

Insta Contactors

The right device - whatever the application



Insta contactors with AC magnetic system

- Extremely long service life of 3 million switching cycles
- Ideal characteristics for switching lighting
- Auxiliary switches can be retrofitted to all models - even on type 20 A
- 40 A and 63 A models with 4 NC contacts for more applications
- With switch position indication for fast detection of operating state

Electrical installation from A to Z

Insta contactors are standard devices in the field of installation technology and belong to the BETA range of switching devices. Insta contactors are particularly suitable for switching heating, lighting and motors. Although Insta contactors are being used less and less for electrical heating in residential buildings, they are seeing ever increasing use for switching lights in buildings. Insta contactors are also being increasingly used in industry for motors, where distribution technology is in the foreground, e.g. in auxiliary installations for heating pumps and air-conditioning systems. In addition to their basic function, they can also be used to switch single-phase and three-phase electrical motors on and off.

5TT58 Insta Contactors

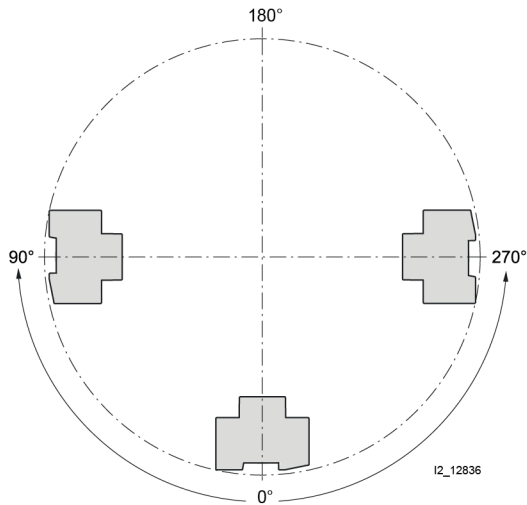


Contactors, 20, 25, 40 and 63 A devices

The 5TT5 8... Insta contactors are equipped with an AC magnetic system and are ideally suited for use under demanding conditions, with a high volume of switching cycles and long service life. Auxiliary switches available in the versions: 2 NO contacts and 1 NC contact/1 NO contact can be fitted on the right-hand side without the need for tools. If fitted with terminal covers, the devices can also be sealed.

Mounting position of 5TT58... installation contactors

The following positions (0° to 90°, 270° to 0°) are permitted when installing the device, as shown in the following diagram. There are no restrictions for these normal mounting positions.



Technical specifications

IEC 60947-4-1, IEC 60947-5-1, IEC 61095, EN 60947-4-1, EN 60947-5-1, EN 61095, VDE 0660			5TT5 80, 2-pole	5TT5 83, 4-pole	5TT5 84, 4-pole	5TT5 85, 4-pole	5TT5 910 AS
Rated frequency	at AC	Hz	50/60	50/60	50/60	50/60	50/60
Rated control voltage U_c		V AC	24, 230	24, 115, 230	24, 230	24, 230	-
Operating range $x U_c$			0.85 ... 1.1	0.85 ... 1.1	0.85 ... 1.1	0.85 ... 1.1	-
Rated operational voltage U_e		V AC	250	440	440	440	230/400
Rated operational current I_e		A	20	25	40	63	6/4 (AC-15)
Rated power dissipation P_v							
• Pick-up power		VA/W	15/13	27/17	62/50	62/50	-
• Holding power		VA/W	3/1.9	2.6/1	7.7/3	7.7/3	-
• Per contact		VA	1.7	2.2	4	8	-
Switching times							
• On-switching (NO contacts)		ms	15...25	10...20	15...20	15...20	-
• Off-switching (NO contacts)		ms	≤ 20	≤ 20	≤ 10	≤ 10	-
• On-switching (NC contacts)		ms	10	10	5...10	5...10	-
• Off-switching (NC contacts)		ms	20...25	25...30	10...15	10...15	-



Heat dissipation

If several Insta contactors with AC magnetic system are butt-mounted in the distribution board, there are no restrictions for types 25 A, 40 A and 63 A within the permissible ambient temperature range up to 55 °C. In the case of 20 A types, a 5TG8240 spacer is required after every third Insta contactor within the temperature range up to 40 °C. For the temperature range from 40 °C to 55 °C, a spacer is required after every second contactor.

