



General Purpose — Type 3TC

Specifications

Type 3TC general purpose contactors meet or exceed the requirements of NEMA, UL, CSA, IEC, VDE and other international standards. Information on approvals in Section 1.

Application

Type 3TC DC contactors are primarily used in mining, steel mills, and other heavy duty industrial applications. These contactors are designed for continuous operation and they are used to remotely control DC drives, cranes, hoists, heaters and lamps as well as such apparatus as battery-chargers, plating equipment and transit systems.

These contactors can be used for starting of DC motors where the starting current does not exceed 10 times the current corresponding to the horsepower rating of the contactor.

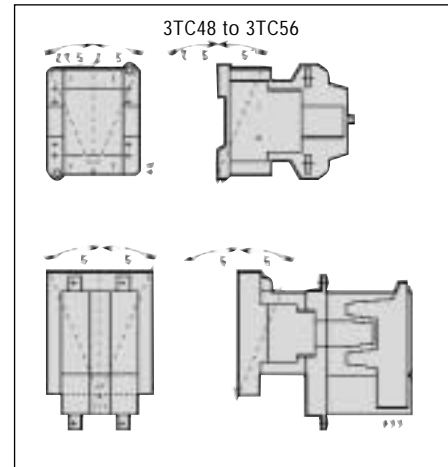
The ratings given in the Contactor Ratings Table apply for the double-pole switching of loads or when the two contact paths of the contactor are connected in series. When only one contact is used, the values given can be switched at voltages up to 220V.

Mounting

The contactors must be mounted in the position indicated in drawing.

Contactors can be tilted up to 22.5° off the vertical.

Mounting positions



Technical Data

Contactor	Type	Unit of Measure	3TC44	3TC48	3TC52	3TC56
Mechanical Life			10 million make/break operations			
Rated Voltage	VDE/IEC	V	600	600	600	600
		V	800	800	800	800
Permissible ambient temperature ranges	in operation when stored	°C	-25 to +55 (-13°F to +131°F)			
		°C	-50 to +80 (-58°F to +176°F)			
Coil ratings (cold coil, 1.0 × U _c)						
DC operation	in-rush sealed	W	10	19	30	86
		W	10	19	30	86
AC Operation	in-rush sealed	VA %	73 78%	365 45%	730 38%	2140 30%
		VA %	9 27%	35 26%	56 24%	140 29%
Coil voltage tolerances			0.8 to 1.1 times rated control voltage (U _c)			
Operating times (valid for 20% undervoltage, 10% overvoltage, cold or warm coil) Total break time = opening delay + arcing time						
DC operation	closing delay opening delay arcing time	ms	35–190 10–25 20–65	90–380 17–28 20–50	120–400 22–35 20–50	110–400 40–110 20–50
AC operation	closing delay opening delay arcing time	ms	10–40 5–25 20–65	20–50 5–30 20–50	20–50 10–30 20–50	20–50 10–30 20–50
Resistance to shock (rectangular pulse)		g/ms	7.5/ 5 3.4/10	10/ 5 5/10	12 / 5 5.5/10	12 / 5 5.5/10
Conductor sizes						
Main conductor:	solid or stranded	AWG	(2) 14–6	#8–3/0	#2–300 MCM	(2)#6–250 MCM
Auxiliary conductor:	solid or stranded	AWG	(2) 14–12	(2) 14–12	(2) 14–12	(2) 14–12
Switching frequency in make/break operations per hour (1/h)						
DC and AC operation	with resistive load	DC1 duty	1/h	1500	1000	1000
	with inductive load	DC2 and DC4 duty	1/h	750	600	600
		DC3 and DC5 duty	1/h	250	250	250

Ratings for Auxiliary Contacts

Contactor	Rated voltage	Switching capacity
3TC44 to 3TC56	max. 600V AC	Heavy duty A600, P600