

CONTACTOR, AC-3, 4KW/400V, 2NO+2NC, AC 230V, 50/60 HZ, 3-POLE, SZ S00 SPRING-LOADED TERMINAL PERMANENT AUX. SWITCH FOR SUVA APPLICATIONS

product brand name	SIRIUS
Product designation	3RT2 contactor

General technical data:

Insulation voltage		
<ul style="list-style-type: none"> Rated value 	V	690
Degree of pollution		3
Surge voltage resistance Rated value	kV	6
Mechanical service life (switching cycles)		
<ul style="list-style-type: none"> 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
Thermal short-time current restricted to 10 s	A	72
Protection class IP		
<ul style="list-style-type: none"> on the front 		IP20
<ul style="list-style-type: none"> of the terminal 		IP20
Equipment marking		
<ul style="list-style-type: none"> acc. to DIN EN 61346-2 		Q
<ul style="list-style-type: none"> acc. to DIN EN 81346-2 		Q

Main circuit:

Number of poles for main current circuit		3
Number of NC contacts for main contacts		0
Number of NO contacts for main contacts		3
Operating voltage		

• at AC-3 Rated value maximum	V	690
Operating current		
• at AC-1		
— at 400 V at ambient temperature 40 °C Rated value	A	22
— up to 690 V at ambient temperature 40 °C Rated value	A	22
— up to 690 V at ambient temperature 60 °C Rated value	A	20
• at AC-2 at 400 V Rated value	A	9
• at AC-3		
— at 400 V Rated value	A	9
— at 500 V Rated value	A	7.7
— at 690 V Rated value	A	6.7
• at AC-4 at 400 V Rated value	A	8.5
Operating current with 1 current path		
• at DC-1		
— at 24 V Rated value	A	20
— at 110 V Rated value	A	2.1
— at 220 V Rated value	A	0.8
— at 440 V Rated value	A	0.6
— at 600 V Rated value	A	0.6
• at DC-3 at DC-5		
— at 24 V Rated value	A	20
— at 110 V Rated value	A	0.1
Operating current with 2 current paths in series		
• at DC-1		
— at 24 V Rated value	A	20
— at 110 V Rated value	A	12
— at 220 V Rated value	A	1.6
— at 440 V Rated value	A	0.8
— at 600 V Rated value	A	0.7
• at DC-3 at DC-5		
— at 110 V Rated value	A	0.35
— at 24 V Rated value	A	20
Operating current with 3 current paths in series		
• at DC-1		
— at 24 V Rated value	A	20
— at 110 V Rated value	A	20
— at 220 V Rated value	A	20
— at 440 V Rated value	A	1.3
— at 600 V Rated value	A	1

<ul style="list-style-type: none"> • at DC-3 at DC-5 <ul style="list-style-type: none"> — at 110 V Rated value — at 220 V Rated value — at 24 V Rated value — at 440 V Rated value — at 600 V Rated value 	A	20
	A	1.5
	A	20
	A	0.2
	A	0.2
Operating power		
<ul style="list-style-type: none"> • at AC-1 at 400 V Rated value • at AC-2 at 400 V Rated value • at AC-4 at 400 V Rated value 	kW	13
	kW	4
	kW	4
Operating power		
<ul style="list-style-type: none"> • at AC-1 <ul style="list-style-type: none"> — at 230 V at 60 °C Rated value — at 230 V Rated value — at 400 V at 60 °C Rated value — at 690 V at 60 °C Rated value — at 690 V Rated value • at AC-3 <ul style="list-style-type: none"> — at 230 V Rated value — at 400 V Rated value — at 690 V Rated value 	kW	7.5
	kW	7.5
	kW	13
	kW	22
	kW	22
	kW	2.2
	kW	4
	kW	5.5
Operating power for ≥ 200000 operating cycles at AC-4		
<ul style="list-style-type: none"> • at 400 V Rated value • at 690 V Rated value 	kW	2
	kW	2.5
Operating frequency		
<ul style="list-style-type: none"> • at AC-3 maximum 	1/h	750

Control circuit/ Control:

Type of voltage of the control supply voltage		AC
Control supply voltage with AC		
<ul style="list-style-type: none"> • at 50 Hz Rated value • at 60 Hz Rated value 	V	230
	V	230
Operating range factor control supply voltage rated value of the magnet coil with AC		
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 		0.8 ... 1.1
		0.85 ... 1.1

