SIEMENS

Data sheet

3RT2025-1AP00

CONTACTOR, AC-3, 7.5KW/400V, 1NO+1NC, AC 230V 50HZ, 3-POLE, SZ S0 SCREW TERMINAL



product brandname	SIRIUS
Product designation	3RT2 contactor
General technical data	
Size of contactor	S0
Product extension	
 function module for communication 	No
 Auxiliary switch 	Yes
Insulation voltage	
• rated value	690 V
Degree of pollution	3
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
 between coil and main contacts acc. to EN 	400 V
60947-1	
Protection class IP	
• on the front	IP20
• of the terminal	IP20
Shock resistance	
 at rectangular impulse 	

- at AC 7,5g / 5 ms. 4, /g / 10 ms • with sine pulse - at AC - at AC 11,8g / 5 ms, 7,4g / 10 ms Mechanical service life (switching cycles) 0 000 000 • of rontactor typical 10 000 000 • of the contactor with added electronics- compatible auxiliary switch block typical 10 000 000 • of the contactor with added electronics- compatible auxiliary switch block typical 10 000 000 • of the contactor with added auxiliary switch block typical 10 000 000 Ambient conditions 2 000 m Main Circuit		/- /-
	— at AC	7,5g / 5 ms, 4,7g / 10 ms
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		11,8g / 5 ms, 7,4g / 10 ms
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at AC-1Image: Comparison of the sector of the s	— at 690 V rated value	13 A
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• at 40 °C minimum permissible 10 mm ² Operating current for approx. 200000 operating cycles at AC-4 • at 400 V rated value 7.7 A	at AC-1	
Operating current for approx. 200000 operating cycles at AC-4 • at 400 V rated value 7.7 A	• at 60 °C minimum permissible	
• at 400 V rated value 7.7 A	-	10 mm ²
• at 690 V rated value 7.7 A	• at 400 V rated value	7.7 A
	• at 690 V rated value	7.7 A

Operating current	
 at 1 current path at DC-1 	
— at 24 V rated value	35 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.4 A
— at 600 V rated value	0.25 A
 with 2 current paths in series at DC-1 	
— at 24 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
— at 600 V rated value	0.8 A
 with 3 current paths in series at DC-1 	
— at 24 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	35 A
— at 440 V rated value	2.9 A
— at 600 V rated value	1.4 A
Operating current	
 at 1 current path at DC-3 at DC-5 	
— at 24 V rated value	20 A
— at 110 V rated value	2.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.09 A
— at 600 V rated value	0.06 A
 with 2 current paths in series at DC-3 at DC-5 	
— at 110 V rated value	15 A
— at 220 V rated value	3 A
— at 24 V rated value	35 A
— at 440 V rated value	0.27 A
— at 600 V rated value	0.16 A
 with 3 current paths in series at DC-3 at DC-5 	
— at 110 V rated value	35 A
— at 220 V rated value	10 A
— at 24 V rated value	35 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
Operating power	
• at AC-1	
— at 230 V rated value	13.3 kW

— at 230 V at 60 °C rated value	13.3 kW
— at 400 V rated value	23 kW
— at 400 V at 60 °C rated value	23 kW
— at 690 V rated value	40 kW
— at 690 V at 60 °C rated value	40 kW
• at AC-2 at 400 V rated value	7.5 kW
• at AC-3	
— at 230 V rated value	4 kW
— at 400 V rated value	7.5 kW
— at 690 V rated value	11 kW
Operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	3.5 kW
• at 690 V rated value	6 kW
Thermal short-time current limited to 10 s	150 A
Power loss [W] at AC-3 at 400 V for rated value of	0.9 W
the operating current per conductor	
No-load switching frequency	
• at AC	5 000 1/h
Operating frequency	
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	1 000 1/h
• at AC-3 maximum	1 000 1/h
● at AC-4 maximum	300 1/h
Control circuit/ Control	
Type of voltage of the control supply voltage	AC
Control supply voltage at AC	
• at 50 Hz rated value	230 V
Operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 1.1
Apparent pick-up power of magnet coil at AC	
• at 50 Hz	65 V·A
Inductive power factor with closing power of the coil	
• at 50 Hz	0.82
Apparent holding power of magnet coil at AC	

