

Modular Installation Devices, Mounting Depth 55 mm >N< Switching Devices

5TT3 8 and 5TT3 9 Insta contactors

Technical specifications

Data acc. to DIN VDE 0660, EN 60947, ZH 1/457		5TT3 8 40 A 4-pole	5TT3 8 63 A 4-pole	5TT3 9 20 A 4-pole					
Rated control voltage U_c	V	230 AC, 220 DC		24 AC, 24 DC 110 AC, 230 AC					
Operating range $\times U_c$		0.85 – 1.1							
Rated power of coil	holding power	VA	4.6			3.5			
	pick-up power	VA	4.6			3.5			
Rated frequency	Hz	50/60							
Switching times	ON-switching	ON-delay NO	ms	AC 15 - 20	DC 20 - 30	AC 15 - 20	DC 20 - 30	DC 10 - 50	DC 11 - 50
		OFF-delay NC	ms	10 - 15	10 - 15	10 - 15	10 - 15	5 - 45	9 - 45
	OFF-switching	OFF-delay NO	ms	35 - 45	30 - 40	35 - 45	30 - 40	20 - 30	2 - 5
		ON-delay NC	ms	40 - 50	35 - 45	40 - 50	35 - 45	20 - 30	3 - 7
arcing time	ms	< 10				10 - 15			
Protective separation	creepage and clearances	mm	8						
	magnet/contact contact/contact	mm	8					< 8	
Contact gap		mm	> 3						
Positively driven contacts			no						
Rated impulse withstand voltage U_{imp}		kV	> 4						
Rated operational voltage U_e		V AC	400				400		
Rated operational current I_e		A	40		63		20		
Power dissipation P_v	coil/drive contact per pole for rated operational voltage	VA	3.6				3.5		
		VA	4		7.5		1.7		
Minimum contact load		V; mA	24; 300				10; 300		
Max. capacitive load		μ F	220		300		--		
Switching of lamp loads	incandescent lamp rating per current path	W	3 000		5 000		1 600		
	fluorescent lamp loads high-pressure and halogen lamps		1) 1)						
Switching of resistive loads AC-1	rated operational power P_s	at V AC	230	400	230	400	230	400	
		kW	14	26	23	40	7.5	13	
Switching of three-phase Asynchronous motors AC-3	rated operational power P_s	at V AC	400		15		4		
		kW	11						
Electrical service life	for switching cycles at I_e and AC-1	NO contacts	100 000						
		NC contacts	50 000				100 000		
Overload withstand capability acc. to IEC 60947-4	per current path	at 1 s	A	625	750	--			
		at 3 s	A	375	450	--			
		at 10 s	A	200	240	--			
Max. making/breaking current with p.f. = 0.45 (NO contacts only) acc. to IEC 60947-4-1	making current	A	200		305		--		
	breaking current	A	160		240		--		
Short-circuit protection acc. to VDE 0636/IEC 60269	back-up fuse characteristic gL/gG	A	40		63		--		
Terminals	coil	\pm screw (Pozidriv)	1						
	current path		2				1		
Conductor cross-sections	rigid	mm ²	1.5 - 25				1 - 4		
	flexible with sleeve	mm ²	0.5 - 16				0.5		
Permissible ambient temperature	for operation	°C	-25 ... +55		-25 ... +55 ²⁾		-25 ... +55		
	for storage	°C	-50 ... +80						

1) See table on page 12/72.

2) For 3-pole operation. For 4-pole operation, -25 °C to +45 °C.

Switching loads		5TT3 8 40 A NO contacts	40 A NC contacts	63 A NO contacts	63 A NC contacts	5TT3 9 20 A
• Utilization categories:						
- AC-1	A	40	240	63	63	20
- AC-3	kW	11	--	15	--	4
• Incandescent lamp load:	W/pole	3 000	2 000	5 000	3 000	1 600
• Fluorescent lamp load 58 W:						
- Uncorrected	unit/pole	40	28	60	49	24
- Parallel-corrected	unit/pole	25	15	43	34	10
- DUO circuit	unit/pole	2 x 40	2 x 28	2 x 60	2 x 49	2 x 28

