

SIEMENS

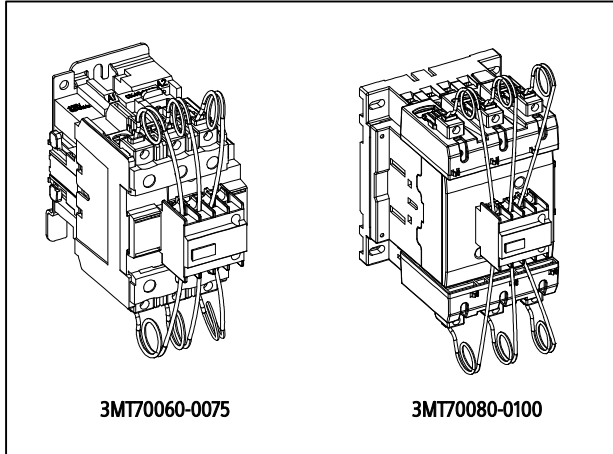
Contactors for capacitor switching Type: 3MT70060. to 3MT70100.

IEC 60947-4-1



Operating Instructions

	Warning: Hazardous Voltage can cause Electric Shock and burns. Disconnect Power before proceeding with any work on this equipment.
	Avoid operation during under voltage conditions. Switch only onto discharged capacitors. Manual operation not permitted for function testing



- **Switching frequency in Make/Break operation:**
100 Operating cycles/hour from 60 to 100kVAR.

(ii) Aux Circuit:

Inbuilt Aux contacts:

1NO + 2NC in case 60 to 100kVAR

Aux Contact Rating :			
Utilisation Category	Inbuilt Aux	Lateral block	Frontal Block (1 NC)
	60 & 75 kVAR	80 & 100 kVAR	
DC-13 (220V)	0.309A	0.28A	0.309A
AC-15 (440V)	1.14A	2.5A	1.14A

Note: Do not remove precharging resistors. If contactor is switched on load without resistor, it may cause damage to the contactor.

iii) Control circuit:

- Control voltage is marked on the product coil.

Note:

- The voltage is to be maintained within allowable limits
- Operation on under voltage conditions to the coil may cause damage to the coil/contactor.
- Maximum back-up fuse rating for control circuit is 10A (6A if relay contacts is in the control circuit).

A. Technical Data

(i) Main Circuit:

The capacitor are precharged during pick-up via early-make contacts and integrated pre-charged resistors before the main contacts close.

This combination may be used for switching of individual capacitor for power factor correction of single loads or for switching capacitor banks in parallel in centralized group power factor correction system.

- Insulation Voltage U_i : 690V AC
- Rated operational voltage U_e : 260/440V, 50/60 Hz
- Temperature : Storage -25 to + 55 °C
Service (without derating) - 5 to + 40 °C

Use the devices with the declared capacitor bank ratings only.

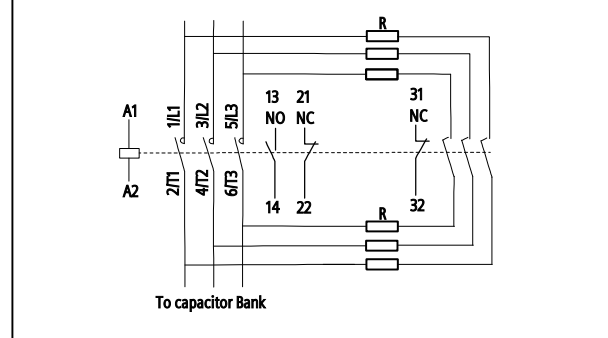
Table 1.1

Contactors Type	Load of contactor when switching 3ph AC capacitor kVAR at 260/440V,50/60 Hz	Fuse Rating for Type 2 Coordination 'gG' (A)
3MT70060	60	125
3MT70075	75	125

Table 1.2

Contactors Type	Load of contactor when switching 3ph AC capacitor kVAR at 260/440V,50/60 Hz	Fuse Rating for Type 1 Coordination 'gG' (A)
3MT70080	80	200
3MT70100	100	200

3MT70060. & 3MT70100. :



B. Installation

1. Permitted mounting positions are indicated in Fig 1
2. The unit is suitable for screw mounting with torque of 2 Nm on flat vertical surface. Always use plain and spring washers.
3. Din rail mounting provision available for 60 to 100 kVAR.

Note: Install the unit in the housing if it is exposed to dust, dirt, contamination or aggressive atmosphere.

