



CONTACTOR,AC3:22KW/400V, 1NO+1NC, 20-33VAC/DC, COM.CAP. WITH VARISTOR, 3-POLE, SIZE S2, SPRING-TYPE TERMINAL

Figure similar

product brand name	SIRIUS
Product designation	3RT2 contactor
General technical data:	
Size of contactor	S2
Product expansion	
• function module for communication	Yes
• 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	IP00
• of the terminal	IP00
Degree of pollution	3
Shock resistance	
• at rectangular impulse	
— at AC	7.7g / 5 ms, 4.5g / 10 ms
— at DC	7.7g / 5 ms, 4.5g / 10 ms
• with sine pulse	
— at AC	12g / 5 ms, 7g / 10 ms
— at DC	12g / 5 ms, 7g / 10 ms
Mechanical service life (switching cycles)	
• of the contactor typical	10 000 000

<ul style="list-style-type: none"> • of the contactor with added electronics-compatible auxiliary switch block typical 	5 000 000
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • during operation 	-25 ... +60 °C
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • at AC-3 Rated value maximum 	690 V
Operating current	
<ul style="list-style-type: none"> • at AC-1 at 400 V <ul style="list-style-type: none"> — at ambient temperature 40 °C Rated value 	70 A
<ul style="list-style-type: none"> • at AC-1 up to 690 V <ul style="list-style-type: none"> — at ambient temperature 40 °C Rated value — at ambient temperature 60 °C Rated value 	70 A 60 A
<ul style="list-style-type: none"> • at AC-2 at 400 V Rated value 	51 A
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V Rated value — at 500 V Rated value — at 690 V Rated value 	51 A 50 A 24 A
Connectable conductor cross-section in main circuit at AC-1	
<ul style="list-style-type: none"> • at 60 °C minimum permissible • at 40 °C minimum permissible 	16 mm ² 25 mm ²
Operating current for ≥ 200000 operating cycles at AC-4	
<ul style="list-style-type: none"> • at 400 V Rated value • at 690 V Rated value 	24 A 20 A
Operating current	
<ul style="list-style-type: none"> • with 1 current path at DC-1 <ul style="list-style-type: none"> — at 24 V Rated value — at 110 V Rated value — at 220 V Rated value — at 440 V Rated value — at 600 V Rated value • with 2 current paths in series at DC-1 	55 A 4.5 A 1 A 0.4 A 0.25 A

— at 24 V Rated value	55 A
— at 110 V Rated value	45 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	55 A
— at 110 V Rated value	55 A
— at 220 V Rated value	45 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	35 A
— at 110 V Rated value	2.5 A
— at 220 V Rated value	1 A
— at 440 V Rated value	0.1 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	25 A
— at 220 V Rated value	5 A
— at 24 V Rated value	55 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	55 A
— at 220 V Rated value	25 A
— at 24 V Rated value	55 A
— at 440 V Rated value	0.6 A
— at 600 V Rated value	0.35 A
Operating power	
• at AC-1	
— at 230 V Rated value	26 kW
— at 230 V at 60 °C Rated value	23 kW
— at 400 V Rated value	46 kW
— at 400 V at 60 °C Rated value	39 kW
— at 690 V Rated value	79 kW
— at 690 V at 60 °C Rated value	68 kW
• at AC-2 at 400 V Rated value	22 kW
• at AC-3	
— at 230 V Rated value	15 kW

— at 400 V Rated value	22 kW
— at 500 V Rated value	30 kW
— at 690 V Rated value	22 kW
Operating power for ≥ 200000 operating cycles at AC-4	
• at 400 V Rated value	12.6 kW
• at 690 V Rated value	18.2 kW
Thermal short-time current restricted to 10 s	420 A
Active power loss at AC-3 at 400 V for rated value of the operating current per conductor	4 W
No-load switching frequency	
• at AC	1 500 1/h
• at DC	1 500 1/h
Operating frequency	
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	600 1/h
• at AC-3 maximum	800 1/h
• at AC-4 maximum	250 1/h
Control circuit/ Control:	
Type of voltage of the control supply voltage	AC/DC
Control supply voltage at AC	
• at 50 Hz Rated value	20 ... 33 V
• at 60 Hz Rated value	20 ... 33 V
Control supply voltage at DC	
• Rated value	20 ... 33 V
Operating range factor control supply voltage rated value of the magnet coil at AC	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.8 ... 1.1
Operating range factor control supply voltage rated value of the magnet coil at DC	0.8 ... 1.1
Design of the surge suppressor	with varistor
Apparent pick-up power of the magnet coil at AC	
• at 50 Hz	40 V·A
• at 60 Hz	40 V·A
Apparent holding power of the magnet coil at AC	
• at 50 Hz	2 V·A
• at 60 Hz	2 V·A
Closing power of the magnet coil at DC	23 W
Holding power of the magnet coil for DC	1 W
Closing delay	
• at AC	45 ... 70 ms

<ul style="list-style-type: none"> • at DC 	45 ... 60 ms
Arcing time	10 ... 20 ms
Residual current of the electronics for control with signal <0>	
<ul style="list-style-type: none"> • at AC at 230 V maximum permissible 	20 mA
<ul style="list-style-type: none"> • at DC at 24 V maximum permissible 	20 mA