• at 50 Hz

• at 50 Hz Closing delay

• at AC

coil

Inductive power factor with the holding power of the

7.6 V·A

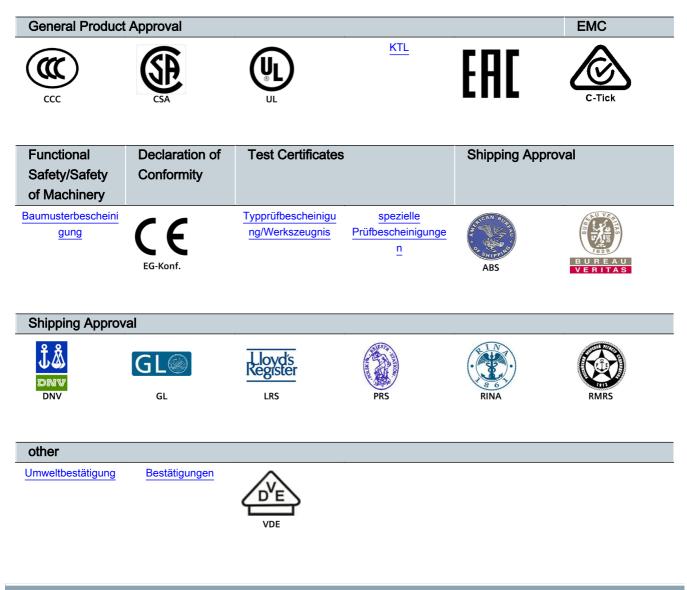
0.25

9 ... 38 ms

Opening delay	
• at AC	4 16 ms
Arcing time	10 10 ms
Residual current of the electronics for control with	
signal <0>	
• at AC at 230 V maximum permissible	6 mA
• at DC at 24 V maximum permissible	16 mA
Auxiliary circuit	
Number of NC contacts	
 for auxiliary contacts 	
— instantaneous contact	1
Number of NO contacts	
 for auxiliary contacts 	
— instantaneous contact	1
Operating current at AC-12 maximum	10 A
Operating current at AC-15	
 at 230 V rated value 	10 A
• at 400 V rated value	3 A
• at 500 V rated value	2 A
• at 690 V rated value	1 A
Operating current at DC-12	
• at 24 V rated value	10 A
• at 48 V rated value	6 A
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 125 V rated value	2 A
• at 220 V rated value	1 A
• at 600 V rated value	0.15 A
Operating current at DC-13	
• at 24 V rated value	10 A
• at 48 V rated value	2 A
• at 60 V rated value	2 A
• at 110 V rated value	1 A
• at 125 V rated value	0.9 A
• at 220 V rated value	0.3 A
• at 600 V rated value	0.1 A
Contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings	
Full-load current (FLA) for three-phase AC motor	
• at 480 V rated value	14 A

Yielded mechanical performance [hp]	
 for single-phase AC motor 	
— at 110/120 V rated value	1 hp
— at 230 V rated value	3 hp
 for three-phase AC motor 	
— at 200/208 V rated value	3 hp
— at 220/230 V rated value	5 hp
— at 460/480 V rated value	10 hp
— at 575/600 V rated value	15 hp
Contact rating of auxiliary contacts according to UL	A600 / Q600
Short-circuit protection	
Design of the fuse link	
 for short-circuit protection of the main circuit 	
 — with type of coordination 1 required 	gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 63 A
 — with type of assignment 2 required 	gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25 A
• for short-circuit protection of the auxiliary switch	fuse gL/gG: 10 A
required	
Installation/ mounting/ dimensions	
Mounting position	+/-180° rotation possible on vertical mounting surface; can be
	tilted forward and backward by +/- 22.5° on vertical mounting surface
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail
	according to DIN EN 50022
 Side-by-side mounting 	Yes
Height	85 mm
Width	45 mm
Depth	97 mm
Required spacing	
 with side-by-side mounting 	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
 for grounded parts 	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— upwards — at the side	0 mm 6 mm
— at the side	6 mm

— Backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	6 mm
Connections/Terminals	
Type of electrical connection	
for main current circuit	screw-type terminals
 for auxiliary and control current circuit 	screw-type terminals
Type of connectable conductor cross-sections	
for main contacts	
— solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)
— single or multi-stranded	$2x (1 2,5 mm^2), 2x (2,5 10 mm^2)$
-	$2x (1 2.5 mm^2)$, $2x (2.5 6 mm^2)$, $1x 10 mm^2$
— finely stranded with core end processing	2x (16 12), 2x (14 8)
at AWG conductors for main contacts Type of connectable conductor cross-sections	$2x(10 \dots 12), 2x(14 \dots 0)$
• for auxiliary contacts	
— single or multi-stranded	2x (0,5 1,5 mm ²), 2x (0,75 2,5 mm ²)
— finely stranded with core end processing	2x (0.5 1.5 mm ²), 2x (0.75 2.5 mm ²)
 at AWG conductors for auxiliary contacts 	2x (20 16), 2x (18 14)
Safety related data	
B10 value	
 with high demand rate acc. to SN 31920 	1 000 000
Proportion of dangerous failures	
 with low demand rate acc. to SN 31920 	40 %
 with high demand rate acc. to SN 31920 	73 %
Failure rate [FIT]	
 with low demand rate acc. to SN 31920 	100 FIT
Product function	
 Mirror contact acc. to IEC 60947-4-1 	Yes
T1 value for proof test interval or service life acc. to IEC 61508	20 у
Protection against electrical shock	finger-safe
Certificates/approvals	
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Further information

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Industry Mall (Online ordering system)

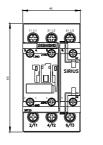
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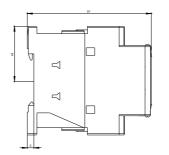
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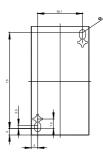
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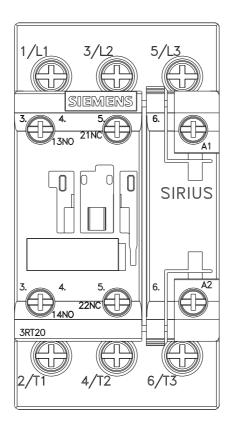
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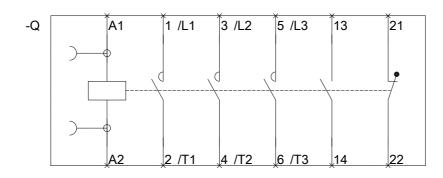
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