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Switching of lamps

Maximum number of lamps per current path at 230 V, 50 Hz			5TT3 8		5TT3 8		5TT3 9
			NO	NC	NO	NC	NO
A			40		63		20
Lamp loads	Lamp type		Unit(s)	Unit(s)	Unit(s)	Unit(s)	Unit(s)
Fluorescent and compact lamps (DULUX) in ballast operation (KVG)							
• Uncorrected	S11	W	210	138	310	223	100
	L18	W	90	78	140	122	43
	L24	W	90	63	140	89	47
	L36	W	65	57	95	79	37
	L58	W	40	28	60	49	24
• Parallel-corrected	S11/4.5	W/μF	45	32	70	51	15
	L18/4.5	W/μF	45	38	70	57	15
	L24/4.5	W/μF	45	38	70	57	15
	L36/4.5	W/μF	45	38	70	57	15
	L58/7.0	W/μF	25	19	43	34	10
• DUO circuit specifications are for lights with 2 lamps each respectively	S11	W	150	122	320	262	--
	L18	W	100	78	150	136	--
	L24	W	78	62	115	94	--
	L36	W	65	53	95	79	--
	L58	W	40	28	60	49	--
Fluorescent lamps with electronic primary switching device							
• AC operation, 1-lamp	L18	W	60	50	80	54	39
	L36	W	30	28	42	31	39
	L58	W	22	17	30	22	26
• AC operation, 2-lamp	L18	W	2 × 20	2 × 16	2 × 24	2 × 18	2 × 26
	L36	W	2 × 10	2 × 6	2 × 13	2 × 9	2 × 26
	L58	W	2 × 8	2 × 3	2 × 9	2 × 6	2 × 12
• DC operation, 3 current paths in series, 1-lamp	L18	W	50	42	75	67	22
	L36	W	30	23	40	32	12
	L58	W	16	11	25	18	8
• DC operation, 3 current paths in series, 2-lamp	L18	W	2 × 25	2 × 19	2 × 38	2 × 31	2 × 12
	L36	W	2 × 15	2 × 11	2 × 20	2 × 13	2 × 6
	L58	W	2 × 8	2 × 5	2 × 12	2 × 7	2 × 4
Metal-vapor and high-pressure mercury-vapor lamps							
• Uncorrected	50	W	47	42	74	49	13
	80	W	36	28	56	31	9
	125	W	25	19	39	22	6
	250	W	13	10	21	11	3
	400	W	8	6	13	9	2
	700	W	5	3	8	4	1
	1000	W	3	1	6	2	1
• Parallel-corrected	50/7	W/μF	30	22	45	19	10
	80/8	W/μF	25	18	40	33	9
	125/10	W/μF	20	13	33	22	7
	250/18	W/μF	12	8	18	11	4
	400/25	W/μF	8	5	13	9	3
	700/40	W/μF	5	3	8	5	1
	1000/60	W/μF	3	1	5	3	1
Halogen metal-vapor lamps							
• Uncorrected	70	W	25	19	39	23	6
	150	W	14	10	22	13	5
	250	W	8	5	13	9	3
	400	W	7	3	11	7	2
	1000	W	1	1	2	1	0
	2000	W	0	0	1	1	0
• Parallel-corrected	70/12	W/μF	18	12	26	22	6
	150/20	W/μF	10	7	16	13	3
	250/32	W/μF	6	3	10	6	2
	400/35	W/μF	6	3	9	4	2
	1000/85	W/μF	1	1	2	1	0
High-pressure sodium-vapor lamps							
• Uncorrected	50	W	28	21	44	31	13
	70	W	22	14	34	19	10
	110	W	18	11	28	13	8
	150	W	12	7	19	8	5
	250	W	7	4	11	5	3
	400	W	5	2	7	3	2
	1000	W	2	1	3	2	1
• Parallel-corrected	50/8	W/μF	22	15	33	22	8
	70/12	W/μF	18	11	27	19	5
	110/12	W/μF	18	11	27	19	5
	150/20	W/μF	10	5	16	11	3
	250/36	W/μF	6	3	9	4	1
	400/45	W/μF	4	2	7	3	1
	1000/100	W/μF	2	1	3	2	0

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Permissible DC switching currents for NO contacts at p.f. = 1			1 path	2 paths in series	3 paths in series	4 paths in series
5TT3 8 Insta contactors, switching of DC voltages						
5TT3 8	I_e at $U_e = 24$ V DC	A	40			40 ¹⁾
40 A	I_e at $U_e = 110$ V DC	A	4	10	30	40
4-pole	I_e at $U_e = 220$ V DC	A	0.8	6	20	40
5TT3 8	I_e at $U_e = 24$ V DC	A	63			63 ¹⁾
63 A	I_e at $U_e = 110$ V DC	A	4	10	35	63
4-pole	I_e at $U_e = 220$ V DC	A	0.8	6	30	63
5TT3 9 Insta contactors, switching of DC voltages						
5TT3 9	I_e at $U_e = 24$ V DC	A	10	--	16	--
20 A	I_e at $U_e = 110$ V DC	A	1.1	--	6	--
4-pole	I_e at $U_e = 220$ V DC	A	0.5	--	2.5	--

Four NO contacts in series are not recommended for small voltages due to unreliable contacts.