IEC 60947-4-1, IEC 60947-5-1, IEC 61095, EN 60947-4-1, EN 60947-5-1, EN 61095, VDE 0660			5TT5 80, 2-pole	5TT5 83, 4-pole	5TT5 84, 4-pole	5TT5 85, 4-pole	5TT5 910 AS
Rated impulse withstand voltage U_{imp}	kV		≥ 4	≥ 4	≥ 4	≥ 4	≥ 4
Rated insulation voltage U_i	V		440	440	500	500	500
Contact gap, min.	mm		3.6	3.6	3.4	3.4	4
Electrical service life in switching cycles at I_e and load							
			200.000	200.000	100.000	100.000	-
	AC-1/AC-7a		300.000	500.000	150.000	150.000	-
	AC-3/AC-7b						
Mechanical lifetime	Operating cycles		3 million	3 million	3 million	3 million	3 million
Maximum switching frequency with load	Operations/h		600	600	600	600	600
Switching of resistive load AC-1/AC-7a at rated operational power P_s							
	1-phase 230 V	kW	4	9	16	24	-
	3-phase 400 V	kW	--	16	26	40	-
Switching of three-phase asynchronous motors AC-3/AC7b at rated operational power P_s							
	1-phase 230 V	kW	1.3 ¹⁾	2.2	5.5	8.5	-
	3-phase 400 V	kW	--	4	11	15	-
Minimum switching capacity			≥ 17 V, ≥ 50 mA	≥ 17 V, ≥ 50 mA	≥ 17 V, ≥ 50 mA	≥ 17 V, ≥ 50 mA	≥ 12 V, ≥ 10 mA
Overload withstand capability per current path (NO contacts only) at 10 s	A		72	72	176	240	-
Short-circuit protection, according to coordination type 1							
Back-up fuse	Characteristic gL/gG	A	20	35	63	80	6
Connection terminals							
• Coil connection	± screw (Poqidrive)		1	1	1	1	-
• Main connection	± screw (Poqidrive)		1	1	2	2	1
Tightening torques							
• Coil connection		Nm	0.6	0.6	0.6	0.6	-
• Main connection		Nm	1.2	1.2	2	2	0.8
Conductor cross-sections							
• Coil connection	rigid	mm ²	1.0 ... 2.5	1.0 ... 2.5	1.0 ... 2.5	1.0 ... 2.5	-
	flexible with sleeve	mm ²	1.0 ... 2.5	1.0 ... 2.5	1.0 ... 2.5	1.0 ... 2.5	-
• Main connection	rigid	mm ²	1.0 ... 10	1.0 ... 10	1 ... 25	1 ... 25	1 ... 2.5
	flexible with sleeve	mm ²	1.0 ... 6	1 ... 6	1 ... 16	1 ... 16	1 ... 2.5
Permissible ambient temperature							
• for operation		°C	-5 ... +55	-5 ... +55	-5 ... +55	-5 ... +55	-5 ... +55
• for storage		°C	-30 ... +80	-30 ... +80	-30 ... +80	-30 ... +80	-30 ... +80
Degree of protection according to EN 60529			IP20	IP20	IP20	IP20	IP20

