



CONTACTOR, AC-3, 5.5KW/400V, 1NO+1NC, DC 24V, 3-POLE, SZ
S0 SPRING-LOADED TERMINAL

product brand name	SIRIUS
Product designation	3RT2 contactor
General technical data:	
Size of contactor	S0
Product expansion	No
<ul style="list-style-type: none"> function module for communication Auxiliary switch 	Yes
Insulation voltage	690 V
<ul style="list-style-type: none"> 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	IP20
<ul style="list-style-type: none"> on the front of the terminal 	IP20
Degree of pollution	3
Shock resistance	
<ul style="list-style-type: none"> at rectangular impulse <ul style="list-style-type: none"> at DC with sine pulse <ul style="list-style-type: none"> at DC 	10g / 5 ms, 7,5g / 10 ms
	15g / 5 ms, 10g / 10 ms
Mechanical service life (switching cycles)	
<ul style="list-style-type: none"> of the contactor typical of the contactor with added electronics-compatible auxiliary switch block typical 	10 000 000
	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	40 A
• at AC-1 up to 690 V	
— at ambient temperature 40 °C Rated value	40 A
— at ambient temperature 60 °C Rated value	35 A
• at AC-2 at 400 V Rated value	12 A
• at AC-3	
— at 400 V Rated value	12 A
— at 500 V Rated value	12 A
— at 690 V Rated value	9 A
Connectable conductor cross-section in main circuit at AC-1	
• at 60 °C minimum permissible	10 mm ²
• at 40 °C minimum permissible	10 mm ²
Operating current for ≥ 200000 operating cycles at AC-4	
• at 400 V Rated value	5.5 A
• at 690 V Rated value	5.5 A
Operating current	
• with 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	
• with 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	5.5 kW
• at AC-3	
— at 230 V Rated value	3 kW
— at 400 V Rated value	5.5 kW
— at 690 V Rated value	7.5 kW

Operating power for ≥ 200000 operating cycles at AC-4	
• at 400 V Rated value	2.6 kW
• at 690 V Rated value	4.6 kW
Thermal short-time current restricted to 10 s	110 A
Active power loss at AC-3 at 400 V for rated value of the operating current per conductor	0.5 W
No-load switching frequency	
• at DC	1 500 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	DC
Control supply voltage at DC	
• Rated value	24 V
Operating range factor control supply voltage rated value of the magnet coil at DC	0.8 ... 1.1
Closing power of the magnet coil at DC	5.9 W
Holding power of the magnet coil for DC	5.9 W
Closing delay	
• at DC	50 ... 170 ms
Opening delay	
• at DC	15 ... 17.5 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

<ul style="list-style-type: none"> • at 500 V Rated value • at 690 V Rated value 	<p>2 A</p> <p>1 A</p>
Operating current at DC-12	
<ul style="list-style-type: none"> • at 24 V Rated value • at 48 V Rated value • at 60 V Rated value • at 110 V Rated value • at 125 V Rated value • at 220 V Rated value • at 600 V Rated value 	<p>10 A</p> <p>6 A</p> <p>6 A</p> <p>3 A</p> <p>2 A</p> <p>1 A</p> <p>0.15 A</p>
Operating current at DC-13	
<ul style="list-style-type: none"> • at 24 V Rated value • at 48 V Rated value • at 60 V Rated value • at 110 V Rated value • at 125 V Rated value • at 220 V Rated value • at 600 V Rated value 	<p>10 A</p> <p>2 A</p> <p>2 A</p> <p>1 A</p> <p>0.9 A</p> <p>0.3 A</p> <p>0.1 A</p>
Contact reliability of the auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)

UL/CSA ratings:

Full-load current (FLA) for three-phase AC motor	
<ul style="list-style-type: none"> • at 480 V Rated value • at 600 V Rated value 	<p>11 A</p> <p>11 A</p>
yielded mechanical performance [hp]	
<ul style="list-style-type: none"> • for single-phase AC motor <ul style="list-style-type: none"> — at 110/120 V Rated value — at 230 V Rated value • for three-phase AC motor <ul style="list-style-type: none"> — at 200/208 V Rated value — at 220/230 V Rated value — at 460/480 V Rated value — at 575/600 V Rated value 	<p>1 hp</p> <p>2 hp</p> <p>3 hp</p> <p>3 hp</p> <p>7.5 hp</p> <p>10 hp</p>
Contact rating of the auxiliary contacts acc. to UL	A600 / Q600

