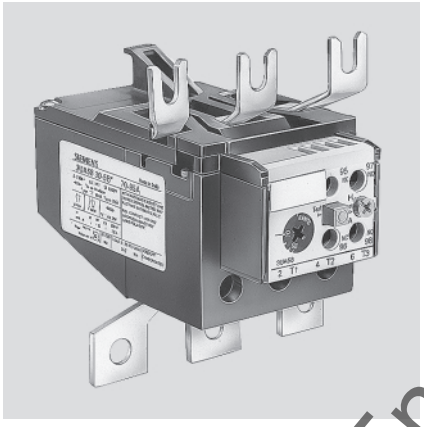
SIEMENS

Operating Instructions

SICOP

Bimetal Relay with Single Phasing Protection

Type 3UA58 30



The Siemens 3UA58 30 bi-relays provide accurate overload and accelerated single phasing protection for three phase motors having rated curents up to 120 A. It incorporates dual slider principle for accelerated tripping under single phasing.

Technical Data

Rated insulation voltage for main circuit : 1000 V AC

Ambient temperature compensation : -25°C to + 55°C

Rated operating current : Ranges up 120A

Frequency of operation : 15 operations per hour.

Selection (Setting ranges)

The Bi-relays are available in 3 different ranges. The ranges are listed in Table 1.

Product Type	Setting Range Amp	Maximum backup fuse rating (Type 3NA1) "Amp"
3UA58 30	70 - 95A	160
	85 - 105A	160
	95 - 120A	200

Table 1

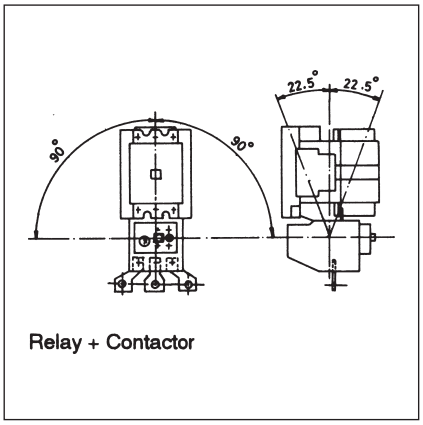
Short Circuit Protection

The bi-relays have to be protected from short circuits. It is mandatory to use backup HRC Fuses. The maximum permissible ratings of Siemens fuses as per IS 13947 Pt-4 (Type 3NA1) corresponding to type 2 coordination for each relay range are listed in Table 1.

Maximum backup fuse rating type 3NA1 for auxiliary circuit : 6 Amps

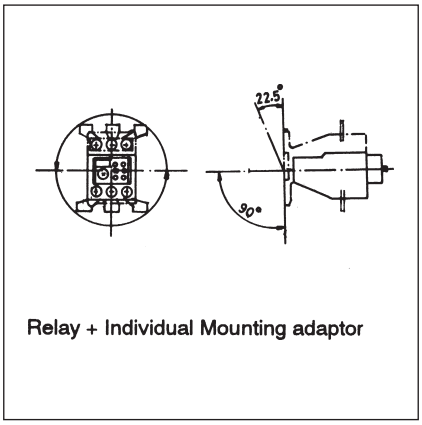
Installation

The Bi-relay type 3UA58 30 is suitable for mounting directly on Siemens contactor type 3TF50. Flat links shown on outgoing side are supplied loose in polythene bag and packed in relay carton. For individual mounting an adaptor type 3UX1421-0XA is available which should be ordered out separately. See Fig. 1 & 2 for permitted mounting position. Care should be taken to avoid shocks and prolonged vibrations, For dimensional details refer Fig. 3 & 4.



Relay + Contactor

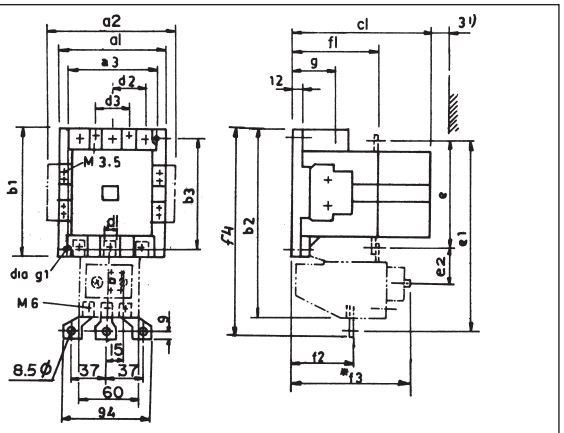
Fig. 1



Relay + Individual Mounting adaptor

Fig. 2

Dimension (mm)