¹⁾ for NO contacts only

Switching of direct voltages DC-1

Permissible DC switching currents for NO contacts at resistive load			1 contact	2 contacts in series	3 contacts in series	4 contacts in series
5TT5 80, 2-pole, 20 A	I_e at $U_e = DC 24 V$	A	20	20	-	-
	I_e at $U_e = DC 110 V$	A	1	3	-	-
	I_e at $U_e = DC 220 V$	A	0.5	1.5	-	-
5TT5 83, 4-pole, 25 A	I_e at $U_e = DC 24 V$	A	25	25	25	25
	I_e at $U_e = DC 110 V$	A	2	4	6	8
	I_e at $U_e = DC 220 V$	A	0.5	1.5	2.5	3.5
5TT5 84, 4-pole, 40 A	I_e at $U_e = DC 24 V$	A	40	40	40	40
	I_e at $U_e = DC 110 V$	A	4	10	30	40
	I_e at $U_e = DC 220 V$	A	0.8	6	20	40
5TT5 85, 4-pole, 63 A	I_e at $U_e = DC 24 V$	A	63	63	63	63
	I_e at $U_e = DC 110 V$	A	4	10	35	63
	I_e at $U_e = DC 220 V$	A	0.8	6	30	63

Switching of lamps

Incandescent lamp loads	Lamp type		1000 W	500 W	200 W	100 W	60 W
5TT5 80, 2-pole, 20 A	per current path	W	1	3	7	14	23
5TT5 83, 4-pole, 25 A	per current path	W	1	3	8	16	29
5TT5 84, 4-pole, 40 A	per current path	W	4	8	20	40	65
5TT5 85, 4-pole, 63 A	per current path	W	5	10	25	50	85

Maximum number of lamps in units per current path at 230 V AC, 50 Hz

Fluorescent and compact lamps in ballast operation (KVG) (permissible number of lamps in units per electrical circuit at 230 V AC, 50 Hz)

Lamp type	W	Capacitor capacitance μF	Uncorrected			Parallel-corrected			DUO switching 2-lamp		
			L18	L36	L58	L18	L36	L58	2 x L18	2 x L36	2 x L58
5TT5 80, 2-pole	20 A	NO contact	22	17	14	7	7	4	30	17	10
5TT5 83, 4-pole	25 A	NO contact	24	20	17	8	8	5	40	24	14
5TT5 84, 4-pole	40 A	NO contact	90	65	45	48	48	31	100	65	40
5TT5 85, 4-pole	63 A	NO contact	140	95	70	73	73	47	150	95	60

Fluorescent and compact lamps with electronic ballast (ECG) (permissible number of lamps in units per electrical circuit at 230 V AC, 50 Hz)

Lamp type	W	One-lamp			Two-lamp			
		1 x L18	1 x L36	1 x L58	2 x L18	2 x L36	2 x L58	
5TT5 80, 2-pole	20 A	NO contact	25	15	14	12	7	7
5TT5 83, 4-pole	25 A	NO contact	35	20	19	17	10	9
5TT5 84, 4-pole	40 A	NO contact	100	52	50	50	26	25
5TT5 85, 4-pole	63 A	NO contact	140	75	72	70	38	36

High-pressure mercury-vapor lamps (permissible number of lamps in units per electrical circuit at 230 V AC, 50 Hz)

Lamp type	W	Capacitor capacitance μF	Uncorrected							Parallel-corrected						
			50	80	125	250	400	700	1000	50	80	125	250	400	700	1000
5TT5 80, 2-pole	20 A	NO contact	14	10	7	4	2	1	1	4	4	3	1	1	0	0
5TT5 83, 4-pole	25 A	NO contact	18	13	9	5	3	2	1	5	5	4	2	1	0	0
5TT5 84, 4-pole	40 A	NO contact	38	29	20	10	7	4	3	31	27	22	12	9	5	4
5TT5 85, 4-pole	63 A	NO contact	55	42	29	15	10	6	4	47	41	33	18	13	7	5

Halogen metal-vapor lamps (permissible number of lamps in units per electrical circuit at 230 V AC, 50 Hz)

