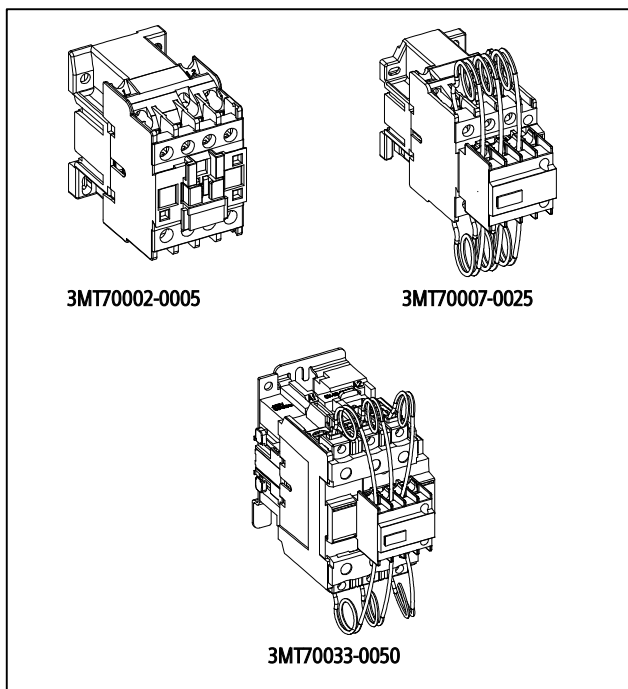


SIEMENS

Contactors for capacitor switching Type: 3MT70002. to 3MT70050.

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:**
240 Operating cycles/hour upto 25kVAr and
100 Operating cycles/hour above 25kVAr ratings.

(ii) Aux Circuit:

Inbuilt Aux contacts:

- 1NO or 1NC in case of 02 to 05kVAr
- 1NO + 1 NC or 2 NC in case of 07 to 25kVAr
- 1NO + 2NC in case 33 to 50kVAr

Aux Contact Rating :		
Utilisation Category	Inbuilt Contactor Aux	Frontal Block (1 NC)
DC-13 (220V)	0.309A	0.309A
AC-15 (440V)	1.14A	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.

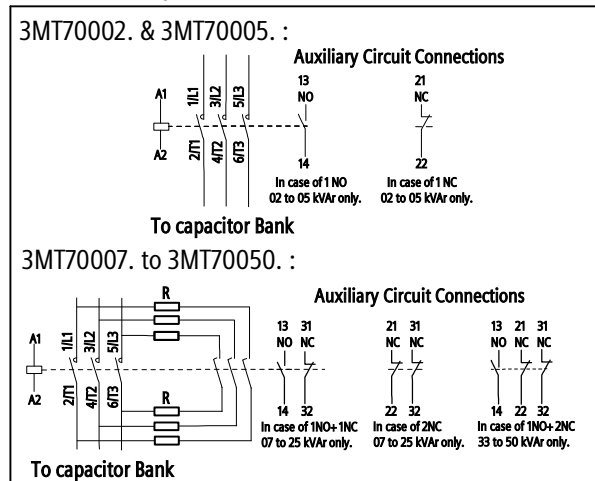
This combination may be used for switching of individual capacitor for power factor correction of single loads or for switching capacitor banks in parallel in centralized group power factor correction system.

- 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, 50/60Hz	Fuse Rating for Type 2 Coordination 'gG' (A)
3MT70002	2.5	25
3MT70005	5	25
3MT70007	7.5	25
3MT70010	10	25
3MT70012	12.5	25
3MT70016	16.7	32
3MT70020	20	40
3MT70025	25	50
3MT70033	33.3	80
3MT70040	40	80
3MT70050	50	80



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 35mm upto 25kVAr and 35mm & 75mm is available from 33 to 50 kVAr as per EN60715