Auxiliary circuit:

Number of NC contacts	
<ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — instantaneous contact 	1
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 	10 A
<ul style="list-style-type: none"> • at 400 V Rated value 	3 A
<ul style="list-style-type: none"> • at 500 V Rated value 	2 A
<ul style="list-style-type: none"> • at 690 V Rated value 	1 A
Operating current at DC-12	
<ul style="list-style-type: none"> • at 24 V Rated value 	10 A
<ul style="list-style-type: none"> • at 48 V Rated value 	6 A
<ul style="list-style-type: none"> • at 60 V Rated value 	6 A
<ul style="list-style-type: none"> • at 110 V Rated value 	3 A
<ul style="list-style-type: none"> • at 125 V Rated value 	2 A
<ul style="list-style-type: none"> • at 220 V Rated value 	1 A
<ul style="list-style-type: none"> • at 600 V Rated value 	0.15 A
Operating current at DC-13	
<ul style="list-style-type: none"> • at 24 V Rated value 	10 A
<ul style="list-style-type: none"> • at 48 V Rated value 	2 A
<ul style="list-style-type: none"> • at 60 V Rated value 	2 A
<ul style="list-style-type: none"> • at 110 V Rated value 	1 A
<ul style="list-style-type: none"> • at 125 V Rated value 	0.9 A
<ul style="list-style-type: none"> • at 220 V Rated value 	0.3 A
<ul style="list-style-type: none"> • at 600 V Rated value 	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 	52 A
<ul style="list-style-type: none"> • at 600 V Rated value 	52 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 	<p>3 hp</p> <p>10 hp</p> <p>15 hp</p> <p>15 hp</p> <p>40 hp</p> <p>50 hp</p>
Contact rating of the auxiliary contacts acc. to UL	A600 / P600

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 NH 3NA, DIAZED 5SB, NEOZED 5SE: 160 A</p> <p>gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 80 A</p> <p>fuse gL/gG: 10 A</p>
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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 <ul style="list-style-type: none"> • Side-by-side mounting 	<p>screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022</p> <p>Yes</p>
Height	114 mm
Width	55 mm
Depth	130 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 	<p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>50 mm</p> <p>6 mm</p> <p>50 mm</p> <p>0 mm</p>

— Backwards	0 mm
— upwards	50 mm
— downwards	50 mm
— at the side	6 mm





Connections/ Terminals:

Type of electrical connection <ul style="list-style-type: none"> • for main current circuit • for auxiliary and control current circuit 	screw-type 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 • for AWG conductors for main contacts 	2x (1 ... 35 mm ²), 1x (1 ... 50 mm ²) 2x (1 ... 25 mm ²), 1x (1 ... 35 mm ²) 2x (18 ... 2), 1x (18 ... 1)
Type of connectable conductor cross-section <ul style="list-style-type: none"> • for auxiliary 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 auxiliary contacts 	2x (0,5 ... 2,5 mm ²) 2x (0.5 ... 1.5 mm ²) 2x (0.5 ... 2.5 mm ²) 2x (20 ... 14)

Safety related data:

Proportion of dangerous failures <ul style="list-style-type: none"> • with low demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920 	40 % 73 %
Product function <ul style="list-style-type: none"> • Mirror contact acc. to IEC 60947-4-1 • positively driven operation acc. to IEC 60947-5-1 	Yes No

Certificates/ approvals:

General Product Approval	Declaration of Conformity	other
 CSA	 EAC	 UL
	 EG-Konf.	Umweltbestätigung

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

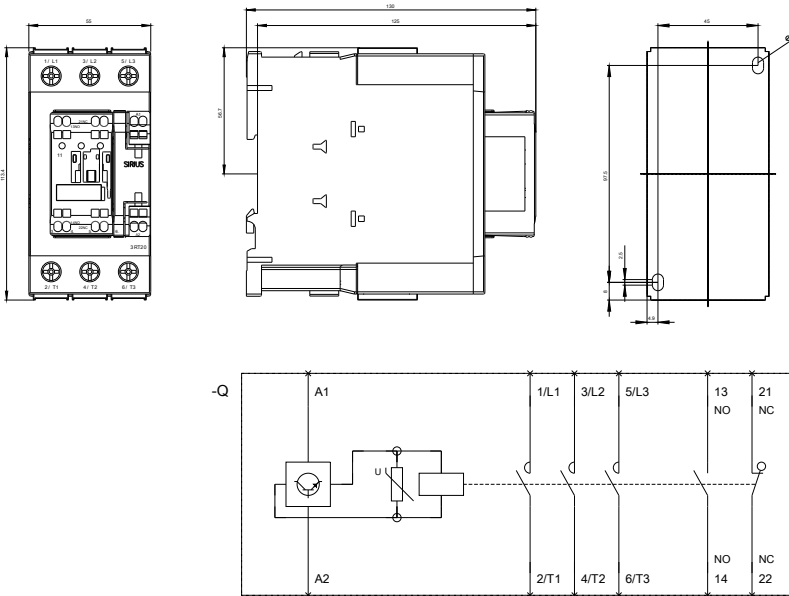
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT20363NB300CC0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT20363NB300CC0>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT20363NB300CC0&lang=en



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