Lamp type	W	Capacitor capacitance μF	Uncorrected							Parallel-corrected						
			70	150	250	400	1000	2000	70	150	250	400	1000	2000		
5TT5 80, 2-pole	20 A	NO contact	10	5	3	3	1	0	2	1	0	0	0	0		
5TT5 83, 4-pole	25 A	NO contact	12	7	4	3	1	0	3	1	1	0	0	0		
5TT5 84, 4-pole	40 A	NO contact	23	12	7	6	2	1	18	11	6	6	2	1		
5TT5 85, 4-pole	63 A	NO contact	32	18	10	9	3	1	25	15	9	8	3	2		













High-pressure sodium-vapor lamps (permissible number of lamps in units per electrical circuit at 230 V AC, 50 Hz)

Lamp type	W	Capacitor capacitance μF	Uncorrected				Parallel-corrected			
			150	250	400	1000	150	250	400	1000
5TT5 80, 2-pole	20 A	NO contact	5	3	2	0	1	0	0	0
5TT5 83, 4-pole	25 A	NO contact	6	4	2	1	1	1	0	0
5TT5 84, 4-pole	40 A	NO contact	17	10	6	3	11	6	4	2
5TT5 85, 4-pole	63 A	NO contact	22	13	8	3	16	10	6	3

Low-pressure sodium-vapor lamps (permissible number of lamps in units per electrical circuit at 230 V AC, 50 Hz)

Lamp type	W	Capacitor capacitance μF	Uncorrected					Parallel-corrected						
			18	35	55	90	135	180	18	35	55	90	135	180
5TT5 80, 2-pole	20 A	NO contact	22	7	7	4	3	3	6	1	1	1	-	-
5TT5 83, 4-pole	25 A	NO contact	27	9	9	5	4	4	7	1	1	1	-	-
5TT5 84, 4-pole	40 A	NO contact	71	23	23	14	10	10	44	11	11	8	4	5
5TT5 85, 4-pole	63 A	NO contact	90	30	30	19	13	13	66	16	16	12	7	8

Selection and ordering data

	Version	U_e	I_e	U_c	MW	Order No.	Weight 1 unit approx.	PS ¹⁾ / P. unit
		V AC	A AC	V AC			kg	Unit(s)
Insta contactors								
for alternating current continuous operation, with switch position indication with AC magnetic system								
	2 NO contacts	250	20	230	1	5TT5 800-0	0.132	1
				24		5TT5 800-2	0.132	1
	1 NO contact, 1 NC contact	250	20	230	1	5TT5 801-0	0.132	1
				24		5TT5 801-2	0.132	1
	2 NO contacts	250	20	230	1	5TT5 802-0	0.132	1
				24		5TT5 802-2	0.132	1
	4 NO contacts	440	25	230	2	5TT5 830-0	0.247	1
				115		5TT5 830-1	0.247	1
	3 NO contact, 1 NC contact	440	25	230	2	5TT5 831-0	0.247	1
				115		5TT5 831-1	0.247	1
	2 NO contact, 2 NC contact	440	25	230	2	5TT5 832-0	0.247	1
				24		5TT5 832-2	0.247	1
	4 NC contacts	440	25	230	2	5TT5 833-0	0.247	1
				24		5TT5 833-2	0.247	1
	4 NO contacts	440	40	230	3	5TT5 840-0	0.410	1
				24		5TT5 840-2	0.410	1
	3 NO contact, 1 NC contact	440	40	230	3	5TT5 841-0	0.410	1
				24		5TT5 841-2	0.410	1
	2 NO contact, 2 NC contact	440	40	230	3	5TT5 842-0	0.410	1
				24		5TT5 842-2	0.410	1
	4 NC contacts	440	40	230	3	5TT5 843-0	0.410	1
				24		5TT5 843-2	0.410	1
	4 NO contacts	440	63	230	3	5TT5 850-0	0.410	1
				24		5TT5 850-2	0.410	1
	3 NO contact, 1 NC contact	440	63	230	3	5TT5 851-0	0.410	1
				24		5TT5 851-2	0.410	1
	2 NO contact, 2 NC contact	440	63	230	3	5TT5 852-0	0.410	1
				24		5TT5 852-2	0.410	1
	4 NC contacts	440	63	230	3	5TT5 853-0	0.410	1
				24		5TT5 853-2	0.410	1
Auxiliary switches								
for right-side retrofitting max. one auxiliary switch per Insta contactor								
	2 NO contacts	230, AC-15	6		0.5	5TT5 910-0	0.039	1
	1 NO contact, 1 NC contact	230, AC-15	6		0.5	5TT5 910-1	0.039	1
Sealable terminal covers								
for Insta contactors 20 A								
					2	5TT5 910-5	0.010	2
for Insta contactors 24 A								
					2	5TT5 910-6	0.010	2
for Insta contactors 40 A and 63 A								
					2	5TT5 910-7	0.010	2

