SIEMENS

Data sheet

3RA2417-8XF31-2BB4

STAR-DELTA COMB. AC3, 11KW/400V DC24V, 3-POLE SZ S00, SPRING-LOADED TERMINAL ELECTR. AND MECH. INTERLOCK 3NO INTEGR.



product brand name	SIRIUS
Product designation	star-delta (wye-delta) contactor assembly 3RA24
Manufacturer article number	
 1 of the supplied contactor 	3RT2018-2BB41
 2 of the supplied contactor 	3RT2018-2BB41
 3 of the supplied contactor 	3RT2016-2BB41
 of the supplied RS assembly kit 	3RA2913-2BB2
 of the supplied function module for wye-delta circuits 	3RA2816-0EW20

General technical data:		
Insulation voltage		
 with degree of pollution 3 Rated value 	V	690
Degree of pollution		3
Shock resistance		9.8g / 5 ms and 5.9g / 10 ms
Surge voltage resistance Rated value	kV	6
Mechanical service life (switching cycles)		
 of the contactor typical 		10 000 000
 of the contactor with added auxiliary switch 		10 000 000
block typical		
Protection class IP		
• on the front		IP20
Equipment marking		
● acc. to DIN EN 81346-2		Q

Main circuit:		
Number of poles for main current circuit	3	3

Operating voltage • at AC-3 Rated value maximum Operating current • at AC-1 — at 400 V at ambient temperature 40 °C Rated value — at 400 V Rated value — at 400 V Rated value • at AC-2 at 400 V Rated value • at AC-3 — at 400 V Rated value A 25 Operating power • at AC-3 — at 400 V Rated value VW 11 Operating power • at AC-3 — at 400 V Rated value NW 11 Operating power • at AC-3 — at 400 V Rated value NW 11 Operating frequency • at AC-3 maximum Inh 1 000 No-load switching frequency • at AC-3 maximum Inh 1 000 Operating frequency • at AC-3 ma	Number of NC contacts for main contacts		0
e at AC-3 Rated value maximum or at AC-1 — at 40 V at ambient temperature 40 °C Rated value — at 400 V at ambient temperature 60 °C Rated value — at 400 V Rated value — at 400 V Rated value • at AC-2 at 400 V Rated value • at AC-3 — at 400 V Rated value • at AC-3 — at 400 V Rated value • at AC-3 — at 400 V Rated value • at AC-3 — at 400 V Rated value • at AC-3 — at 400 V Rated value • at AC-3 — at 400 V Rated value • by AC-2 at 400 V Rated value • at AC-3 — at 400 V Rated value • by AC-2 at 400 V Rated value — at 500 V Rated value — at 500 V Rated value — at 400 V Rated value — at 500 V Rated value — at 400 V Rated value — by AC-3 maximum — at 400-3 maximum — by AC-3 maximum — at 400-3 maximum — by AC-3 maximum — by	Number of NO contacts for main contacts		3
Operating current • at AC-1 — at 400 V at ambient temperature 40 °C Rated value — at 400 V at ambient temperature 60 °C Rated value • at AC-2 at 400 V Rated value • at AC-2 at 400 V Rated value • at AC-3 — at 400 V Rated value • at AC-3 — at 400 V Rated value Operating power • at AC-2 at 400 V Rated value • at AC-3 — at 400 V Rated value Operating power • at AC-3 — at 400 V Rated value • at 600 V Rated value — at 500 V Rated value WW 11 — at 500 V Rated value — at 690 V Rated value NW 11 Operating frequency • at AC-3 maximum No-load switching frequency Inh 1 500 Control circuit/ Control: Type of voltage of the control supply voltage Control supply voltage 1 • for DC Rated value V 24 Operating range factor control supply voltage rated value of the magnet coil for DC W 5.9 W 5.9 Wxiliary circuit: Number of NC contacts — instantaneous contact — lagging switching • for auxiliary contacts — instantaneous contact — lagging switching • for auxiliary contacts — instantaneous contact — lagging switching Number of NO contacts • for auxiliary contacts — instantaneous contact — lagging switching Number of NO contacts • for auxiliary contacts — instantaneous contact — lagging switching Number of NO contacts • for auxiliary contacts — instantaneous contact — lagging switching Number of NO contacts • for auxiliary contacts — instantaneous contact — leading contact	Operating voltage		
• at AC-1 — at 400 V at ambient temperature 40 °C Rated value — at 400 V at ambient temperature 60 °C Rated value • at AC-2 at 400 V Rated value • at AC-2 at 400 V Rated value • at AC-3 — at 400 V Rated value • at AC-3 — at 400 V Rated value • at AC-3 — at 400 V Rated value • at AC-3 — at 400 V Rated value • at AC-3 — at 400 V Rated value • at AC-3 — at 400 V Rated value • at AC-3 — at 400 V Rated value • www. 11 — at 500 V Rated value — at 500 V Rated value — at 690 V Rated value — at 690 V Rated value — at AC-3 maximum No-load switching frequency • at AC-3 maximum No-load switching frequency Type of voltage of the control supply voltage Control supply voltage 1 • for DC Rated value V 24 Operating pange factor control supply voltage rated value of the magnet coil for DC W 5.9 W 5.9 Ww. 11 V 24 Oberating range factor control supply voltage rated value of the magnet coil for DC W 5.9 Ww. 15.9 Ww. 16.9 Ww. 17 Ww. 19 Ww. 10 Ww	 at AC-3 Rated value maximum 	V	690
