output relay

Maximum breaking capacity ohmic	: 250V AC/120 W DC
Inductive	: 500V AC/75 W DC
Rated current	: 5 A
Making current	: 20 A

System data

Regulations	: VDE 0435 Part 303
Temperature range at storage and operation	: -25°C to $+70^{\circ}\text{C}$

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 unit front	: IP 40 at closed front cover
Weight	: approx. 0.5 kg
Mounting position	: any

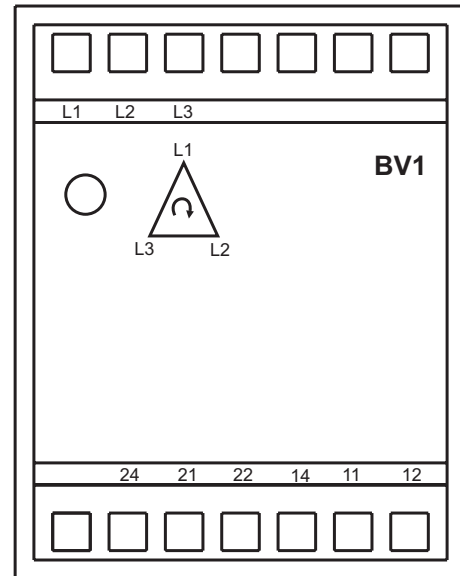


Fig. 1 : Front plate

The unit **BV1** is designed to be fastened onto a DIN rail acc. to DIN EN 50022 same as all units of the **BASIC RANGE**. The front panel 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.

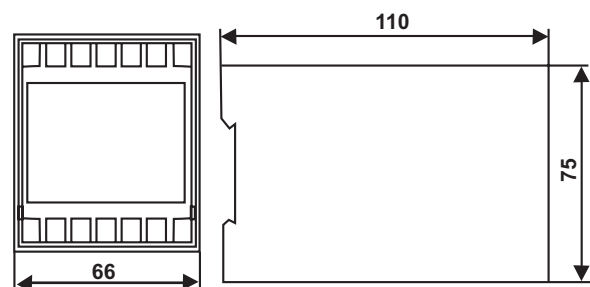


Fig. 2 : Dimensional drawing BV1

Auxiliary voltage supply

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

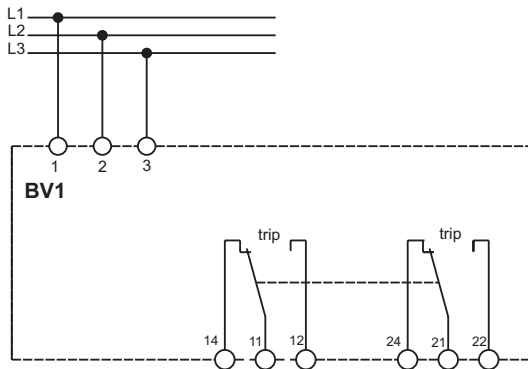
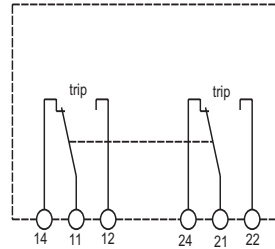
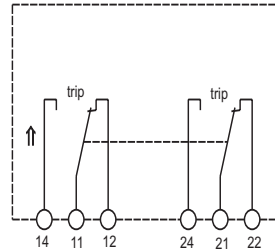


Fig. 3. Connection diagram



Unit dead, wrong phase sequence or tripped



Operation with out a fault

Fig. 4: Contact positions

Connecting terminals

The connection up to a maximum of $2 \times 2.5 \text{ mm}^2$ cross-section conductors is possible. For this procedure the transparent cover of the unit has to be removed.

Order key

BV1	
Rated voltage 110 V AC	110
Rated voltage 230 V AC	230
Rated voltage 400 V AC	400

For further information, please contact :



C&S Protection & Control Ltd.

44, Okhla Indl. Estate, New Delhi-110020, Ph.: 011-55602414, 26319465-66 Fax: 011-55602413 email: cspc@controlsindia.com

Marketing Office : DELHI : Ph.: 55602414, 26319465-66 Fax: 55602413 **CHANDIGARH** : Ph. 2776154, 2776151, 2726153 Fax: 2726154
KOLKATA : Ph. 24549607-08 Fax: 24549371 **MUMBAI** : Ph.: 24114727-28 Fax : 24126631 **PUNE** : Ph.: 5444822-824, Fax: 5410820,
AHMEDABAD : Ph.: 65841425, 6589132 Fax : 6589132 **BANGALORE** : Ph.: 5586147, 5323582, 5594939 Fax: 5582796,
CHENNAI : Ph.: 26426475, 26426572 Fax: 26411972 **HYDERABAD** : Ph.: 27813003, 55332304 Fax: 27812987