

Data sheet

3RA2416-8XF31-1AP0

STAR-DELTA COMB. AC3, 7,5KW/400V AC230V, 50/60HZ, 3-POLE
SZ S00, SCREW TERMINAL ELECTR. AND MECH. INTERLOCK
3NO INTEGR.

Product brand name	SIRIUS
Product designation	Contacteur assembly for star-delta (wye-delta) start
Product type designation	3RA24
Manufacturer's article number	
• 1 of the supplied contactor • 2 of the supplied contactor • 3 of the supplied contactor • of the supplied RS assembly kit • of the supplied function module for wye-delta circuits	3RT2017-1AP01 3RT2017-1AP01 3RT2015-1AP01 3RA2913-2BB1 3RA2816-0EW20

General technical data	
Size of contactor	S00
Product extension	
• Auxiliary switch	No
Insulation voltage	
• with degree of pollution 3 rated value	690 V
Degree of pollution	3
Surge voltage resistance rated value	6 kV
Protection class IP	
• on the front	IP20
Shock resistance at rectangular impulse	
• at AC • at DC	6,7g / 5 ms, 4,2g / 10 ms 6,7g / 5 ms, 4,2g / 10 ms
Shock resistance with sine pulse	
• at AC • at DC	10,5g / 5 ms, 6,6g / 10 ms 10,5g / 5 ms, 6,6g / 10 ms
Mechanical service life (switching cycles)	
• of contactor typical • of the contactor with added auxiliary switch block typical	10 000 000 10 000 000
Equipment marking	
• acc. to DIN EN 81346-2	Q

Ambient conditions	
Ambient temperature	
• during operation	-25 ... +60 °C

- during storage

-55 ... +80 °C

Main circuit

Number of poles for main current circuit	3
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 — at ambient temperature 60 °C rated value • at AC-2 at 400 V rated value • at AC-3 — at 400 V rated value	22 A 20 A 16 A 16 A
No-load switching frequency	1 500 1/h
Operating frequency • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-4 maximum	1 000 1/h 1 000 1/h 1 000 1/h 300 1/h

Control circuit/ Control

Type of voltage of the control supply voltage	AC
Control supply voltage 1 at AC • at 50 Hz rated value	230 V
Operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz	0.8 ... 1.1 0.85 ... 1.1
Apparent pick-up power of magnet coil at AC • at 50 Hz	27 V·A
Inductive power factor with closing power of the coil • at 50 Hz	0.8
Apparent holding power of magnet coil at AC • at 50 Hz	4.2 V·A
Inductive power factor with the holding power of the coil • at 50 Hz	0.25

Auxiliary circuit

Number of NC contacts • for auxiliary contacts — instantaneous contact	0
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Number of NO contacts	
• for auxiliary contacts — instantaneous contact	3
Operating current of auxiliary contacts at AC-12 maximum	10 A
Operating current of auxiliary contacts at AC-15	
• at 230 V	6 A
• at 400 V	3 A
Operating current of auxiliary contacts at DC-13	
• at 24 V	10 A
• at 60 V	2 A
• at 110 V	1 A
• at 220 V	0.3 A
Contact reliability of auxiliary contacts	< 1 error per 100 million operating cycles

UL/CSA ratings

Contact rating of auxiliary contacts according to UL	A600 / Q600
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Short-circuit protection

Design of the fuse link	
• for short-circuit protection of the main circuit — with type of coordination 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
Height	68 mm
Width	135 mm
Depth	145 mm
Required spacing	
• with side-by-side mounting — forwards — Backwards — upwards — downwards — at the side • for grounded parts — forwards — Backwards	6 mm 0 mm 6 mm 6 mm 6 mm 6 mm 0 mm

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

Connections/Terminals

Type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control current circuit	screw-type terminals
Type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), 2x 4 mm ²
— single or multi-stranded	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²), 2x (0,5 ... 4 mm ²)
— finely stranded with core end processing	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
• at AWG conductors for main contacts	2x (20 ... 16), 2x (18 ... 14)
Type of connectable conductor cross-sections	
• for auxiliary contacts	
— single or multi-stranded	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²)
— finely stranded with core end processing	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
• at AWG conductors for auxiliary contacts	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	40 %
• with high demand rate acc. to SN 31920	75 %
Failure rate [FIT]	
• with low demand rate acc. to SN 31920	100 FIT
T1 value for proof test interval or service life acc. to IEC 61508	20 y

Communication/ Protocol

Product function Bus communication	No
Protocol is supported	
• AS-interface protocol	No

Certificates/approvals

General Product Approval	Declaration of Conformity	Test Certificates	Marine / Shipping
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[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping



GL



LRS



PRS



RINA



RMRS



DNVGL.COM/AF

other Railway

[Environmental Confirmations](#)

[Confirmation](#)

[Vibration and Shock](#)

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=3RA2416-8XF31-1AP0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2416-8XF31-1AP0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2416-8XF31-1AP0>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2416-8XF31-1AP0&lang=en

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