

CONTACTOR, AC-3, 3KW/400V, 1NO, AC220V, 50/60 HZ, 3-POLE, SZ S00 SCREW TERMINAL



product brand name	SIRIUS
Product designation	3RT2 contactor
General technical data:	
Size of contactor	S00
Product expansion	
• function module for communication	No
• Auxiliary switch	Yes
Insulation voltage	
• rated value	690 V
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1	400 V
Protection class IP	
• on the front	IP20
• of the terminal	IP20
Degree of pollution	3
Shock resistance	
• at rectangular impulse	
— at AC	6,7g / 5 ms, 4,2g / 10 ms

• with sine pulse — at AC	10,5g / 5 ms, 6,6g / 10 ms
Mechanical service life (switching cycles)	
• of contactor typical	30 000 000
• of the contactor with added electronics-compatible auxiliary switch block typical	5 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
Ambient conditions:	
Installation altitude at height above sea level maximum	2 000 m
Ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-55 ... +80 °C
Main circuit:	
Number of NO contacts for main contacts	3
Number of NC contacts for main contacts	0
Operating voltage	
• at AC-3 rated value maximum	690 V
Operating current	
• at AC-1 at 400 V — at ambient temperature 40 °C rated value	18 A
• at AC-1 up to 690 V — at ambient temperature 40 °C rated value — at ambient temperature 60 °C rated value	18 A 16 A
• at AC-2 at 400 V rated value	7 A
• at AC-3 — at 400 V rated value — at 500 V rated value — at 690 V rated value	7 A 6 A 4.9 A
Connectable conductor cross-section in main circuit at AC-1	
• at 60 °C minimum permissible	2.5 mm ²
• at 40 °C minimum permissible	2.5 mm ²
Operating current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	2.6 A
• at 690 V rated value	1.8 A
Operating current	
• at 1 current path at DC-1 — at 24 V rated value — at 110 V rated value	15 A 1.5 A

— at 220 V rated value	0.6 A
— at 440 V rated value	0.42 A
— at 600 V rated value	0.42 A
• with 2 current paths in series at DC-1	
— at 24 V rated value	15 A
— at 110 V rated value	8.4 A
— at 220 V rated value	1.2 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.5 A
• with 3 current paths in series at DC-1	
— at 24 V rated value	15 A
— at 110 V rated value	15 A
— at 220 V rated value	15 A
— at 440 V rated value	0.9 A
— at 600 V rated value	0.7 A
Operating current	
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	15 A
— at 110 V rated value	0.1 A
• with 2 current paths in series at DC-3 at DC-5	
— at 110 V rated value	0.25 A
— at 24 V rated value	15 A
• with 3 current paths in series at DC-3 at DC-5	
— at 110 V rated value	15 A
— at 220 V rated value	1.2 A
— at 24 V rated value	15 A
— at 440 V rated value	0.14 A
— at 600 V rated value	0.14 A
Operating power	
• at AC-1	
— at 230 V rated value	6.3 kW
— at 230 V at 60 °C rated value	6 kW
— at 400 V rated value	11 kW
— at 400 V at 60 °C rated value	10.5 kW
— at 690 V rated value	19 kW
— at 690 V at 60 °C rated value	18 kW
• at AC-2 at 400 V rated value	3 kW
• at AC-3	
— at 230 V rated value	1.5 kW
— at 400 V rated value	3 kW
— at 690 V rated value	4 kW

Operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	1.15 kW
• at 690 V rated value	1.15 kW
Thermal short-time current limited to 10 s	56 A
Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor	0.4 W
No-load switching frequency	
• at AC	10 000 1/h
Operating frequency	
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	750 1/h
• at AC-3 maximum	750 1/h
• at AC-4 maximum	250 1/h

Control circuit/ Control:	
Type of voltage of the control supply voltage	AC
Control supply voltage at AC	
• at 50 Hz rated value	220 V
• at 60 Hz rated value	220 V
Operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.85 ... 1.1
Apparent pick-up power of magnet coil at AC	
• at 50 Hz	27 V·A
• at 60 Hz	31.7 V·A
Inductive power factor with closing power of the coil	
• at 50 Hz	0.8
• at 60 Hz	0.81
Apparent holding power of magnet coil at AC	
• at 50 Hz	4.2 V·A
• at 60 Hz	4.8 V·A
Inductive power factor with the holding power of the coil	
• at 50 Hz	0.25
• at 60 Hz	0.25
Closing delay	
• at AC	9 ... 35 ms
Opening delay	
• at AC	3.5 ... 14 ms
Arcing time	10 ... 15 ms
Residual current of the electronics for control with signal <0>	

- at AC at 230 V maximum permissible
- at DC at 24 V maximum permissible

3 mA
10 mA

Auxiliary circuit:

Number of NC contacts	
• for auxiliary contacts — instantaneous contact	0
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	4.8 A
• at 600 V rated value	6.1 A
yielded mechanical performance [hp]	
• for single-phase AC motor — at 110/120 V rated value — at 230 V rated value	0.25 hp 0.75 hp
• for three-phase AC motor	

