



4NO CONTACTOR, AC1: 22A AC 110V 50HZ, 120V 60HZ 4-POLE,  
4NO, 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	7,3g / 5 ms, 4,7g / 10 ms
• with sine pulse — at AC	11,4g / 5 ms, 7,3g / 10 ms
Mechanical service life (switching cycles)	
• of the 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
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#### Ambient conditions:

<b>Installation altitude at height above sea level maximum</b>	2 000 m
<b>Ambient temperature</b>	
• during operation	-25 ... +60 °C

• during storage -55 ... +80 °C

#### Main circuit:

<b>Number of NO contacts for main contacts</b>	4
<b>Number of NC contacts for main contacts</b>	0
<b>Operating voltage</b>	
• at AC-3 Rated value maximum	690 V
<b>Operating current</b>	
• 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	12 A
• at AC-3	
— at 400 V Rated value	12 A
<b>Connectable conductor cross-section in main circuit at AC-1</b>	
• at 60 °C minimum permissible	2.5 mm <sup>2</sup>
• at 40 °C minimum permissible	4 mm <sup>2</sup>
<b>Operating current</b>	
• 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
• 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
• 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
<b>Operating current</b>	
• 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
<b>Operating power</b>	
• 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 at 60 °C Rated value	22 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
<b>Thermal short-time current restricted to 10 s</b>	96 A
<b>Active power loss at AC-3 at 400 V for rated value of the operating current per conductor</b>	1.2 W
<b>No-load switching frequency</b>	
• at AC	10 000 1/h
<b>Operating frequency</b>	
• 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
<b>Control circuit/ Control:</b>	
<b>Type of voltage of the control supply voltage</b>	AC
<b>Control supply voltage at AC</b>	
• at 50 Hz Rated value	110 V
• at 60 Hz Rated value	120 V
<b>Operating range factor control supply voltage rated value of the magnet coil at AC</b>	
• at 50 Hz	0.8 ... 1.1

• at 60 Hz	0.85 ... 1.1
<b>Apparent pick-up power of the magnet coil at AC</b>	
• at 50 Hz	37 V·A
• at 60 Hz	33 V·A
<b>Inductive power factor with closing power of the coil</b>	
• at 50 Hz	0.8
• at 60 Hz	0.75
<b>Apparent holding power of the magnet coil at AC</b>	
• at 50 Hz	5.7 V·A
• at 60 Hz	4.4 V·A
<b>Inductive power factor with the holding power of the coil</b>	
• at 50 Hz	0.25
• at 60 Hz	0.25
<b>Closing delay</b>	
• at AC	8 ... 33 ms
<b>Opening delay</b>	
• at AC	4 ... 15 ms
<b>Arcing time</b>	10 ... 15 ms

<b>Auxiliary circuit:</b>	
<b>Number of NC contacts</b>	
• for auxiliary contacts	
— instantaneous contact	0
<b>Number of NO contacts</b>	
• for auxiliary contacts	
— instantaneous contact	0
<b>Contact reliability of the auxiliary contacts</b>	1 faulty switching per 100 million (17 V, 1 mA)

<b>UL/CSA ratings:</b>	
<b>Full-load current (FLA) for three-phase AC motor</b>	
• at 480 V Rated value	7.6 A
• at 600 V Rated value	9 A
<b>yielded mechanical performance [hp]</b>	
• for single-phase AC motor	
— at 110/120 V Rated value	0.33 hp
— at 230 V Rated value	1 hp
• for three-phase AC motor	
— at 200/208 V Rated value	2 hp
— at 220/230 V Rated value	3 hp
— at 460/480 V Rated value	5 hp
— at 575/600 V Rated value	7.5 hp

<b>Short-circuit:</b>	
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## 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

## Installation/ mounting/ dimensions:

<b>mounting position</b>	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
<b>Mounting type</b>	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
• Side-by-side mounting	Yes
<b>Height</b>	58 mm
<b>Width</b>	45 mm
<b>Depth</b>	73 mm
<b>Required spacing</b>	
• 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
— at the side	6 mm
— downwards	0 mm
• for live parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	6 mm

## Connections/ Terminals:

<b>Type of electrical connection</b>	
• for main current circuit	screw-type terminals
• for auxiliary and control current circuit	screw-type terminals
<b>Type of connectable conductor cross-section</b>	
• for main contacts	
— single or multi-stranded	2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup>

— finely stranded with core end processing	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
• for AWG conductors for main contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12
<b>Type of connectable conductor cross-section</b>	
• for auxiliary contacts	
— single or multi-stranded	2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup>
— finely stranded with core end processing	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
• for AWG conductors for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12
<b>Safety related data:</b>	
<b>B10 value with high demand rate acc. to SN 31920</b>	1 000 000
<b>Proportion of dangerous failures</b>	
• with low demand rate acc. to SN 31920	40 %
• with high demand rate acc. to SN 31920	73 %
<b>Product function</b>	
• Mirror contact acc. to IEC 60947-4-1	Yes; with 3RH29
<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	20 y

#### Certificates/ approvals:

General Product Approval	Functional Safety/Safety of Machinery	Declaration of Conformity
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CCC



CSA



Baumusterbescheinigung



EG-Konf.