	Operating current		
Rated value — at 400 V at ambient temperature 60 °C Rated value • at AC-2 at 400 V Rated value • at AC-3 — at 400 V Rated value A 25 Operating power • at AC-3 — at 400 V Rated value NW 11 Operating power • at AC-3 — at 400 V Rated value A 25 Operating power • at AC-3 — at 400 V Rated value A 25 Operating power • at AC-3 — at 400 V Rated value RW 11 — at 500 V Rated value — at 500 V Rated value — at 690 V Rated value — at 690 V Rated value — be with the value — at 690 V Rated value — at AC-3 maximum No-load switching frequency • at AC-3 maximum I/h 1 000 No-load switching frequency I/h 1 500 Operating requency • at AC-3 maximum V 24 Operating requency • at Control supply voltage 1 • for DC Rated value V 24 Operating renge factor control supply voltage Control supply voltage 1 • for DC Rated value V 24 Operating renge factor control supply voltage rated value of the magnet coil for DC W 5.9 Holding power of the magnet coil for DC W 5.9 wxiliary circuit: Number of NC contacts • for auxiliary contacts — instantaneous contact — lagging switching Number of NC contacts • for auxiliary contacts — instantaneous contact — instantaneous	• at AC-1		
Rated value • at AC-2 at 400 V Rated value • at AC-3 — at 400 V Rated value A 25 Operating power • at AC-2 at 400 V Rated value Operating power • at AC-3 at 400 V Rated value Operating power • at AC-3 — at 400 V Rated value At C-3 — at 400 V Rated value — at 500 V Rated value — at 500 V Rated value — at 690 V Rated value — at 690 V Rated value — at 690 V Rated value No-load switching frequency • at AC-3 maximum I/h 1 000 No-load switching frequency • at AC-3 maximum I/h 1 500 Control circuit/ Control: Type of voltage of the control supply voltage Control supply voltage 1 • for DC Rated value Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 5.9 Holding power of the magnet coil for DC w 5.9 Validiary circuit: Number of NC contacts • for auxiliary contacts — instantaneous contact — lagging switching Number of NO contacts • for auxiliary contacts — instantaneous contact — lagging switching Number of NO contacts • for auxiliary contacts — instantaneous contact — laging switching Number of NO contacts • for auxiliary contacts — instantaneous contact — leading contact	-	Α	22
• at AC-3 — at 400 V Rated value		Α	20
— at 400 V Rated value A 25 Operating power • at AC-2 at 400 V Rated value kW 11 Operating power • at AC-3 — at 400 V Rated value kW 11 — at 500 V Rated value kW 11 — at 690 V Rated value kW 11 Operating frequency • at AC-3 maximum 1/h 1 000 100 100 No-load switching frequency 1/h 1 500 100<	• at AC-2 at 400 V Rated value	Α	25
Operating power • at AC-2 at 400 V Rated value	• at AC-3		
• at AC-2 at 400 V Rated value	— at 400 V Rated value	Α	25
Operating power • at AC-3 — at 400 V Rated value	Operating power		
• at AC-3 — at 400 V Rated value	• at AC-2 at 400 V Rated value	kW	11
- at 400 V Rated value	Operating power		
— at 500 V Rated value	• at AC-3		
— at 690 V Rated value	— at 400 V Rated value	kW	11
Operating frequency • at AC-3 maximum 1/h 1 000 No-load switching frequency 1/h 1 500 Control circuit/ Control: Type of voltage of the control supply voltage Control supply voltage 1 • for DC Rated value V 24 Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 5.9 Holding power of the magnet coil for DC W 5.9 Waxiliary circuit: Number of NC contacts • for auxiliary contacts — lagging switching Number of NO contacts • for auxiliary contacts • for auxiliary contacts — instantaneous contact — lagging switching Number of NO contacts • for auxiliary contacts — instantaneous contact — lagging switching Number of NO contacts • for auxiliary contacts — instantaneous contact — leading contact	— at 500 V Rated value	kW	11
at AC-3 maximum No-load switching frequency 1/h 1 500 Control circuit/ Control: Type of voltage of the control supply voltage Control supply voltage 1 • for DC Rated value Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 5.9 Holding power of the magnet coil for DC W 5.9 Waxiliary circuit: Number of NC contacts • for auxiliary contacts — lagging switching Number of NO contacts • for auxiliary contacts • for auxiliary contacts — instantaneous contact — lagging switching Number of NO contacts • for auxiliary contacts — instantaneous contact — leading contact — 0	— at 690 V Rated value	kW	11
No-load switching frequency I/h 1 500 Control circuit/ Control: Type of voltage of the control supply voltage Control supply voltage 1 • for DC Rated value Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 5.9 Holding power of the magnet coil for DC W 5.9 Muxiliary circuit: Number of NC contacts • for auxiliary contacts — lagging switching Number of NO contacts • for auxiliary contacts • for auxiliary contacts — instantaneous contact — lagging contact • for auxiliary contacts • for auxiliary contacts — instantaneous contact — leading contact — 0	Operating frequency		