— at 200/208 V rated value	1.5 hp
— at 220/230 V rated value	2 hp
— at 460/480 V rated value	3 hp
— at 575/600 V rated value	5 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 assignment 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required	gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20 A fuse gL/gG: 10 A
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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	58 mm
Width	45 mm
Depth	73 mm
Required spacing	
• with side-by-side mounting — forwards — Backwards — upwards — downwards — at the side • for grounded parts — forwards — Backwards — upwards — at the side — downwards • for live parts — forwards — Backwards — upwards — downwards — at the side	0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 6 mm 0 mm 0 mm 0 mm 0 mm 0 mm 6 mm

Connections/ Terminals:

Type of electrical connection • for main current circuit • for auxiliary and control current circuit	screw-type terminals screw-type terminals
Type of connectable conductor cross-sections • for main contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for main contacts	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²), 2x 4 mm ² 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14), 2x 12
Type of connectable conductor cross-sections • for auxiliary contacts — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²), 2x 4 mm ² 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14), 2x 12

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 • with high demand rate acc. to SN 31920	40 % 73 %
Product function • Mirror contact acc. to IEC 60947-4-1	Yes; with 3RH29
T1 value for proof test interval or service life acc. to IEC 61508	20 y

Certificates/ approvals:

General Product Approval	Functional Safety/Safety of Machinery	Declaration of Conformity
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Test Certificates	Shipping Approval
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Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<http://www.siemens.com/industrymall>

Cax online generator

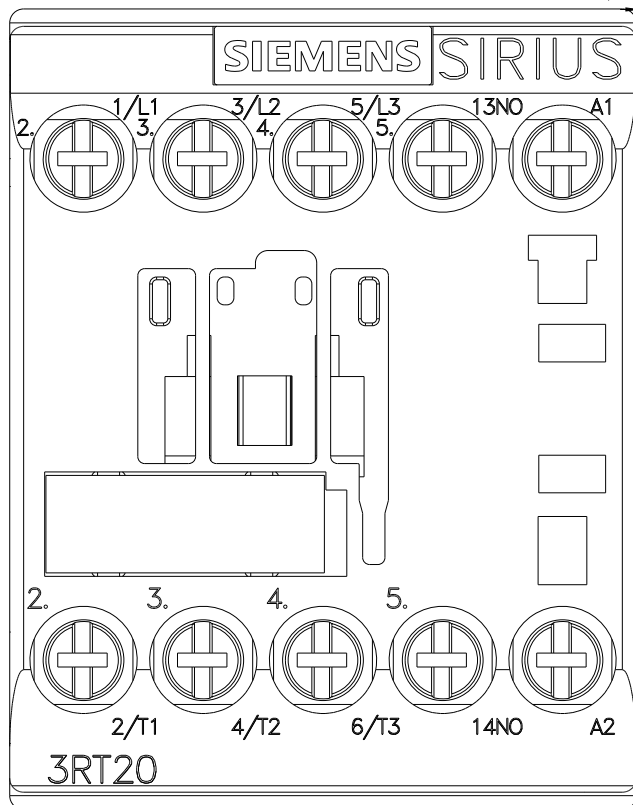
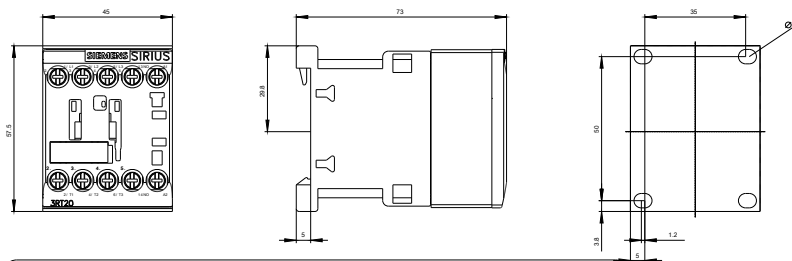
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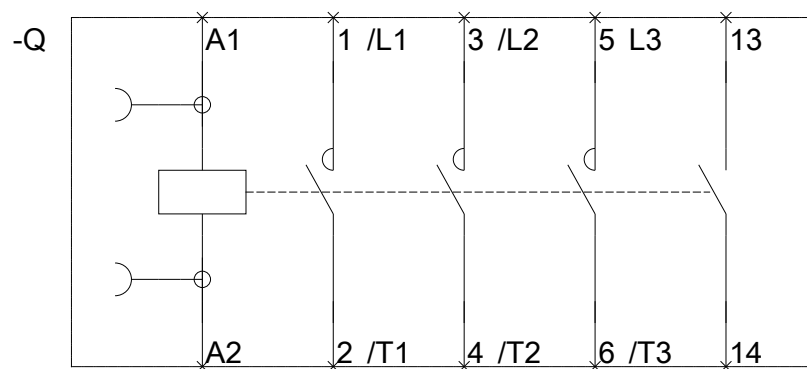
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RT20151AN21>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT20151AN21&lang=en





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