

CONTACTOR, AC-3, 15KW/400V, 2NO+2NC, DC 24V, 3-POLE, SZ
S0 SCREW TERMINAL PERMANENT AUX. SWITCH FOR SUVA
APPLICATIONS



product brand name	SIRIUS
Product designation	3RT2 contactor
General technical data:	
Size of contactor	S0
Product expansion	
• function module for communication	No
• Auxiliary switch	No
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 DC	10g / 5 ms, 7,5g / 10 ms
• with sine pulse	
— at DC	15g / 5 ms, 10g / 10 ms
Mechanical service life (switching cycles)	
• of contactor typical	10 000 000
• 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	50 A
• at AC-1 up to 690 V	
— at ambient temperature 40 °C rated value	50 A
— at ambient temperature 60 °C rated value	42 A
• at AC-2 at 400 V rated value	32 A
• at AC-3	
— at 400 V rated value	32 A
— at 500 V rated value	32 A
— at 690 V rated value	21 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 approx. 200000 operating cycles at AC-4	
• at 400 V rated value	12 A
• at 690 V rated value	12 A
Operating current	
• at 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	
• at 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	16 kW
— at 230 V at 60 °C rated value	15.5 kW
— at 400 V rated value	28 kW
— at 400 V at 60 °C rated value	27.5 kW

— at 690 V rated value	48 kW
— at 690 V at 60 °C rated value	47.5 kW
• at AC-2 at 400 V rated value	15 kW
• at AC-3	
— at 230 V rated value	7.5 kW
— at 400 V rated value	15 kW
— at 690 V rated value	18.5 kW
Operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	6 kW
• at 690 V rated value	10.3 kW
Thermal short-time current limited to 10 s	260 A
Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor	2.7 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	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	DC
Control supply voltage at DC	
• rated value	24 V
Operating range factor control supply voltage rated value of magnet coil at DC	0.8 ... 1.1
Closing power of magnet coil at DC	5.9 W
Holding power of magnet coil at 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	7 mA
• at DC at 24 V maximum permissible	16 mA

Auxiliary circuit:

Number of NC contacts	
• for auxiliary contacts	
— instantaneous contact	2

Number of NO contacts	
• for auxiliary contacts — instantaneous contact	2
Operating current at AC-12 maximum	10 A
Operating current at AC-15	
• at 230 V rated value	6 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	6 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	27 A
• at 600 V rated value	27 A
• yielded mechanical performance [hp] for single-phase AC motor — at 110/120 V rated value — at 230 V rated value	2 hp 5 hp
• Yielded mechanical performance [hp] for three-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value	10 hp 10 hp 20 hp 25 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 NH 3NA, DIAZED 5SB, NEOZED 5SE: 125 A
gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 50 A
fuse gL/gG: 10 A

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

85 mm

Width

45 mm

Depth

151 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 (1 ... 2,5 mm ²), 2x (2,5 ... 10 mm ²) 2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ² 2x (16 ... 12), 2x (14 ... 8)
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 (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 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 • with high demand rate acc. to SN 31920	40 % 73 %
Failure rate [FIT] • with low demand rate acc. to SN 31920	100 FIT
Product function • Mirror contact acc. to IEC 60947-4-1 • positively driven operation acc. to IEC 60947-5-1	Yes Yes
T1 value for proof test interval or service life acc. to IEC 61508	20 y
Certificates/approvals	

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



[spezielle Prüfbescheinigungen](#)



Shipping Approval	other
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[Bestätigungen](#)

other

[Umweltbestätigung](#)



Further information

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

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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT20271BB443MA0>

Cax online generator

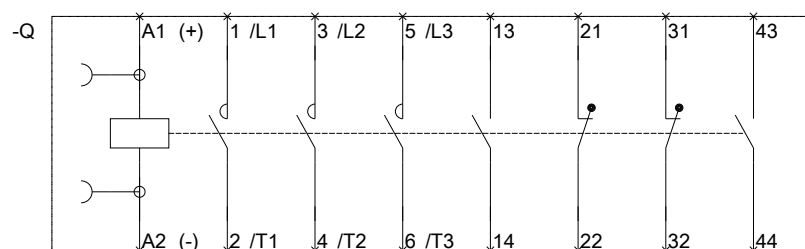
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT20271BB443MA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT20271BB443MA0>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT20271BB443MA0&lang=en



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