Type of voltage of the control supply voltage Control supply voltage 1 • for DC Rated value Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 5.9 Holding power of the magnet coil for DC W 5.9 wuxiliary circuit: Number of NC contacts • for auxiliary contact • for auxiliary contact • for auxiliary contact • for auxiliary contact • for auxiliary contacts • for auxiliary contact	• at AC-3 maximum	1/h	1 000
Type of voltage of the control supply voltage Control supply voltage 1 • for DC Rated value Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 5.9 Holding power of the magnet coil for DC W 5.9 **Example 1 **Example 2 **Example 3 **Example 3 **Example 3 **Example 4 **Example 4 **Example 5 **Example 5 **Example 6 **Example 6 **Example 6 **Example 7 **	No-load switching frequency	1/h	1 500
Control supply voltage 1 • for DC Rated value Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 5.9 Holding power of the magnet coil for DC W 5.9 Muxiliary circuit: Number of NC contacts • for auxiliary contacts — lagging switching Number of NO contacts • for auxiliary contacts • for auxiliary contacts — lagging switching Number of NO contacts • for auxiliary contacts — instantaneous contact — lagding contact — leading contact — leading contact — leading contact — 0	Control circuit/ Control:		
for DC Rated value V 24 Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 5.9 Holding power of the magnet coil for DC W 5.9 wuxiliary circuit: Number of NC contacts	Type of voltage of the control supply voltage		DC
Operating range factor control supply voltage rated value of the magnet coil for DC Closing power of the magnet coil for DC W 5.9 Holding power of the magnet coil for DC W 5.9 Williary circuit: Number of NC contacts • for auxiliary contacts — instantaneous contact — lagging switching Number of NO contacts • for auxiliary contacts • for auxiliary contacts — instantaneous contact — lagging switching Number of NO contacts • for auxiliary contacts — instantaneous contact — leading contact — leading contact — leading contact — leading contact — 0	Control supply voltage 1		
value of the magnet coil for DC Closing power of the magnet coil for DC W 5.9 Holding power of the magnet coil for DC W 5.9 Auxiliary circuit: Number of NC contacts • for auxiliary contacts — instantaneous contact — lagging switching Number of NO contacts • for auxiliary contacts • for auxiliary contacts — instantaneous contact — lagging contact — instantaneous contact — instantaneous contact — instantaneous contact — instantaneous contact — leading contact — leading contact — 0	• for DC Rated value	V	24
Holding power of the magnet coil for DC W 5.9 Nuxiliary circuit: Number of NC contacts • for auxiliary contacts — instantaneous contact — lagging switching Number of NO contacts • for auxiliary contacts • for auxiliary contacts — instantaneous contact — leading contact — leading contact 0	Operating range factor control supply voltage rated value of the magnet coil for DC		0.85 1.1
Number of NC contacts • for auxiliary contacts — instantaneous contact — lagging switching Number of NO contacts • for auxiliary contacts — instantaneous contact — leading contact 3 — leading contact 0	Closing power of the magnet coil for DC	W	5.9
Number of NC contacts ● for auxiliary contacts 0 — instantaneous contact 0 — lagging switching 0 Number of NO contacts 0 ● for auxiliary contacts 3 — instantaneous contact 3 — leading contact 0	Holding power of the magnet coil for DC	W	5.9
 for auxiliary contacts instantaneous contact lagging switching Number of NO contacts for auxiliary contacts instantaneous contact leading contact 13 leading contact 0 	Auxiliary circuit:		
 — instantaneous contact — lagging switching Number of NO contacts ● for auxiliary contacts — instantaneous contact — leading contact 0 	Number of NC contacts		
— lagging switching 0 Number of NO contacts • for auxiliary contacts — instantaneous contact — leading contact 0 0	• for auxiliary contacts		
Number of NO contacts • for auxiliary contacts — instantaneous contact — leading contact 0	— instantaneous contact		0
 for auxiliary contacts — instantaneous contact — leading contact 0 	— lagging switching		0
 instantaneous contact leading contact 0 	Number of NO contacts		
— leading contact 0	• for auxiliary contacts		
	— instantaneous contact		3
Product expansion Auxiliary switch No	— leading contact		0
	Product expansion Auxiliary switch		No