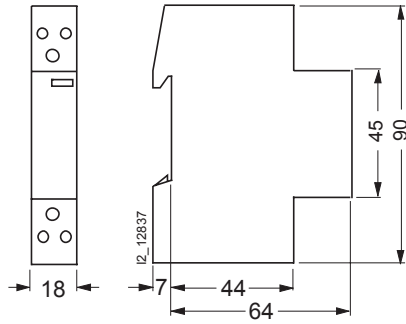
¹⁾ You can order this quantity or a multiple thereof.

5TT58 Insta Contactors

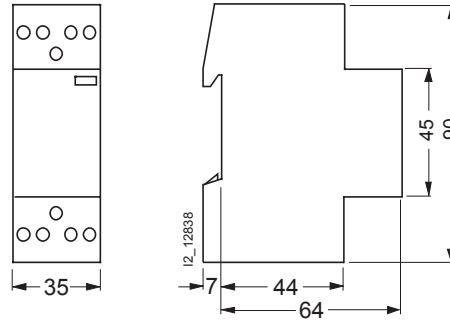
Dimensional drawings

5TT5 8 Insta contactors

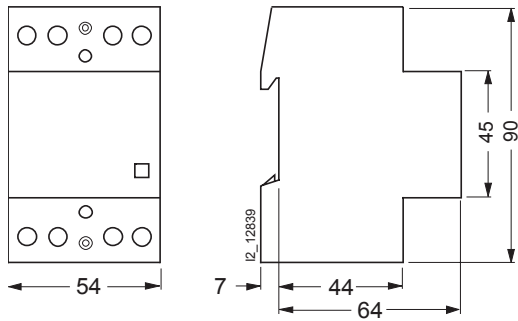
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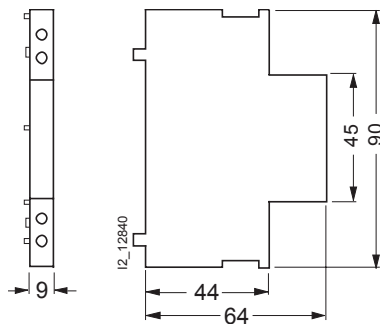
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5TT5 850 5TT5 851 5TT5 852 5TT5853

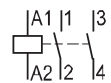


5TT5 9100 5TT5 9101

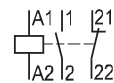


Schematics

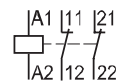
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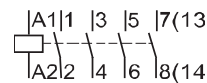
5TT5 801



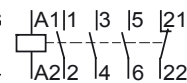
5TT5 802



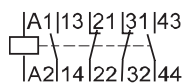
5TT5 830
5TT5 840
5TT5 850



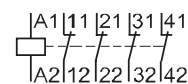
5TT5 831
5TT5 841
5TT5 851



5TT5 832
5TT5 842
5TT5 852



5TT5 833
5TT5 843
5TT5 853



5TT5 9100



5TT5 9101



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