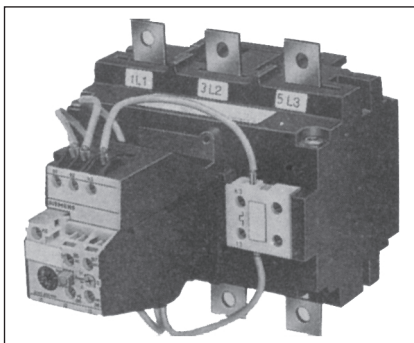


C.T. Operated Bimetal Relay with single phasing protection feature

Type 3UA66/68/ 3UC5/6



The Siemens 3UA66/68 and 3UC5/6 C.T. operated bi-relays provide accurate overload and accelerated single phasing protection for three phase motors having rated currents upto 630A/400A respectively.

3UA66/68 comprise of current transformer, a bimetallic tripping unit, while 3UC5/6 comprise of current transformer, a bimetallic tripping unit and resistance unit. The tripping unit makes use of the dual slider principle for faster tripping under single phasing.

Technical Data

Rated insulation voltage 1000V AC for main circuit

Ambient temperature compensation :

: -25° C to + 55° C

Rated operating current :

Ranges upto : 630A for 3UA66/68

: 400A for 3UC5/6

Frequency of operation :

: 15 operations/hour.

A. Selection (Setting Ranges)

The Bi-relay 3UA66/68 is available in 5 different ranges while type 3UC5/6 is available in 13 different ranges. The minimum and maximum setting of each range is listed in table 1.

B. Short Circuit Protection

The Bi-relay have to be protected from short circuits. It is mandatory to use back up MRC fuses. The maximum permissible ratings of Siemens fuses (Type 3NA) corresponding to type '2' coordination for each relay range are listed in table 1 and 2. Maximum back-up fuse rating for auxiliary circuit : 4 Amps.

C. Operating Instructions/ Setting

Set scale so that ratio corresponds to the rated load current.

Example : Load current : 200 A

Max. setting : 250 A
ratio : $200 = 0.8$
250

i.e. Scale should be set at 0.8 marking. Refer table 1 & 2 for more details.

D. Installation

Bi-relays type 3UA 66/68 and 3UC 5/6 are independent mounting type. Permitted mounting position is an shown in figure 1. Care should be taken to avoid shocks

and prolonged vibrations.

Bi-relays are suitable for snap-on mounting on a DIN rail (75 mm DIN EN 50223) or bolting on a plane surface by four M6 bolts to be secured by washer and spring washer. For details refer dimension drawing

