



Contactor	NEMA Size Type	Unit of Measure	3TF50	3TF51	4 3TF52	3TF53	3TF54	3TF55	5 3TF56	3TF57		
Mechanical Life	make/break operations	Mill.	10	10	10	10	10	10	10	10		
Insulation rating		V	1000	1000	1000	1000	1000	1000	1000	1000		
Ambient temperature range		°C	-25 to +55 in operation -50 to +80 when stored									
Coil ratings (cold coil, 1.0 × U _c)		Hz	50	60	50	60	50	60	50	60	Control Supply voltage:	
											lower	upper
AC operation	Inrush	VA	550	570	1015	1005	1690	1590	2450	2760	1136	1900
	p.f.		0.45	0.4	0.38	0.31	0.34	0.26	0.21	0.18	1136	1900
	Sealed	VA	39	35	71	62	101	94	115	132	16	45
	p.f.		0.24	0.25	0.26	0.28	0.24	0.27	0.33	0.33	5.4	6.9
DC economy circuit	Inrush	W	500	—	870	—	1210	—	1300	—	1100	—
	Sealed	W	2.7	—	2.7	—	7.1	—	7.7	—	14	—
DC solenoid system	Closing = Closed	W	—	—	—	—	—	—	—	—	—	—
Coil voltage range	AC		0.85 to 1.1 × U _c									
Operating times (valid for 20% undervoltage to 10% overvoltage, cold or warm coil) Total break time = opening delay + arcing time												
AC operation	closing delay	ms	20–50	—	20–50	—	20–50	—	17–65	—	40–110	—
	opening delay ^①	ms	8–30	—	10–30	—	10–30	—	8–20	—	70–110	—
	arcing time	ms	10–15	—	10–15	—	10–15	—	10–15	—	15–25	—
Operating times at 1 × U _c												
AC operation	closing delay	ms	22–37	—	25–40	—	25–40	—	25–40	—	48–70	—
	opening delay ^①	ms	8–30	—	10–30	—	10–30	—	8–20	—	80–100	—
Resistance to shock (rectangular pulse)		g/ms	9.4/5 and 5.2/10		10.4/5 and 5.8/10		9.9/5 and 5.5/10		8.8/5 and 4.9/10		8.8/5 and 4.9/10	
Conductor sizes For contactors without overload relay main conductors: solid or stranded with lug kit 3TX		AWG	max. 2/0		1/0 to 250 mcm ^②		—		—		—	
		AWG	—		—		1 to 500 mcm or 2 to 300 mcm		(2) 6 to 250 mcm (2) 2 to 500 mcm		(2) 2 to 500 mcm	
auxiliary conductor: solid or stranded		AWG	2 × (18 to 12)		2 × (18 to 12)		2 × (18 to 12)		2 × (18 to 12)		2 × (18 to 12)	
Switching frequency in make/break operations per hour (1/h)												
Contactors without overload relay												
duty AC-1	1/h		800	800	800	750	800	750	700		500	
duty AC-2	1/h		400	300	300	250	300	250	200		170	
duty AC-3	1/h		1000	750	700	500	700	500	500		420	
duty AC-4	1/h		300	200	200	130	200	130	130		150	
Contactors with overload relay (average value)	1/h		15	15	15	15	15	15	15		15	

4

Auxiliary contacts

UL, RA and CE ratings for auxiliary contacts				24V	120V	240V	480V	600V	
3TF40 thru 3TF57	Rated voltage switching capacity	AC 600V maximum NEMA A600	Make	A	60	60	30	15	12
			Break	A	6	6	3	1.5	1.2
	Continuous current: 10A (AC/DC)	DC 600V maximum NEMA P600	Make	A	1.1	1.1	0.55	0.20	0.20
			Break	A	1.1	1.1	0.55	0.20	0.20

①The opening delay can increase if the coils have voltage spike protection. Diodes may only be attached to contactors up to 3TF44.

②With lug kit 3TX6.