



CONTACTOR, AC-3, 18.5KW/400V, 2NO+2NC
 AC110V 50HZ/120V 60HZ 3-POLE, SZ S0 SCREW
 TERMINAL PERMANENT AUX. SWITCH FOR SUVA
 APPLICATIONS

Figure similar

product brand name	SIRIUS
Product designation	3RT2 contactor

General technical data:

Insulation voltage		
• Rated value	V	690
Degree of pollution		3
Surge voltage resistance Rated value	kV	6
Mechanical service life (switching cycles)		
• of the 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
Thermal short-time current restricted to 10 s	A	304
Protection class IP		
• on the front		IP20
• of the terminal		IP20
Equipment marking		
• acc. to DIN EN 61346-2		Q
• 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	50
— up to 690 V at ambient temperature 40 °C Rated value	A	50
— up to 690 V at ambient temperature 60 °C Rated value	A	42
• at AC-2 at 400 V Rated value	A	38
• at AC-3		
— at 400 V Rated value	A	38
— at 500 V Rated value	A	32
— at 690 V Rated value	A	21
• at AC-4 at 400 V Rated value	A	22
Operating current with 1 current path		
• at DC-1		
— at 24 V Rated value	A	35
— at 110 V Rated value	A	4.5
— at 220 V Rated value	A	1
— at 440 V Rated value	A	0.4
— at 600 V Rated value	A	0.25
• at DC-3 at DC-5		
— at 24 V Rated value	A	20
— at 110 V Rated value	A	2.5
— at 220 V Rated value	A	1
— at 440 V Rated value	A	0.09
— at 600 V Rated value	A	0.06
Operating current with 2 current paths in series		
• at DC-1		
— at 24 V Rated value	A	35
— at 110 V Rated value	A	35
— at 220 V Rated value	A	5
— at 440 V Rated value	A	1
— at 600 V Rated value	A	0.8
• at DC-3 at DC-5		
— at 110 V Rated value	A	15
— at 220 V Rated value	A	3
— at 24 V Rated value	A	35
— at 440 V Rated value	A	0.27
— at 600 V Rated value	A	0.16
Operating current with 3 current paths in series		

<ul style="list-style-type: none"> • 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 • 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	35
	A	35
	A	35
	A	2.9
	A	1.4
	A	35
	A	10
	A	35
	A	0.6
	A	0.6
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	28
	kW	18.5
	kW	11
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	15.5
	kW	16
	kW	27.5
	kW	47.5
	kW	48
	kW	11
	kW	18.5
	kW	18.5
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	6
	kW	10.3
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	110
	V	120
Operating range factor control supply voltage rated value of the magnet coil with AC		
<ul style="list-style-type: none"> • at 50 Hz 		0.8 ... 1.1

- at 60 Hz

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	34
<ul style="list-style-type: none"> • at 600 V Rated value 	A	27
yielded mechanical performance [hp]		
<ul style="list-style-type: none"> • for single-phase AC motor at 110/120 V Rated value 	metric hp	3
<ul style="list-style-type: none"> • for single-phase AC motor at 230 V Rated value 	metric hp	5
<ul style="list-style-type: none"> • for three-phase AC motor at 200/208 V Rated value 	metric hp	10
<ul style="list-style-type: none"> • for three-phase AC motor at 220/230 V Rated value 	metric hp	10

<ul style="list-style-type: none"> • for three-phase AC motor at 460/480 V Rated value 	metric hp	25
<ul style="list-style-type: none"> • for three-phase AC motor at 575/600 V Rated value 	metric hp	25
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: 100 A gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 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	85
Width	mm	45
Depth	mm	141
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 	mm	0 0 0 0 0 0 0 0 6 0 0 0 0 0

— at the side

mm 6

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 — finely stranded with 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 • for AWG conductors for auxiliary 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) 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)
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	81 79

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		S0
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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	EMC	Functional Safety/Safety of Machinery
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[Type Examination](#)

