



CONTACTOR, AC-3, 4KW/400V, 1NO, AC 24V, 50/60 HZ, 3-POLE, SZ S00 SPRING-LOADED TERMINAL

product brand name	SIRIUS
Product designation	3RT2 contactor
General technical data:	
Size of contactor	S00
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 AC with sine pulse <ul style="list-style-type: none"> — at AC 	6,7g / 5 ms, 4,2g / 10 ms
	10,5g / 5 ms, 6,6g / 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 	30 000 000 5 000 000

• of the contactor with added auxiliary switch block typical	10 000 000
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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	22 A
• at AC-1 up to 690 V	
— at ambient temperature 40 °C Rated value	22 A
— at ambient temperature 60 °C Rated value	20 A
• at AC-2 at 400 V Rated value	9 A
• at AC-3	
— at 400 V Rated value	9 A
— at 500 V Rated value	7.7 A
— at 690 V Rated value	6.7 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	4 mm ²
Operating current for ≥ 200000 operating cycles at AC-4	
• at 400 V Rated value	4.1 A
• at 690 V Rated value	3.3 A
Operating current	
• with 1 current path at DC-1	
— at 24 V Rated value	20 A
— at 110 V Rated value	2.1 A
— at 220 V Rated value	0.8 A
— at 440 V Rated value	0.6 A
— at 600 V Rated value	0.6 A
• with 2 current paths in series at DC-1	
— at 24 V Rated value	20 A
— at 110 V Rated value	12 A

— at 220 V Rated value	1.6 A
— at 440 V Rated value	0.8 A
— at 600 V Rated value	0.7 A
• with 3 current paths in series at DC-1	
— at 24 V Rated value	20 A
— at 110 V Rated value	20 A
— at 220 V Rated value	20 A
— at 440 V Rated value	1.3 A
— at 600 V Rated value	1 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	0.1 A
• with 2 current paths in series at DC-3 at DC-5	
— at 110 V Rated value	0.35 A
— at 24 V Rated value	20 A
• with 3 current paths in series at DC-3 at DC-5	
— at 110 V Rated value	20 A
— at 220 V Rated value	1.5 A
— at 24 V Rated value	20 A
— at 440 V Rated value	0.2 A
— at 600 V Rated value	0.2 A
Operating power	
• at AC-1	
— at 230 V Rated value	7.5 kW
— at 230 V at 60 °C Rated value	7.5 kW
— at 400 V Rated value	13 kW
— at 400 V at 60 °C Rated value	13 kW
— at 690 V Rated value	22 kW
— at 690 V at 60 °C Rated value	22 kW
• at AC-2 at 400 V Rated value	4 kW
• at AC-3	
— at 230 V Rated value	2.2 kW
— at 400 V Rated value	4 kW
— at 690 V Rated value	5.5 kW
Operating power for ≥ 200000 operating cycles at AC-4	
• at 400 V Rated value	2 kW
• at 690 V Rated value	2.5 kW
Thermal short-time current restricted to 10 s	72 A
Active power loss at AC-3 at 400 V for rated value of the operating current per conductor	0.7 W

No-load switching frequency	
<ul style="list-style-type: none"> • at AC 	10 000 1/h
Operating frequency	
<ul style="list-style-type: none"> • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-4 maximum 	1 000 1/h 750 1/h 750 1/h 250 1/h

Control circuit/ Control:

Type of voltage of the control supply voltage	AC
Control supply voltage at AC	
<ul style="list-style-type: none"> • at 50 Hz Rated value • at 60 Hz Rated value 	24 V 24 V
Operating range factor control supply voltage rated value of the magnet coil at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.8 ... 1.1 0.85 ... 1.1
Apparent pick-up power of the magnet coil at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	27 V·A 31.7 V·A
Inductive power factor with closing power of the coil	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.8 0.81
Apparent holding power of the magnet coil at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	4.2 V·A 4.8 V·A
Inductive power factor with the holding power of the coil	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.25 0.25
Closing delay	
<ul style="list-style-type: none"> • at AC 	9 ... 35 ms
Opening delay	
<ul style="list-style-type: none"> • at AC 	3.5 ... 14 ms
Arcing time	10 ... 15 ms
Residual current of the electronics for control with signal <0>	
<ul style="list-style-type: none"> • at AC at 230 V maximum permissible • at DC at 24 V maximum permissible 	3 mA 10 mA

Auxiliary circuit:

Number of NC contacts	
<ul style="list-style-type: none"> • for auxiliary contacts — instantaneous contact 	0

