# **SIEMENS**

Product data sheet 3RA2416-8XH31-2BB4

STAR-DELTA COMB. WITH ASI AC3, 7.5KW/400V DC24V, 3-POLE SZ S00, SPRING-LOADED TERMINAL ELECTR. AND MECH. INTERLOCK 3NO INTEGR.



General technical data:		
Product brand name		SIRIUS
product designation		star-delta (wye-delta) contactor assembly 3RA24
Product function		wye-delta motor start-up
Size of the contactor		S00
Protection class IP / on the front		IP20
Degree of pollution		3
Insulation voltage / with degree of pollution 3 / rated value	V	690
Installation altitude / at a height over sea level / maximum	m	2,000
Ambient temperature		
during transport	°C	-55 80
during storage	°C	-55 80
during operating	°C	-25 60
Resistance against shock		9.8g / 5 ms and 5.9g / 10 ms
Impulse voltage resistance / rated value	kV	6
Active power loss / per conductor / typical	W	0.7
Item designation		
<ul> <li>according to DIN 40719 extendable after IEC 204-2 / according to IEC 750</li> </ul>		К
according to DIN EN 61346-2		Q

Manufacturer article number		
<ul> <li>of the function module for communication included in the scope of supply</li> </ul>		3RA2712-2CA00
• 1 / of the contactor included in the scope of supply		3RT2017-2BB41-0CC0
• 2 / of the contactor included in the scope of supply		3RT2017-2BB41
• 3 / of the contactor included in the scope of supply		3RT2015-2BB41
of the RS applied assembly kit		3RA2913-2BB2
Mechanical operating cycles as operating time		
of the main contacts / typical		10,000,000
of the auxiliary contacts / typical		10,000,000
of the contactor / typical		10,000,000
of the contactor with added auxiliary switch block / typical		10,000,000
Communication:		
Product function		
• bus-communication		Yes
control circuit interface with IO link		No
Protocol / will be supported / AS interface protocol		Yes
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 40 °C ambient temperature / rated value	Α	18
• at 60 °C ambient temperature / rated value	Α	16
• at AC-2 / at 400 V / rated value	Α	17
• at AC-3 / at 400 V / rated value	Α	17
Service power		
• at AC-2 / at 400 V / rated value	kW	7.5
• at AC-3		
• at 400 V / rated value	kW	7.5
• at 500 V / rated value	kW	10.3
• at 690 V / rated value	kW	9.2
Off-load operating frequency	1/h	15
Frequency of operation		
• at AC-1 / according to IEC 60947-6-2 / maximum	1/h	1,000
• at AC-2 / according to IEC 60947-6-2 / maximum	1/h	1,000

• at AC-3 / according to IEC 60947-6-2 / maximum

1/h

1,000

1/h 300

Control circuit:		
Design of activation		conventional
Design of the surge suppressor		with varistor
Type of voltage / of the controlled supply voltage		DC
Control supply voltage / 1		
• for DC / rated value	V	24
Operating range factor control supply voltage rated value / of the solenoid		
• for DC		0.85 1.1
Pull-in power / of the solenoid / for DC	W	5.9
Holding power / of the solenoid / for DC	W	5.9
Resistive loss / of the magnet coil / for DC		
• typical	W	4

Auxiliary circuit:		
Product extension / auxiliary switch		No
Contact reliability / of the auxiliary contacts		< 1 error per 100 million operating cycles
Number of NC contacts / for auxiliary contacts		
• instantaneous switching		3
lagging switching		0
Number of NO contacts / for auxiliary contacts		
instantaneous switching		3
leading switching		0
Operating current / of the auxiliary contacts		
• at AC-12 / maximum	Α	10
• at AC-15		
• at 230 V	Α	6
• at 400 V	Α	3
• at DC-12		
• at 48 V	Α	6
• at 60 V	Α	6
• at 110 V	Α	3
• at 220 V	Α	1
• at DC-13		
• at 24 V	Α	10
• at 48 V	Α	2
• at 60 V	Α	2
• at 110 V	Α	1
• at 220 V	А	0.3

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
• at type of coordination 2 / required	gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20

fuse gL/gG: 10 A

• for short-circuit protection of the auxiliary switch / required

Installation/mounting/dimensions:		
Built in orientation		any
Type of mounting		screw and snap-on mounting onto 35 mm standard mounting rail
Width	mm	135
Height	mm	84
Depth	mm	145
Distance, to be maintained, to the ranks assembly		
• forwards	mm	6
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sidewards	mm	6
Distance, to be maintained, to earthed part		
• forwards	mm	6
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sidewards	mm	6
Distance, to be maintained, conductive elements		
• forwards	mm	6
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6

Connections:		
Design of the electrical connection		
for main current circuit	spring-loaded terminals	
<ul> <li>for auxiliary and control current circuit</li> </ul>	spring-loaded terminals	
Type of the connectable conductor cross-section		
• for main contacts		

mm

6

• sidewards

• solid	2x (0.5 4 mm2)
• stranded	2x (0.5 4 mm²)
• finely stranded	
<ul> <li>with conductor end processing</li> </ul>	2 x (0.5 2.5 mm2)
without conductor final cutting	2x (0.5 2.5 mm2)
• for AWG conductors / for main contacts	1x (20 12)
for auxiliary contacts	
• solid	2x (0.5 2.5 mm2)
• finely stranded	
<ul> <li>with conductor end processing</li> </ul>	2x (0.5 1.5 mm2)
without conductor final cutting	2 x (0.5 1.5 mm2)
• for AWG conductors / for auxiliary contacts	2x (20 14)

Certificates/	C 10 10 11 C 1 C C
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Verification of suitability CE / UL / CSA / CCC

General Product Approval **Test Certificates** 

ROSTEST Manufacturer

## **Shipping Approval**







GL







**Shipping Approval** 

other other



## **UL/CSA** ratings

Contact rating designation / for auxiliary contacts / according to UL

A600 / Q600

Safety:		
B10 value / with high demand rate		
according to SN 31920		1,000,000
Failure rate (FIT value) / with low demand rate		
according to SN 31920	FIT	100
Proportion of dangerous failures		
• with low demand rate / according to SN 31920	%	40
• with high demand rate / according to SN 31920	%	75
T1 value / for proof test interval or service life		
according to IEC 61508	а	20
Protection against electrical shock		finger-safe

## Further information:

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

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

Industry Mall (Online ordering system)

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

#### **CAx-Online-Generator**

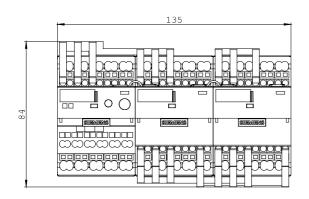
http://www.siemens.com/cax

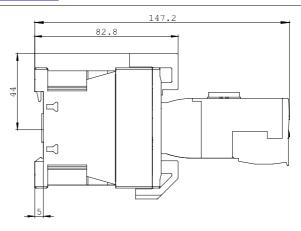
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

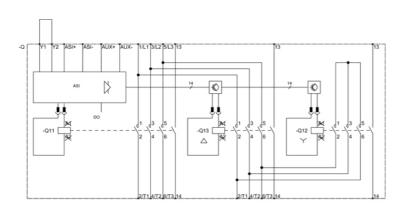
http://support.automation.siemens.com/WW/view/en/3RA2416-8XH31-2BB4/all

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

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RA2416-8XH31-2BB4







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