

CONTACTOR, AC-3, 5.5KW/400V, 1NO, AC 100V 50HZ, 100...110V
60HZ 3-POLE, 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

<ul style="list-style-type: none"> • with sine pulse <ul style="list-style-type: none"> — at AC 	11,4g / 5 ms, 7,3g / 10 ms
Mechanical service life (switching cycles)	
<ul style="list-style-type: none"> • of the contactor typical 	30 000 000
<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 	22 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 	22 A 20 A
<ul style="list-style-type: none"> • at AC-2 at 400 V Rated value 	12 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 	12 A 9.2 A 6.7 A
Connectable conductor cross-section in main circuit at AC-1	
<ul style="list-style-type: none"> • at 60 °C minimum permissible 	2.5 mm ²
<ul style="list-style-type: none"> • at 40 °C minimum permissible 	4 mm ²
Operating current	
<ul style="list-style-type: none"> • at 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 	20 A 2.1 A 0.8 A 0.6 A 0.6 A
<ul style="list-style-type: none"> • 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	
• at 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	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	5.5 kW
Thermal short-time current limited to 10 s	90 A
Active power loss at AC-3 at 400 V for rated value of the operating current per conductor	1.2 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 	1 000 1/h
<ul style="list-style-type: none"> • at AC-2 maximum 	750 1/h
<ul style="list-style-type: none"> • at AC-3 maximum 	750 1/h
<ul style="list-style-type: none"> • at AC-4 maximum 	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 	100 V
<ul style="list-style-type: none"> • at 60 Hz Rated value 	110 V
Operating range factor control supply voltage rated value of the magnet coil at AC	
<ul style="list-style-type: none"> • at 50 Hz 	0.8 ... 1.1
<ul style="list-style-type: none"> • at 60 Hz 	0.85 ... 1.1
Apparent pick-up power of the magnet coil at AC	
<ul style="list-style-type: none"> • at 50 Hz 	37 V·A
<ul style="list-style-type: none"> • at 60 Hz 	33 V·A
Inductive power factor with closing power of the coil	
<ul style="list-style-type: none"> • at 50 Hz 	0.8
<ul style="list-style-type: none"> • at 60 Hz 	0.75
Apparent holding power of the magnet coil at AC	
<ul style="list-style-type: none"> • at 50 Hz 	5.7 V·A
<ul style="list-style-type: none"> • at 60 Hz 	4.4 V·A
Inductive power factor with the holding power of the coil	
<ul style="list-style-type: none"> • at 50 Hz 	0.25
<ul style="list-style-type: none"> • at 60 Hz 	0.25
Closing delay	
<ul style="list-style-type: none"> • at AC 	8 ... 33 ms
Opening delay	
<ul style="list-style-type: none"> • at AC 	4 ... 15 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 	4 mA
<ul style="list-style-type: none"> • at DC at 24 V maximum permissible 	10 mA

Auxiliary circuit:

Number of NC contacts	
<ul style="list-style-type: none"> • for auxiliary contacts 	
<ul style="list-style-type: none"> — 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 	11 A 11 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 	0.5 hp 2 hp 3 hp 3 hp 7.5 hp 10 hp
Contact rating of the auxiliary contacts acc. 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: 50 A
 gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25 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
<ul style="list-style-type: none"> • Side-by-side mounting 	Yes
Height	58 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:

Type of electrical connection	
<ul style="list-style-type: none"> • for main current circuit • for auxiliary and control current circuit 	screw-type terminals screw-type 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 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²), 2x 4 mm ²

<ul style="list-style-type: none"> — finely stranded with core end processing • for AWG conductors for main contacts 	<p>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)</p> <p>2x (20 ... 16), 2x (18 ... 14), 2x 12</p>
<p>Type of connectable conductor cross-section</p> <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 • for AWG conductors for auxiliary contacts 	<p>2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²), 2x 4 mm²</p> <p>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)</p> <p>2x (20 ... 16), 2x (18 ... 14), 2x 12</p>