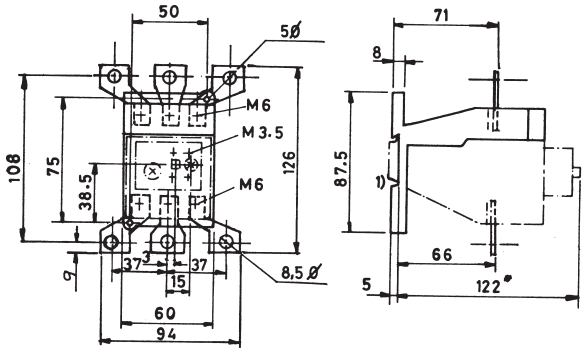


Type	a1	a2	a3	b1	b2	b3	c1	d1	d2	d3	e	e1	e2	f1	f2	f3	g	ϕg1	f4
3TF50 + 3UA5830	120	143	100	150	212	130	150	15	37	37	130	217	37	93	71	131	45	6.3	235

"Dimension - For square OFF button (Stroke 3mm)
- For Round RESET button (Stroke 2,5mm) less 2,5mm

1) Minimum clearance from insulated component = 3 mm
Minimum clearance from earthed component = 10mm

Fig. 3



1) Suitable for DIN RAIL 35mm as per DIN 50022

"Dimension - For square OFF button (Stroke 3mm)
- For Round RESET button (Stroke 2,5mm) less 2,5 mm

Fig. 4

Connection diagram

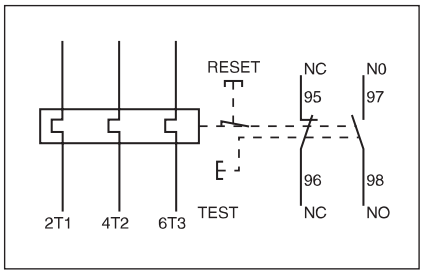


Fig. 5

In case of single phase loads, the three main poles should be connected in series. Refer Fig. 6.

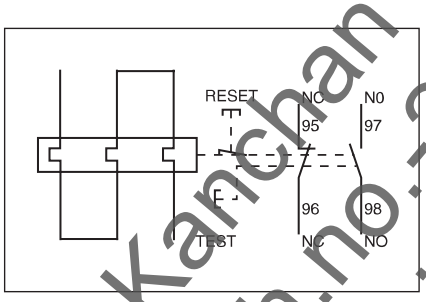


Fig. 6

Auxiliary contacts

See Fig. 5. Contact configuration is 1NO + 1NC. For switching capacities refer table below:

AC15		DC11	
Ue V~	Ie A	Ue V–	Ie A
24	2	24	2
60	1.5	60	0,5
120	1.25	110	0,3
230	1.15	220	0,2
415	1		
500	1		
690	0,8		

Allowable Conductor cross section

Main Circuits

Cable withlugs : 50 mm² to 120 mm²

Terminal Screws : M8

Tightening torque : 10 - 14Nm

Auxiliary Contact

Solid/Stranded conductor	2 x (1 to 2.5 mm²)
Flexible with end sleeve	2 x (0.75 to 1.5 mm²)
Terminal screw	M3.5
Tightening Torque	0.8 - 1.2 Nm

Operational details

Refer Fig. 7.

Dial Setting (P1)

Set the scale (P1) to the actual current of the load. For details refer "Siemens Handly Guide for Electricians."

Reset Button (P2) (blue)

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

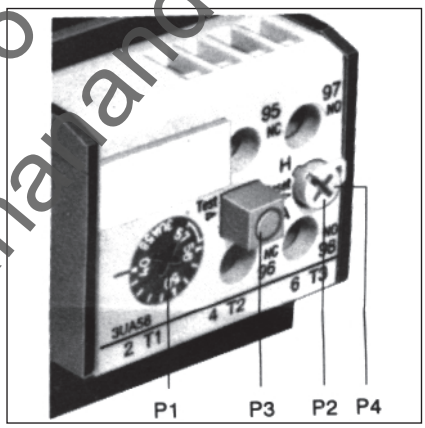


Fig. 7

Test button (P3) (red)

When this button is actuated, the NC contact opens and the NO contact closes i.e. a test function for NC and NO contacts. (Simulation of overload tripping)

Trip Indicator (P4) (green)

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

Tripping Characteristics

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