Auxiliary circuit:

Number of NC contacts		
<ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — instantaneous contact 		2
Number of NO contacts		

<ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — instantaneous contact 		2
Product expansion Auxiliary switch		No
Operating current at AC-15		
<ul style="list-style-type: none"> • at 230 V Rated value 	A	6
<ul style="list-style-type: none"> • at 400 V Rated value 	A	3
<ul style="list-style-type: none"> • at 690 V Rated value 	A	1
Operating current		
<ul style="list-style-type: none"> • at DC-12 at 125 V Rated value 	A	2
<ul style="list-style-type: none"> • at DC-12 at 220 V Rated value 	A	1
<ul style="list-style-type: none"> • at DC-12 at 600 V Rated value 	A	0.15
<ul style="list-style-type: none"> • at DC-13 at 125 V Rated value 	A	0.9
<ul style="list-style-type: none"> • at DC-13 at 220 V Rated value 	A	0.3
<ul style="list-style-type: none"> • at DC-13 at 600 V Rated value 	A	0.1
Operating current		
<ul style="list-style-type: none"> • at DC-12 <ul style="list-style-type: none"> — at 60 V Rated value — at 110 V Rated value 	A	6
	A	3
<ul style="list-style-type: none"> • at DC-13 <ul style="list-style-type: none"> — at 24 V Rated value — at 60 V Rated value — at 110 V Rated value 	A	6
	A	2
	A	1
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 	A	7.6
<ul style="list-style-type: none"> • at 600 V Rated value 	A	9
yielded mechanical performance [hp]		
<ul style="list-style-type: none"> • for single-phase AC motor at 110/120 V Rated value 	metric hp	0.33
<ul style="list-style-type: none"> • for single-phase AC motor at 230 V Rated value 	metric hp	1
<ul style="list-style-type: none"> • for three-phase AC motor at 200/208 V Rated value 	metric hp	2
<ul style="list-style-type: none"> • for three-phase AC motor at 220/230 V Rated value 	metric hp	3
<ul style="list-style-type: none"> • for three-phase AC motor at 460/480 V Rated value 	metric hp	5
<ul style="list-style-type: none"> • for three-phase AC motor at 575/600 V Rated value 	metric hp	7.5
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

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	mm	69.5
Width	mm	45
Depth	mm	121
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 	mm	0 0 0 0 0 0 0 0 6 0 0 0 0 0 6

Connections/ Terminals:

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 — finely stranded with core end processing — finely stranded without core end processing • for AWG conductors for main contacts • 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 ... 4 mm ²) 2x (0.5 ... 2.5 mm ²) 2x (0.5 ... 2.5 mm ²) 2x (20 ... 12) 2x (0,5 ... 4 mm ²) 2x (0.5 ... 2.5 mm ²) 2x (0.5 ... 2.5 mm ²) 2x (20 ... 12)
Apparent pick-up power of the magnet coil with AC		
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	V·A V·A	27 31.7

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 	% %	40 73
Failure rate [FIT] with low demand rate acc. to SN 31920	FIT	100
Product function Mirror contact acc. to IEC 60947-4-1		Yes
T1 value for proof test interval or service life acc. to IEC 61508	y	20
Protection against electrical shock		finger-safe

Mechanical data:

Size of contactor		S00
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Ambient conditions:

Installation altitude at height above sea level maximum	m	2 000
Ambient temperature		
<ul style="list-style-type: none"> • during operation • during storage 	°C °C	-25 ... +60 -55 ... +80

Certificates/ approvals:

General Product Approval	Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates
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[Type Examination](#)



[Special Test Certificate](#)

Shipping Approval



Shipping Approval	other
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[Confirmation](#)

[Environmental Confirmations](#)



