

Basic Range

BU1-AC-U- Voltage Relay

Application

Under voltage supervision of 1 and 3 phase systems.

Function

Unit BU1-AC-U is equipped with an undervoltage supervision ($U<$) with adjustable pickup values, trip delay (t) and hysteresis (DIFF). The voltages are compared with the set reference values.

For three-phase undervoltage supervision the lowest in each phase is considered.

Pickup of supervision circuit $U<$ is indicated by flashing of the corresponding LED.

At tripping LED $U<$ extinguishes

At voltages $< 60\% U_n$ no trip delay takes place.

Technical data

Rated voltage U_n	: 110 V, 230 V, 400 V AC
Rated frequency range	: 45-66 Hz
Accuracy	: $\pm 5\%$ of set value
power consumption in voltage circuit	: 3.5 VA
Thermal load carrying capacity of the voltage circuit	: constant $1.3 \times U_n$
Dropout to pickup ratio	: dependent on the set hysteresis
Dropout time	: 300 ms
Minimum operating delay	: 300 ms

Output relay

Maximum breaking capacity ohmic	: 1250 VA AC/120 W DC
Inductive	: 500 VA 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

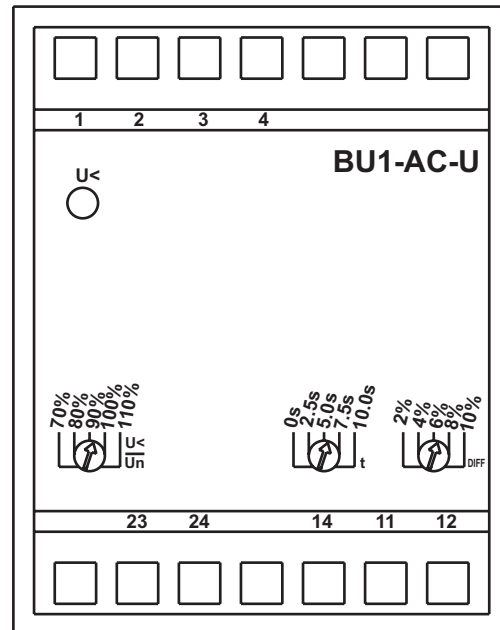


Fig. 1 : Front plate

The unit BU1-AC-U is designed to be fastened onto a DIN rail acc. to DIN EN 50022 same as all units of the BASIC RANGE.

The front plate of the unit is protected with a sealable transparent cover (IP40).

Please remove the transparent cover at the appropriate openings with a screw drive to adjust the relay.

LEDs

LED $U<$ is used to indicate trouble free operation with steady light. LED $U<$ indicate pickup of the relay by flashing. At undervoltage tripping LED $U<$ extinguishes.

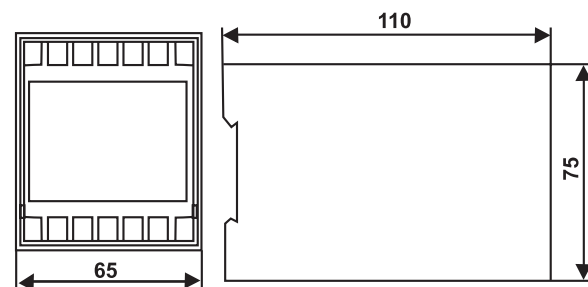
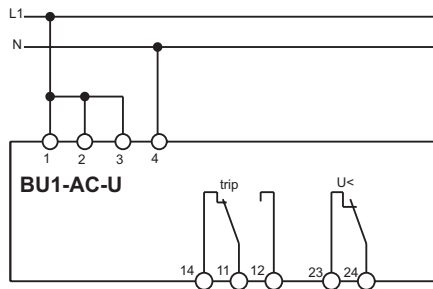


Fig. 2 : Dimensional drawing BU1-AC-U

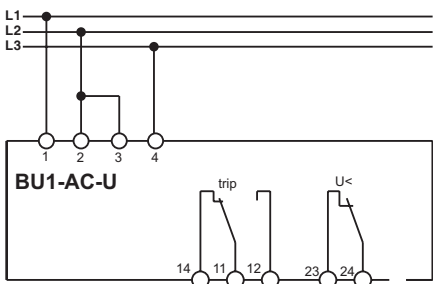
Auxiliary voltage supply

Unit **BU1-AC-U** needs no separate auxiliary voltage supply. The supply voltage can be formed directly from the measuring quantity.

A) Two-wire system



B) Three-wire system



C) Four-wire system

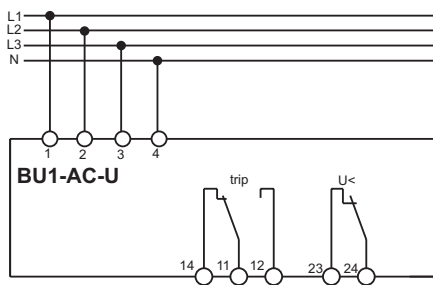
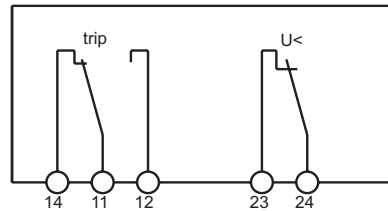
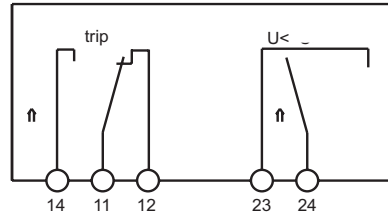


Fig. 3. Connection diagram



Unit dead or under voltage



Trouble free operation

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.

Setting ranges

U< : 0.7-1.1 Un
t : 0 - 10 s
DIFF : 2-10%

Order key

BU1-AC-U	
Rated voltage 110 V AC	110
Rated voltage 230 V AC	230
Rated voltage 400 V AC	400

The rated voltage of the units the voltage between terminals 1 and 4

System	Relay type	Connection diagram
3 Phase 110 V	BU1-AC-U-110	B
3 Phase 400 V	BU1-AC-U-400	B
3 Phase 400/230 V with N	BU1-AC-U-230	C or A (A for single-phase measuring)

C&S Electric Limited

(Protection & Control Division)

44, Okhla Industrial Estate, New Delhi -110 020 (INDIA)

Phone : +91 11- 66602414, 30883745/54/64 Fax: +91 11- 66602413

E-mail: cspc@cselectric.co.in Web : www.cselectric.co.in

Marketing Offices :

AHMEDABAD: +91 79 30074534/35/36 FAX : +91 79 30074519 **BANGALORE:** +91 80 25586147, 25594939 FAX : +91 25584839
BHUBANESWAR : +91 674 2507265 FAX : +91 674 2507265 **CHANDIGARH :** +91 172 272613, 3062624 FAX : +91 172 2726153
CHENNAI: +91 44 39180531/32/33/34 FAX:+91 44 39180514 **DELHI :** +91 11 30838822-25 Fax:+91 11 30838826 **HYDERABAD :** +91 40 27813003
 FAX : +91 40 27812987 **KOLKATA :** +91 33 22275850/51 FAX : +91 33 22275849 **MUMBAI :** +91 22 24114727/28 FAX : +91 22 24126631
NAGPUR : +91 712 5616651 FAX : +91 712 5616651 **PUNE :** +91 20 30283244/45 FAX : +91 20 30283245 **RAIPUR :** +91 771 320852433/34