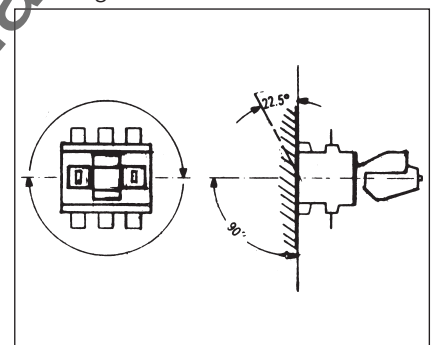


Fig. 1

E. Connection diagram

Refer figure 2 and 3

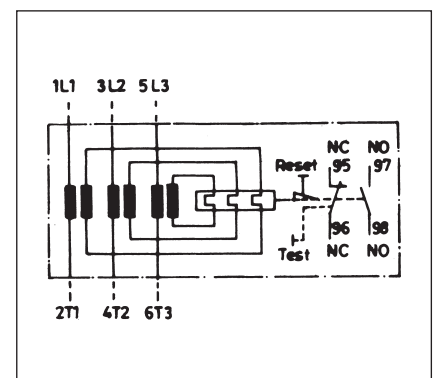


Fig. 2

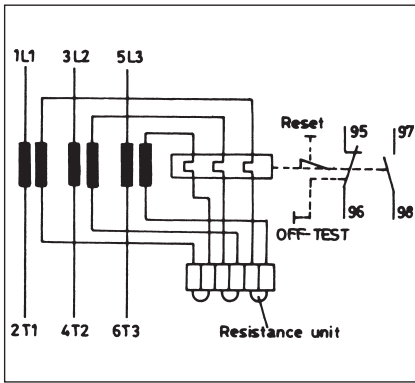


Fig. 3

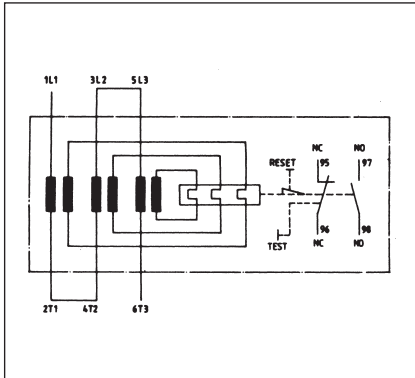


Fig. 4

in case of single phase loads the three main poles should be connected in series. Refer figure 4.

F. Auxiliary contacts

See figure 2 and 3 contact configuration is 1NO + 1NC. 1NC is trip contact. For switching capacities refer table.

AC11		DC11	
Ue V	Ie A	Ue V	Ie A
24	2	24	1
60	1,5	60	0,4
125	1,25	110	0,22
220	1,15	220	0,1
380	1,1		
415	1		
500	1		

G. Allowable conductor cross sections

Main Circuits (Refer table 3)

Auxiliary Circuit

Solid/ Stranded	2 x (1 to 2.5 mm ²)
Flexible with end Sleeve	2 x (0.75 to 1.5 mm ²)
Terminal screw	M 3.5
Tightening torque	0.8 - 1.2 Nm

H. Connection of Main conductors (Refer fig. 5) (Not applicable for 3UC50)

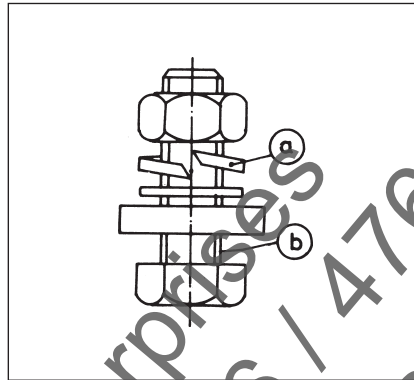


Fig. 5

The spring washer (a) is required to lock the screw. The serrated washer (b) facilitates fitting and prevents screw from turning. There is thus no need to hold the screw head. The serrated washer does not reduce the locking effect of the spring washer (Refer figure 5). These are supplied loose in a plastic bag)

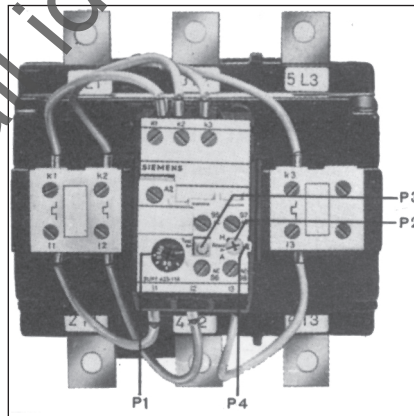


Fig. 6

I. Operational details (Refer fig. 6)

1) Dial Setting (PI)

Set the scale on tripping relay at making corresponding to the load current as indicated in table 1.

2) Reset Button (P2)

Before putting the relay into operation, press the blue coloured reset button (P2). The auxiliary contacts are present in the factory for 'Manual resetting'. This can be converted to 'Automatic Resetting' by pressing the reset button (P2) with screwdriver and turning it anti-clockwise from H (Manual) to A (Automatic) upto limit

3) Test (Off) button (P3)

The trip contact (NC) can be manually opened by pressing the red coloured test (Off) button - P3.

4) Trip Indicator (P4)

Tripping of 'Manual-resetting' relay is indicated by popping-up of the green coloured pin (P4) from the front plate. Press the reset button to reset the relay. There is no indication in case of automatic resetting.

J) Tripping Characteristics

The average tripping characteristics for 3 phase overload and single phasing i.e. 2 phase overloads is given in data sheet. Individual characteristics for each range are available on request. Please get in touch with the nearest Siemens office.