Short-circuit:

Design of the fuse link	
<ul style="list-style-type: none"> • for short-circuit protection of the main circuit <ul style="list-style-type: none"> — with type of assignment 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required 	<p>gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 63 A</p> <p>gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25 A</p> <p>fuse gL/gG: 10 A</p>

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
<ul style="list-style-type: none"> • Side-by-side mounting 	Yes
Height	102 mm
Width	45 mm
Depth	107 mm
Required spacing	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — 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	
<ul style="list-style-type: none"> • for main current circuit • for auxiliary and control current circuit 	spring-loaded terminals spring-loaded terminals
Type of connectable conductor cross-section	
<ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing • for AWG conductors for main contacts 	2x (1 ... 10 mm ²) 2x (1 ... 6 mm ²) 2x (1 ... 6 mm ²) 2x (18 ... 8)
Type of connectable conductor cross-section	
<ul style="list-style-type: none"> • for auxiliary contacts 	

- single or multi-stranded
- finely stranded with core end processing
- finely stranded without core end processing
- for AWG conductors for auxiliary contacts

2x (0,5 ... 2,5 mm²)

2x (0.5 ... 1.5 mm²)

2x (0.5 ... 2.5 mm²)

2x (20 ... 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 %
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 y

Certificates/ approvals:

General Product Approval	EMC	Functional Safety/Safety of Machinery	Declaration of Conformity
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[Baumusterbescheinigung](#)



Test Certificates	Shipping Approval
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[Typprüfbescheinigung/Werkszeugnis](#)

[spezielle Prüfbescheinigung](#)



Shipping Approval	other
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other



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

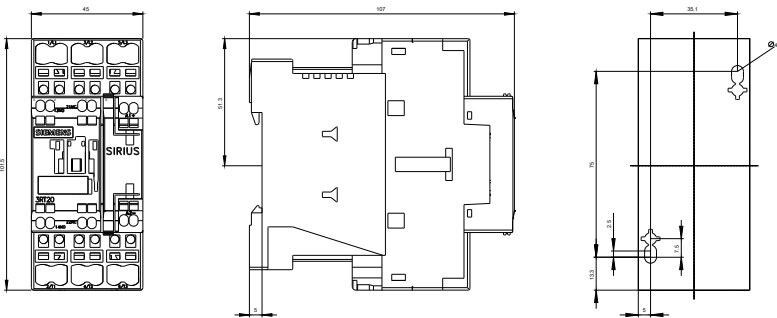
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RT20242BB40>

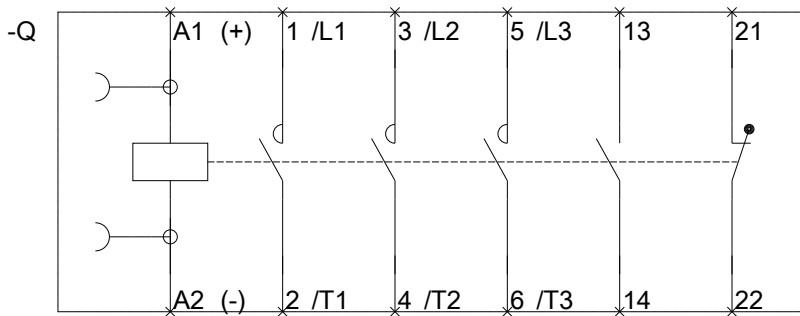
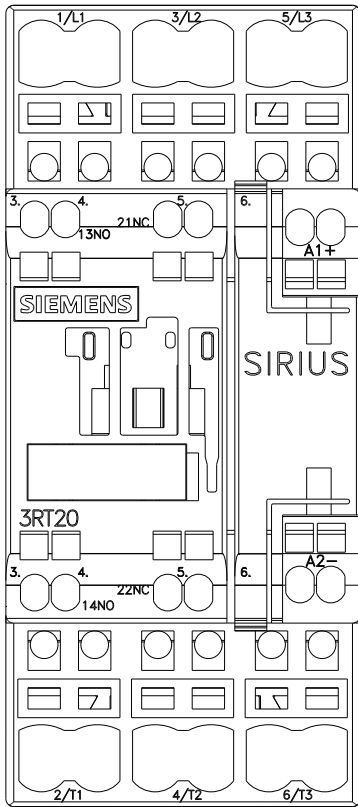
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RT20242BB40>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RT20242BB40&lang=en





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