Test Certificates	Shipping Approval
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[spezielle Prüfbescheinigungen](#)

[Typprüfbescheinigung/Werkszeugnis](#)



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GL

Shipping Approval	other
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LRS



PRS



RINA



RMRS

[Bestätigungen](#)

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other
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VDE

## Further information

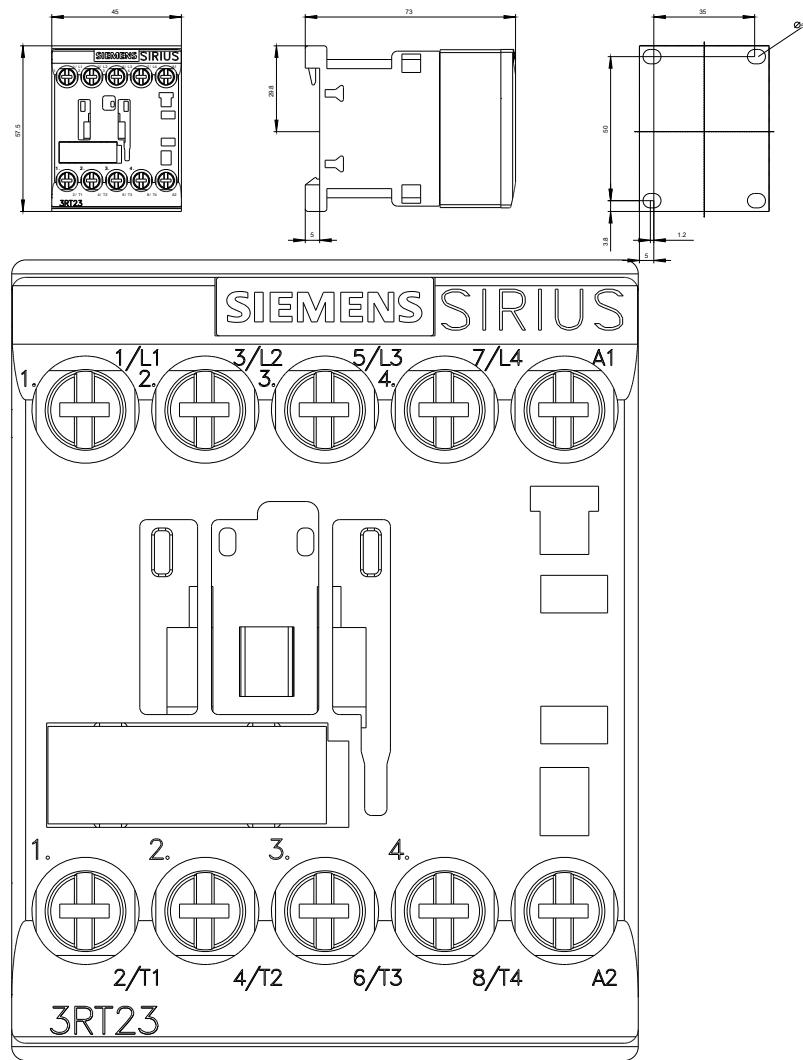
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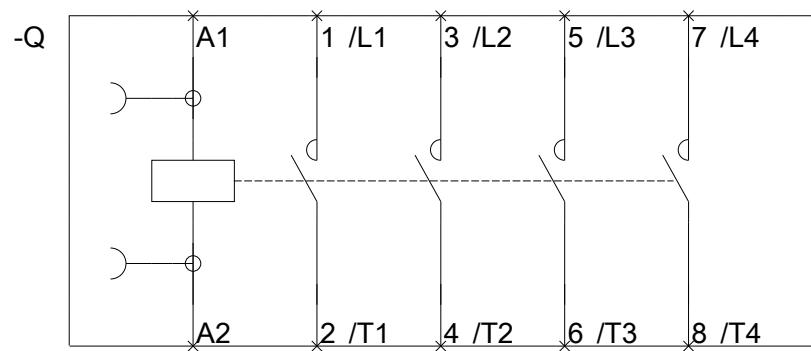
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Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)  
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