Operating current of the auxiliary contacts at AC-12 maximum	Α	10
Operating current of the auxiliary contacts at AC-15		
● at 230 V	Α	6
● at 400 V	Α	3
Operating current of the auxiliary contacts at DC-13		
● at 24 V	Α	10
● at 60 V	Α	2
• at 110 V	Α	1
• at 220 V	Α	0.3
Contact reliability of the auxiliary contacts		< 1 error per 100 million operating cycles
JL/CSA ratings:		
Contact rating of the auxiliary contacts acc. to UL		A600 / Q600
Short-circuit:		
Design of the fuse link		
• for short-circuit protection of the main circuit		
 — with type of assignment 1 required 		gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A
— with type of assignment 2 required		gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20 A
• for short-circuit protection of the auxiliary switch required		fuse gL/gG: 10 A
nstallation/ 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
Height		mounting rail
-	mm	mounting rail 84
Width	mm mm	84 135
Width Depth		84
Width	mm	84 135
Width Depth	mm	84 135
Width Depth Required spacing	mm	84 135
Width Depth Required spacing • with side-by-side mounting	mm mm	84 135 145
Width Depth Required spacing • with side-by-side mounting — forwards	mm mm	84 135 145
Width Depth Required spacing • with side-by-side mounting — forwards — Backwards	mm mm mm	84 135 145 6 0
Width Depth Required spacing • with side-by-side mounting — forwards — Backwards — upwards	mm mm mm mm	84 135 145 6 0 6
Width Depth Required spacing • with side-by-side mounting — forwards — Backwards — upwards — downwards	mm mm mm mm mm	84 135 145 6 0 6 6
Width Depth Required spacing • with side-by-side mounting — forwards — Backwards — upwards — downwards — at the side	mm mm mm mm mm	84 135 145 6 0 6 6
Width Depth Required spacing • with side-by-side mounting — forwards — Backwards — upwards — downwards — at the side • for grounded parts	mm mm mm mm mm mm	84 135 145 6 0 6 6 6