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

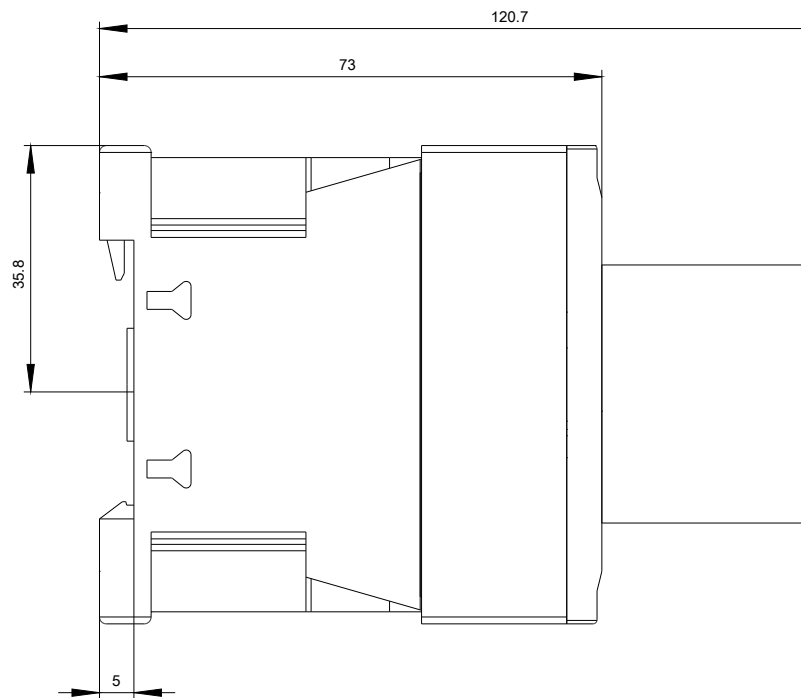
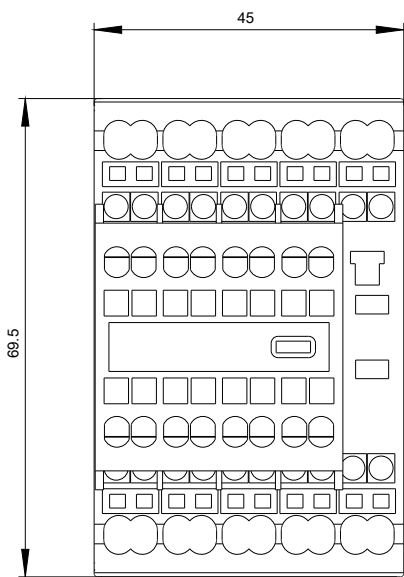
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT20162AP043MA0>

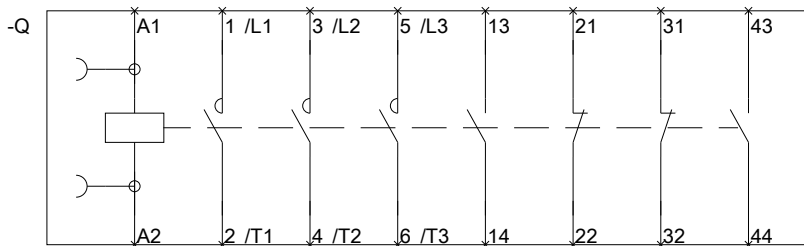
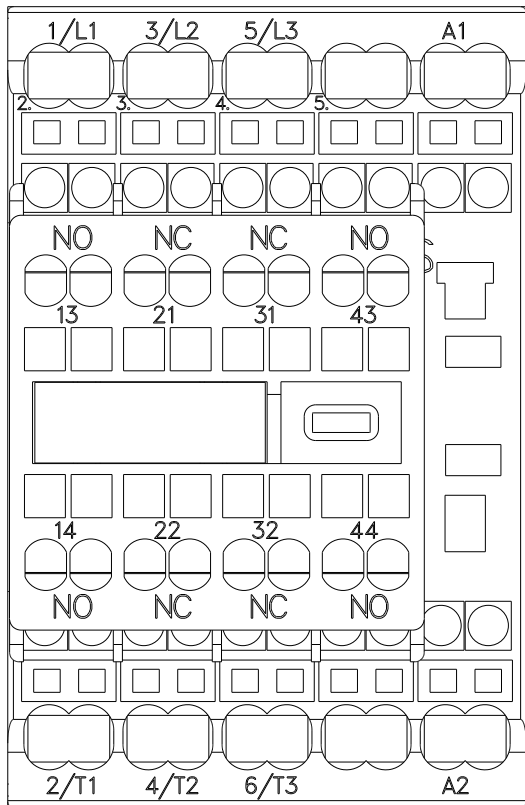
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RT20162AP043MA0/all>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT20162AP043MA0&lang=en





last modified:

11.03.2015