Safety related data:

B10 value with high demand rate acc. to SN 31920	1 000 000
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 	<p>40 %</p> <p>73 %</p>
Product function	
<ul style="list-style-type: none"> • 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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Test Certificates	Shipping Approval
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Shipping Approval	other
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[Bestätigungen](#)

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

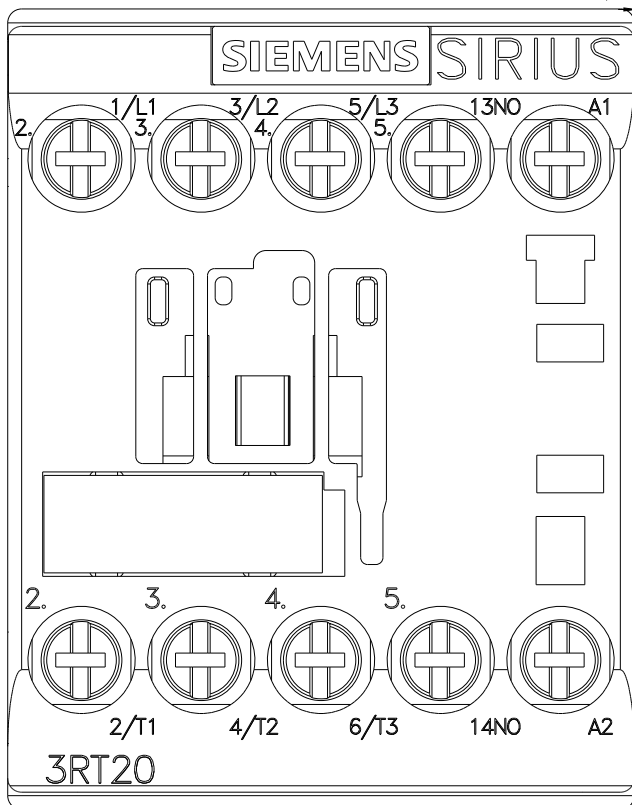
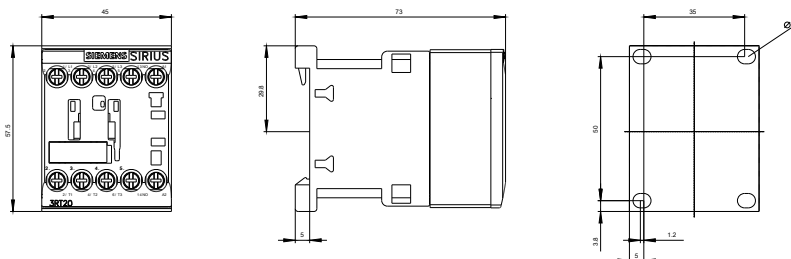
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RT20171AG61>

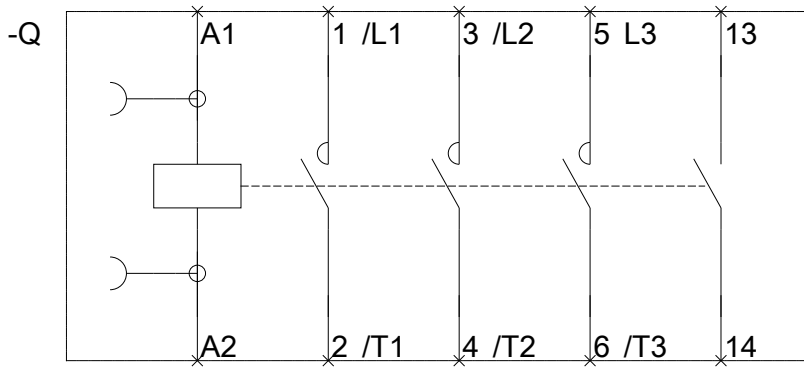
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RT20171AG61>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RT20171AG61&lang=en





last modified:

09.11.2015