— at the side	mm	6
— downwards	mm	6
• for live parts		
— forwards	mm	6
— Backwards	mm	0
— upwards	mm	6
— downwards	mm	6
— at the side	mm	6

Connections/ Terminals:	
Type of electrical connection	
• for main current circuit	spring-loaded terminals
 for auxiliary and control current circuit 	spring-loaded terminals
Type of connectable conductor cross-section	
• for main contacts	
— single or multi-stranded	2x (0,5 4 mm²)
 finely stranded with core end processing 	2x (0.5 2.5 mm²)
 finely stranded without core end processing 	2x (0.5 2.5 mm²)
 for AWG conductors for main contacts 	1x (20 12)
 for auxiliary contacts 	
 single or multi-stranded 	2x (0,5 2,5 mm²)
 finely stranded with core end processing 	2x (0.5 1.5 mm²)
 finely stranded without core end processing 	2x (0.5 1.5 mm²)
 for AWG conductors for auxiliary contacts 	2x (20 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 	%	40
 with high demand rate acc. to SN 31920 	%	75
Failure rate [FIT] with low demand rate acc. to SN 31920	FIT	100
T1 value for proof test interval or service life acc. to IEC 61508	У	20
Protection against electrical shock		finger-safe

Mechanical data:	
Size of contactor	S00

Communication/ Protocol:	
Product function Bus communication	No
Protocol is supported	
AS-interface protocol	No

Product function Control circuit interface with IO link		No
Ambient conditions:		
Installation altitude at height above sea level	m	2 000
maximum		
Ambient temperature		
during operation	°C	-25 + 60
during storage	°C	-55 + 80

Certificates/ approvals:

General	Declaration of	Test	Shipping Approval
Product	Conformity	Certificates	
Approval			













other

Shipping Approval







LRS







Environmental Confirmations

other

other

Further information

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

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

Industry Mall (Online ordering system)

http://www.siemens.com/industrymall

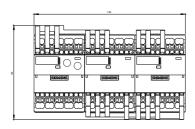
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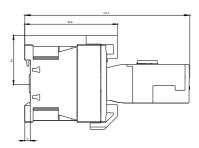
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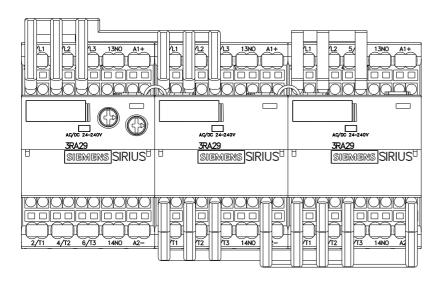
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

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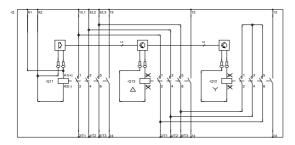
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA24178XF312BB4&lang=en







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