# **SIEMENS**

Product data sheet 3RA2415-8XF31-1BB4



STAR-DELTA COMB. AC3, 5,5KW/400V DC24V, 3-POLE SZ S00, SCREW 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	0.4
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

Manufactura atiala mushan		
Manufacturer article number		OD 40040 OF MO
<ul> <li>of the function module for for wye-delta circuits included in the scope of supply</li> </ul>		3RA2816-0EW20
• 1 / of the contactor included in the scope of supply		3RT2015-1BB41
• 2 / of the contactor included in the scope of supply		3RT2015-1BB41
• 3 / of the contactor included in the scope of supply		3RT2015-1BB41
<ul> <li>of the RS applied assembly kit</li> </ul>		3RA2913-2BB1
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		No
control circuit interface with IO link		No
Protocol / will be supported / AS interface protocol		No
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
Operational 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	А	12
• at AC-3 / at 400 V / rated value	Α	12
Service power		
• at AC-2 / at 400 V / rated value	kW	5.5
• at AC-3		
• at 400 V / rated value	kW	5.5
• at 500 V / rated value	kW	7.2
• 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	
Type of voltage / of the controlled supply voltage		DC	
Control supply voltage frequency			
• 1 / rated value	Hz	50	
• 2 / rated value	Hz	60	
Control supply voltage / 1			
• for DC / rated value	V	24	
Operating range factor control supply voltage rated value / of the magnet coil			
• 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	А	2	

• at 110 V A 1
• at 220 V A 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 A
• for short-circuit protection of the auxiliary switch / required	fuse gL/gG: 10 A

Installation/mounting/dimensions:			
mounting position		any	
Type of mounting		screw and snap-on mounting onto 35 mm standard mounting rail	
Width	mm	135	
Height	mm	68	
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	
• sidewards	mm	6	

Connections:			
Design of the electrical connection			
for main current circuit	screw-type terminals		
for auxiliary and control current circuit	screw-type terminals		

Type of the connectable conductor cross-section	
• for main contacts	
• solid	2 x (0.5 1.5 mm²), 2 x (0.75 2.5 mm²), 2 x (0.5 4 mm²)
• stranded	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x (0.5 4 mm²)
• finely stranded	
<ul> <li>with conductor end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
• for AWG conductors / for main contacts	2x (20 16), 2x (18 14)
for auxiliary contacts	
• solid	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
• finely stranded	
<ul> <li>with conductor end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
<ul> <li>for AWG conductors / for auxiliary contacts</li> </ul>	2x (20 16), 2x (18 14)

Certificates/approvals:
-------------------------

#### Verification of suitability CE/UL/CSA/CCC

**General Product Approval** 

**Declaration of** Conformity

**Test Certificates** 

**Special Test** Certificate





## **Shipping Approval**













**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**

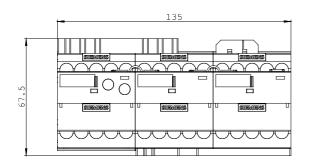
http://www.siemens.com/cax

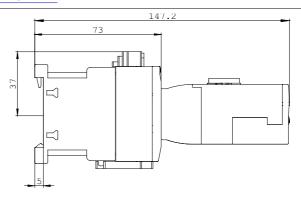
#### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

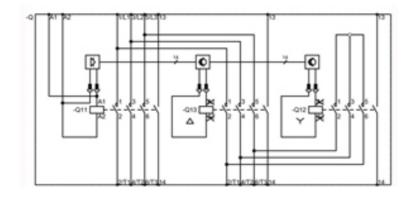
http://support.automation.siemens.com/WW/view/en/3RA2415-8XF31-1BB4/all

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

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RA2415-8XF31-1BB4







last change: Feb 4, 2013