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

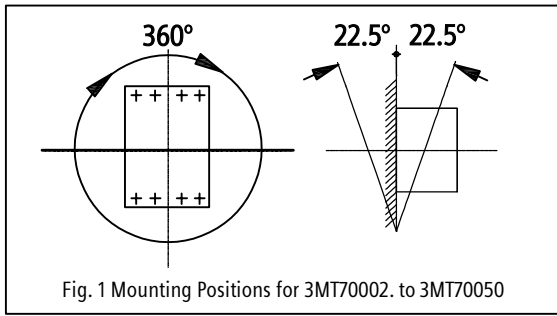





Fig. 1 Mounting Positions for 3MT70002. to 3MT70050

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	Controller Setting				
		3MT70002-12	3MT70016	3MT70020	3MT70025	3MT70033-50
Solid 	mm ²	1 x 1 to 4	1 x 1.5 to 10	1 x 1.5 to 10	1 x 1.5 to 10	1 x 2.5 to 25
	mm ²	2 x 1 to 4	2 x 1.5 to 6	2 x 1.5 to 6	2 x 2.5 to 10	2 x 2.5 to 16
Strip Length 'D'	mm	8.5				
Flexible without cable end 	mm ²	1 x 1 to 4	1 x 1 to 6	1 x 1.5 to 10	1 x 2.5 to 10	1 x 2.5 to 25
	mm ²	2 x 1 to 4	2 x 1 to 4	2 x 1.5 to 6	2 x 2.5 to 10	2 x 2.5 to 16
Flexible with pin type lugs 	mm ²	1 x 1 to 4	1 x 1.5 to 10	1 x 1.5 to 10	1 x 1.5 to 10	1 x 2.5 to 25
	mm ²	2 x 1 to 4	2 x 1.5 to 6	2 x 1.5 to 6	2 x 1.5 to 6	2 x 2.5 to 10
Screw Size		M3.5	M3.5	M4	M4	M8
Screw Size (Control Circuit)		M3.5				
Tightening Torque	Nm	1.2	1.7	1.85	2.5	5
Tightening Torque (Control Circuit)	Nm	1.2				

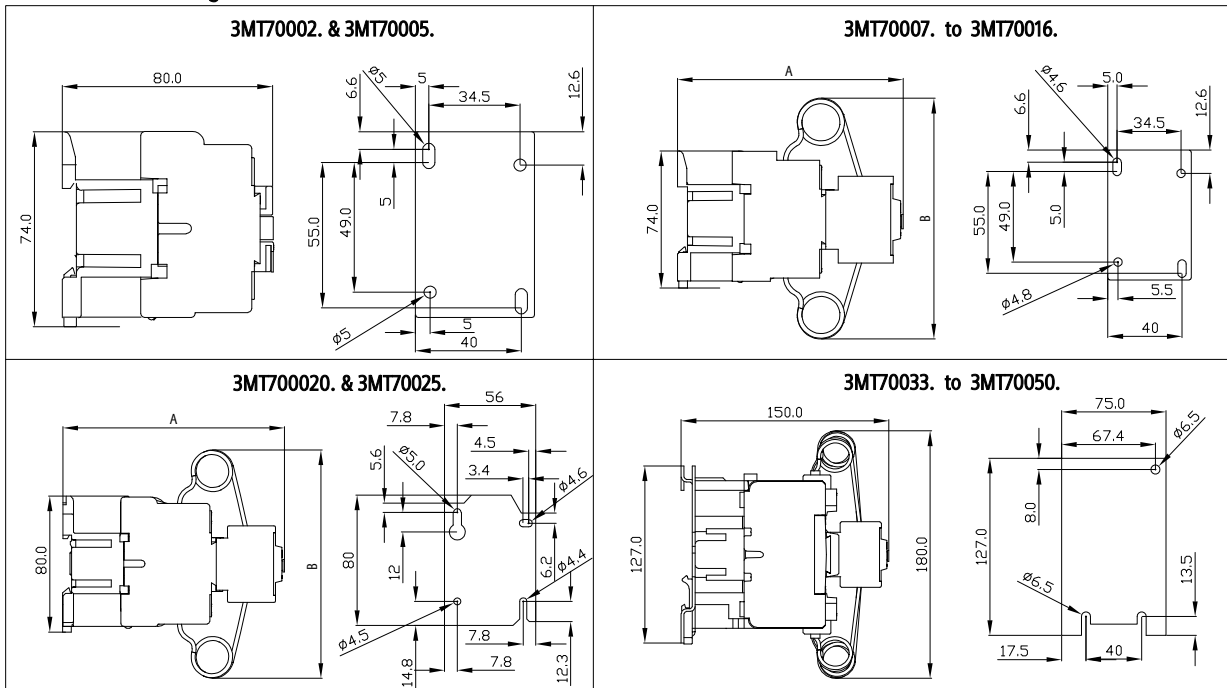
D. Note

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.

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.

E. Overall Dimensions

Dimensional drawing:



3MT70	007	010	012	016	020	025
A	117	117	117	122	130	135
B	130	130	130	130	140	140

Note: All dimensions are in mm.

Disposal

Siemens product 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.