

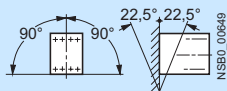
Technical specifications

Contactors	Type	3TK1
Rated data of the auxiliary contacts		According to IEC 60947-5-1/DIN VDE 0660 Part 200
Rated insulation voltage U_i (degree of pollution 3)	V	690
Continuous thermal current I_{th} = Rated operational current I_e/AC-12	A	10
AC load Rated operational current I_e/AC-15/AC-14 for rated operational voltage U_e		
	24 V A	6
	110 V A	6
	125 V A	6
	220 V A	6
	230 V A	6
	380 V A	4
	400 V A	4
	500 V A	1
	660 V A	1
	690 V A	1
DC load Rated operational current I_e/DC-12 for rated operational voltage U_e		
	24 V A	--
	60 V A	--
	110 V A	--
	125 V A	--
	220 V A	--
	440 V A	--
	600 V A	--
Rated operational current I_e/DC-13 for rated operational voltage U_e		
	24 V A	6
	60 V A	6
	110 V A	1.8
	125 V A	--
	220 V A	0.6
	440 V A	--
	600 V A	--
CSA and UL rated data for the auxiliary contacts		
Rated voltage	V AC, max.	600
Switching capacity		A 600, P 600

3RT, 3RH, 3TB, 3TC, 3TH, 3TK Contactors for Special Applications

3TK1 Contactors for Switching Resistive Loads (AC-1)

4-pole, 4 NO, 200 ... 1000 A

Contactor			Type		3TK10	3TK11	3TK12	3TK13	3TK14	3TK15	3TK17
General data											
Permissible mounting position											
Vertical mounting position also permitted.											
Mechanical endurance	Operating cycles	Mill.	10						5		
Electrical endurance	Operating cycles	Mill.	0.8	0.8	0.8	0.4	0.65	0.5	0.4		
for I _e /AC-1 at 55 °C											
Rated insulation voltage U _i (degree of pollution 3)			V	1000							
Ambient temperature	During operation	°C	-25 ... +55								
	During storage	°C	-50 ... +70								
Degree of protection according to EN 60947-1, Appendix C			IP00								
Touch protection according to EN 50274			Finger-safe with cover								
Shock resistance	Sine pulse	g/ms	10/15								
Short-circuit protection											
Main circuit											
Fuse links, gL/gG, LV HRC 3NA, DIAZED 5SB, NEOZED 5SE											
- According to IEC 60947-4-1/ EN 60947-4-1	Type of coordination "1"	A	250		355		800	1000			
	Type of coordination "2":	A	250		315		630	850			
Auxiliary circuit			A	10							
(short-circuit current I _k ≥ 1 kA) fuse links, gL/gG, DIAZED 5SB, NEOZED 5SE											
Control											
Magnetic coil operating range			0.85 ... 1.1 x U _s								
Power consumption of the magnetic coils (when coil is cold and 1.0 x U _s)											
50 Hz	Closing	VA	820		1100		3500				
	P.f.		0.4		0.35		0.26				
	Closed	VA	44		52		125				
	P.f.		0.34		0.35		0.4				
60 Hz	Closing	VA	990		1200		4000				
	P.f.		0.35		0.31		0.22				
	Closed	VA	52		65		140				
	P.f.		0.35		0.34		0.43				
Operating times at 1.0 x U _s											
Arcing time	Closing delay	ms	20 ... 40						30 ... 60		
	Opening delay	ms	7 ... 15						10 ... 20		
		ms	10						10		
Main circuit											
AC capacity											
Utilization category AC-1, switching resistive loads											
Rated operational currents I _e	at 40 °C up to 690 V	A	200	250	300	350	550	800	1000		
	at 50 °C up to 690 V	A	180	230	270	310	470	650	850		
Rated power for AC loads with P.f. = 0.95 (at 40°C)	at 230 V	kW	76	95	114	132	208	303	378		
	400 V	kW	132	165	197	230	362	527	658		
	500 V	kW	165	206	247	288	452	658	828		
	690 V	kW	227	284	341	397	624	908	1135		
Minimum conductor cross-sections for loads with I _e	at 40° C	mm ²	95	150	185	240	185	240	300		
Utilization category AC-2 and AC-3											
Rated operational current I _e	up to 400 V	A	120	145	210	210	400	550	700		
Rated power of squirrel-cage or slipping motors at	at 230 V	kW	30	45	75	75	110	160	220		
50 Hz and 60 Hz	400 V	kW	55	75	110	110	200	280	370		
Short-time current at 40° C in cold state up to 10 s		A	900	1200	1600	1600	5300	5300	6400		
Switching frequency ¹⁾											
Switching frequency z in operating cycles/hour											
Contactors without overload relays	No-load switching frequency	1/h	3600								
	AC-1	1/h	300								
	AC-3	1/h	300								

1) Dependence of the switching frequency z' on the operational current I' and operational voltage U' : $z' : z' = z \cdot (I_e/I') \cdot (400\text{ V}/U')^{1.5} \cdot 1/\text{h}$.

3RT, 3RH, 3TB, 3TC, 3TH, 3TK Contactors for Special Applications

3TK1 Contactors for Switching Resistive Loads (AC-1)

4-pole, 4 NO, 200 ... 1000 A

Contactors	Type		3TK10	3TK11	3TK12	3TK13	3TK14	3TK15	3TK17
Conductor cross-sections									
Main conductors:									
• Stranded with cable lug • Solid or stranded • Connecting bar (max. width) • Terminal screw - Tightening torque	AWG	mm ²	2 x 70	2 x 120	2 x 120		2 x 300		
		MCM	2 x 00	2 x 250	2 x 250		2 x 600		
		mm	30	30	33		55		
			M6	M10	M10		M10		
		NM	5	16	16		16		
Auxiliary conductors:	AWG	mm ²	2 x (0.5 ... 2.5)						
		mm ²	2 x (0.5 ... 2.5)						
		MCM	20 ... 14						
		NM	1.2 (10 lb.in)						