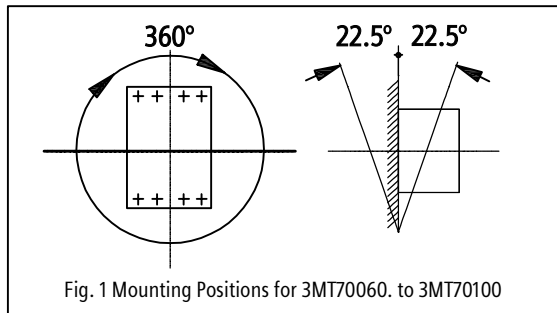





Fig. 1 Mounting Positions for 3MT70060. to 3MT70100

C. Maintenance

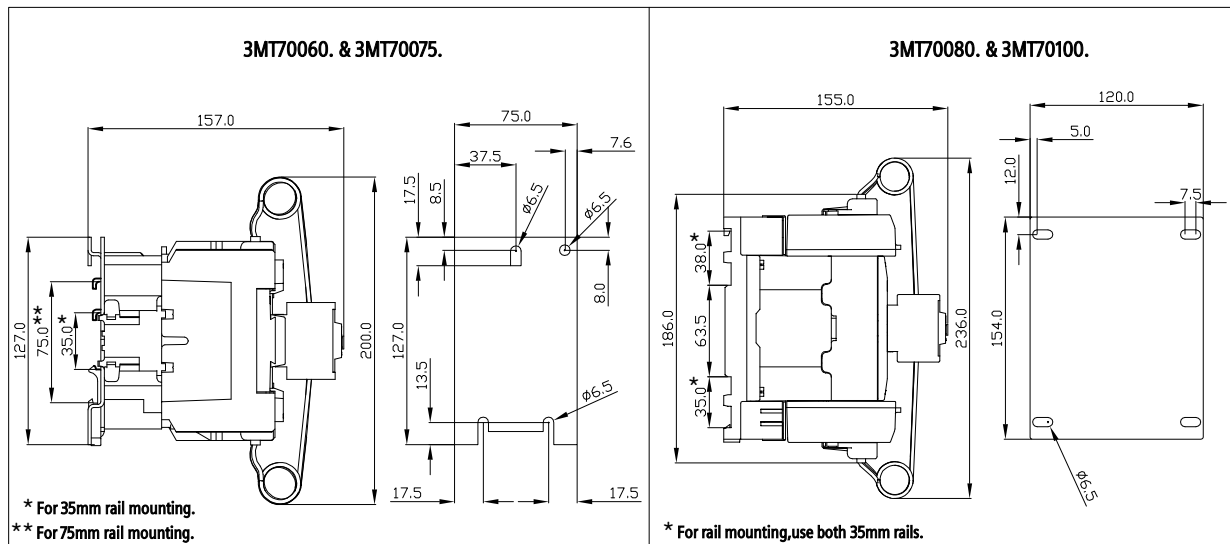
- Remove dust by suction.
- Replacement of coil available as spare.
- Contact Siemens Sales office for details.
- Handle the resistor wires carefully.

Permissible Conductor Size: Termination Data of contactor

Contactor-Main Circuit	Cable	3MT70060-75	3MT70080-100
Solid 	mm ²	1 x 4 to 70	1 x 4 to 95
	mm ²	2 x 4 to 35	2 x 4 to 50
Strip Length 'D'	mm	22	
Flexible without cable end 	mm ²	1 x 4 to 50	1 x 4 to 95
	mm ²	2 x 4 to 25	2 x 4 to 50
Flexible with pin type lugs 	mm ²	1 x 4 to 50	1 x 4 to 95
	mm ²	2 x 4 to 50	2 x 4 to 50
Screw Size		M10	M8
Screw Size (Control Circuit)		M3.5	
Tightening Torque	Nm	9	
Tightening Torque (Control Circuit)	Nm	1.2	

E. Overall Dimensions

Dimensional drawing:



Note: All dimensions are in mm.

Disposal

Siemens products are environment friendly, which predominantly consist of recyclable materials

For disposal we recommend disassembling and separation into following materials:

METALS: Segregate into Ferrous & Non Ferrous types for recycling through authorised dealer.

PLASTICS: Segregate as per material type for recycling through authorised dealer. Because of the long lifetime of Siemens products the disposal guidelines may be replaced by other national regulations when taking the product out of service.

The local customer care service is available at any time to answer disposal-related questions.

Customer Care Toll free no. 1800 209 0987

Email:ics.india@siemens.com

Order No. MISC0893_B

Siemens Ltd.

Product development is a continuous process. Consequently the data indicated in this Leaflet is subject to change without prior notice. For latest issue contact our sales offices.

Last update: 31 March 2021

D. Note

Normally the power factor controller in APFC panels, has the provision for adjustment under voltage cut out with respect to voltage and time. Please ensure that the controllers are present as per values given in the table.

Coil Voltage	Controller Setting	
	Under Voltage setting	Actuating time
24V	21V	< 0.1 sec
110V	94V	< 0.1 sec
220V	187V	< 0.1 sec
240V	204V	< 0.1 sec
415V	353V	< 0.1 sec

In case Power factor controller does not have provision of above settings, it is recommended to provide a separate under voltage monitor having setting as per table to ensure satisfactory performance of the contactor. For further details on such an under voltage monitor, contact nearest Siemens office.