Number of NO contacts	
<ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — instantaneous contact 	1
Operating current at AC-12 maximum	10 A
Operating current at AC-15	
<ul style="list-style-type: none"> • at 230 V Rated value • at 400 V Rated value • at 500 V Rated value • at 690 V Rated value 	10 A 3 A 2 A 1 A
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 	10 A 6 A 6 A 3 A 2 A 1 A 0.15 A
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 	10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A
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 	7.6 A 9 A
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 	0.33 hp 1 hp 2 hp 3 hp 5 hp 7.5 hp
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 	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:	
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mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
Mounting type <ul style="list-style-type: none"> • Side-by-side mounting 	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022 Yes
Height	70 mm
Width	45 mm
Depth	73 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:	
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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 	2x (0,5 ... 4 mm ²)

— finely stranded with core end processing	2x (0.5 ... 2.5 mm ²)
— finely stranded without core end processing	2x (0.5 ... 2.5 mm ²)
• for AWG conductors for main contacts	2x (20 ... 12)
Type of connectable conductor cross-section	
• for auxiliary contacts	
— single or multi-stranded	2x (0,5 ... 4 mm ²)
— finely stranded with core end processing	2x (0.5 ... 2.5 mm ²)
— finely stranded without core end processing	2x (0.5 ... 2.5 mm ²)
• for AWG conductors for auxiliary contacts	2x (20 ... 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	40 %
• with high demand rate acc. to SN 31920	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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[Baumusterbescheinigung](#)



Test Certificates	Shipping Approval
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[spezielle Prüfbescheinigungen](#)

[Typprüfbescheinigung/Werkszeugnis](#)



Shipping Approval	other
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[Umweltbestätigung](#)

[Bestätigungen](#)

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

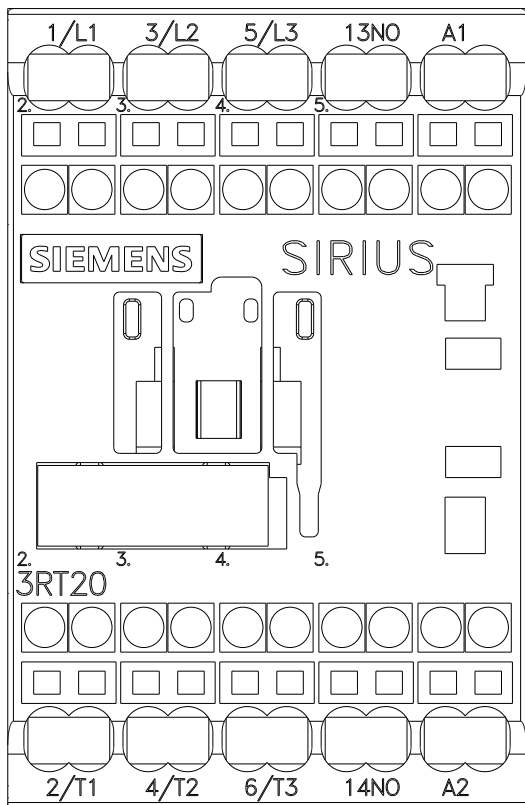
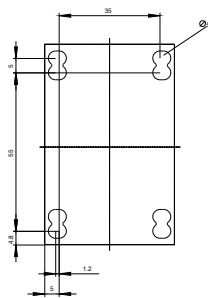
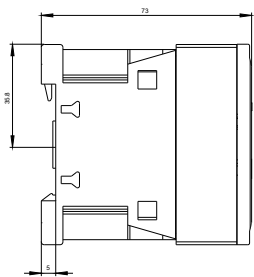
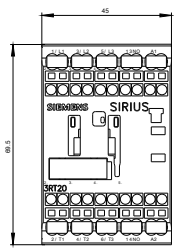
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RT20162AB01>

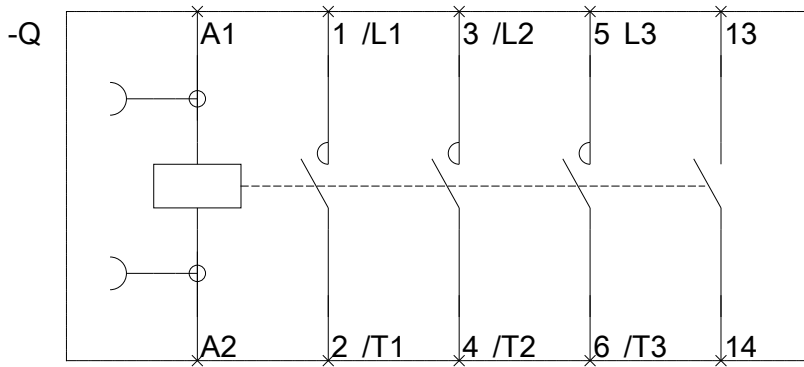
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RT20162AB01>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RT20162AB01&lang=en





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29.06.2015