Declaration of Conformity	Test Certificates	Shipping Approval
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[Special Test Certificate](#)



Shipping Approval	other
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[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

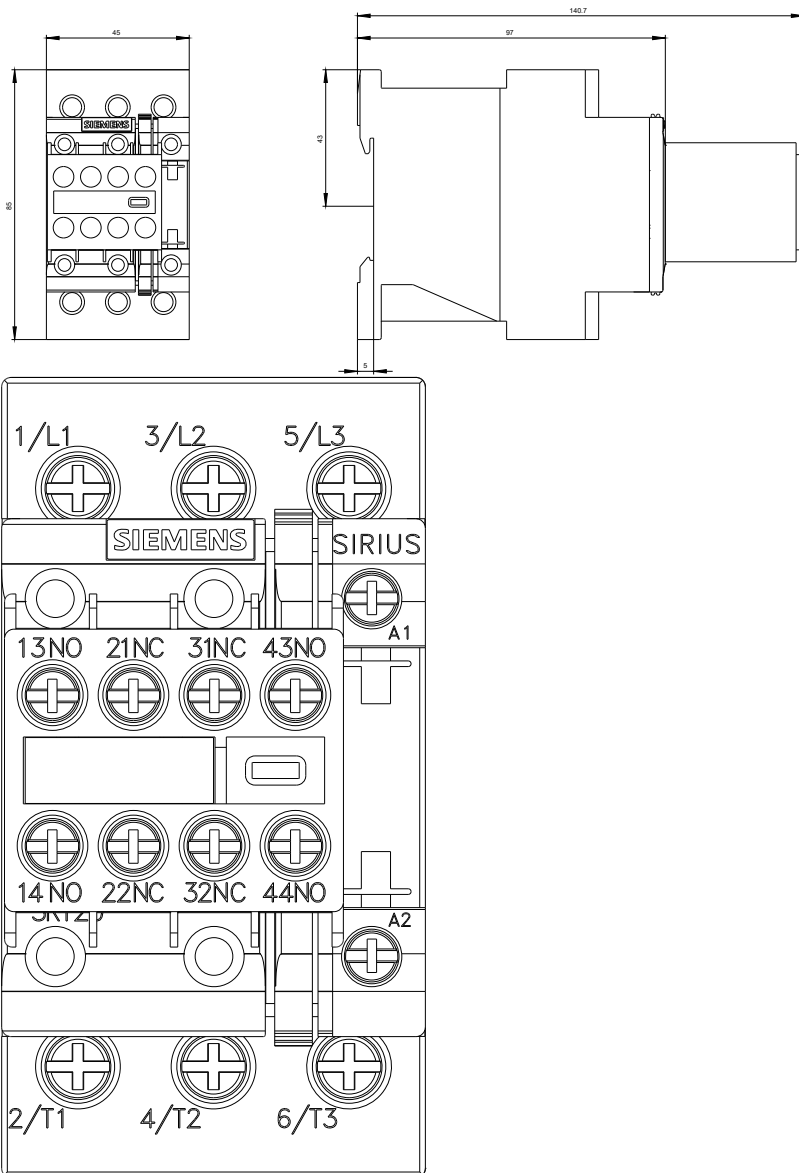
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT20281AK643MA0>

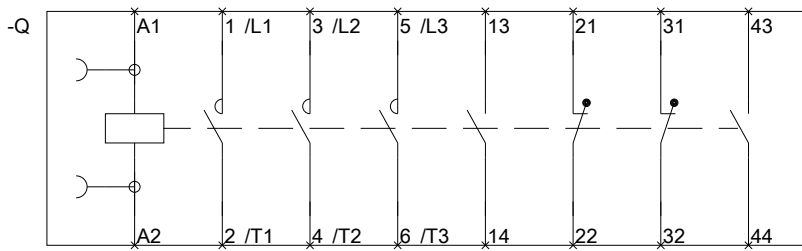
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RT20281AK643MA0/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=3RT20281AK643MA0&lang=en





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