

STAR-DELTA COMB. AC3, 11KW/400V AC110V,  
50/60HZ, 3-POLE SZ S0,  
SCREW TERMINAL ELECTR. AND MECH. INTERLOCK  
3NO+3NC 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		S0
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 <ul style="list-style-type: none"> <li>during transport</li> <li>during storage</li> <li>during operating</li> </ul>	°C	-55 ... 80 -55 ... 80 -25 ... 60
Resistance against shock		12.5g / 5 ms and 7.8g / 10 ms
Impulse voltage resistance / rated value	kV	6
Active power loss / per conductor / typical	W	0.4
Item designation <ul style="list-style-type: none"> <li>according to DIN 40719 extendable after IEC 204-2 / according to IEC 750</li> <li>according to DIN EN 61346-2</li> </ul>		K Q

<b>Manufacturer article number</b> <ul style="list-style-type: none"> <li>• of the function module for for wye-delta circuits included in the scope of supply</li> <li>• 1 / of the contactor included in the scope of supply</li> <li>• 2 / of the contactor included in the scope of supply</li> <li>• 3 / of the contactor included in the scope of supply</li> <li>• of the RS applied assembly kit</li> </ul>		<a href="#">3RA2816-0EW20</a>  <a href="#">3RT2024-1AG20</a> <a href="#">3RT2024-1AG20</a> <a href="#">3RT2024-1AG20</a> <a href="#">3RA2923-2BB1</a>
<b>Mechanical operating cycles as operating time</b> <ul style="list-style-type: none"> <li>• of the main contacts / typical</li> <li>• of the auxiliary contacts / typical</li> <li>• of the contactor / typical</li> <li>• of the contactor with added auxiliary switch block / typical</li> </ul>		10,000,000 10,000,000 10,000,000 10,000,000
<b>Communication:</b>		
<b>Product function</b> <ul style="list-style-type: none"> <li>• bus-communication</li> <li>• control circuit interface with IO link</li> </ul>		No No
<b>Protocol / will be supported / AS interface protocol</b>		No
<b>Main circuit:</b>		
<b>Number of poles / for main current circuit</b>		3
<b>Number of NC contacts / for main contacts</b>		0
<b>Number of NO contacts / for main contacts</b>		3
<b>Operating voltage / at AC-3 / rated value / maximum</b>	V	690
<b>Operating current</b> <ul style="list-style-type: none"> <li>• at AC-1 / at 400 V <ul style="list-style-type: none"> <li>• at 40 °C ambient temperature / rated value</li> <li>• at 60 °C ambient temperature / rated value</li> </ul> </li> <li>• at AC-2 / at 400 V / rated value</li> <li>• at AC-3 / at 400 V / rated value</li> <li>• with 1 current path / at DC-1 <ul style="list-style-type: none"> <li>• at 24 V / rated value</li> <li>• at 110 V / rated value</li> </ul> </li> <li>• with 2 current paths in series / at DC-1 <ul style="list-style-type: none"> <li>• at 24 V / rated value</li> <li>• at 110 V / rated value</li> </ul> </li> <li>• with 3 current paths in series / at DC-1 <ul style="list-style-type: none"> <li>• at 24 V / rated value</li> <li>• at 110 V / rated value</li> </ul> </li> <li>• with 1 current path / at DC-3 / at DC-5 <ul style="list-style-type: none"> <li>• at 24 V / rated value</li> </ul> </li> </ul>	A A A A  A A  A A  A A  A	40 35 25 17  35 4.5  35 35  35 35  20

<ul style="list-style-type: none"> <li>• at 110 V / rated value</li> </ul>	A	2.5
<ul style="list-style-type: none"> <li>• with 2 current paths in series / at DC-3 / at DC-5</li> </ul>		
<ul style="list-style-type: none"> <li>• at 24 V / rated value</li> </ul>	A	35
<ul style="list-style-type: none"> <li>• at 110 V / rated value</li> </ul>	A	15
<ul style="list-style-type: none"> <li>• with 3 current paths in series / at DC-3 / at DC-5</li> </ul>		
<ul style="list-style-type: none"> <li>• at 24 V / rated value</li> </ul>	A	35
<ul style="list-style-type: none"> <li>• at 110 V / rated value</li> </ul>	A	35
<b>Service power</b>		
<ul style="list-style-type: none"> <li>• at AC-2 / at 400 V / rated value</li> </ul>	kW	11
<ul style="list-style-type: none"> <li>• at AC-3</li> </ul>		
<ul style="list-style-type: none"> <li>• at 400 V / rated value</li> </ul>	kW	11
<ul style="list-style-type: none"> <li>• at 500 V / rated value</li> </ul>	kW	11
<ul style="list-style-type: none"> <li>• at 690 V / rated value</li> </ul>	kW	19
<ul style="list-style-type: none"> <li>• at AC-4 / at 400 V / rated value</li> </ul>	kW	2
<b>Off-load operating frequency</b>	1/h	15
<b>Frequency of operation</b>		
<ul style="list-style-type: none"> <li>• at AC-1 / according to IEC 60947-6-2 / maximum</li> </ul>	1/h	1,000
<ul style="list-style-type: none"> <li>• at AC-2 / according to IEC 60947-6-2 / maximum</li> </ul>	1/h	1,000
<ul style="list-style-type: none"> <li>• at AC-3 / according to IEC 60947-6-2 / maximum</li> </ul>	1/h	1,000
<ul style="list-style-type: none"> <li>• at AC-4 / according to IEC 60947-6-2 / maximum</li> </ul>	1/h	300

#### Control circuit:

<b>Design of activation</b>		conventional
<b>Type of voltage / of the controlled supply voltage</b>		AC
<b>Control supply voltage frequency</b>		
<ul style="list-style-type: none"> <li>• 1 / rated value</li> </ul>	Hz	50
<ul style="list-style-type: none"> <li>• 2 / rated value</li> </ul>	Hz	60
<b>Control supply voltage / 1</b>		
<ul style="list-style-type: none"> <li>• at 50 Hz / for AC / rated value</li> </ul>	V	110
<ul style="list-style-type: none"> <li>• at 60 Hz / for AC / rated value</li> </ul>	V	110
<b>Operating range factor control supply voltage rated value / of the solenoid</b>		
<ul style="list-style-type: none"> <li>• at 50 Hz / for AC</li> </ul>		0.8 ... 1.1
<ul style="list-style-type: none"> <li>• at 60 Hz / for AC</li> </ul>		0.8 ... 1.1
<b>Apparent pull-in power / of the solenoid / for AC</b>	V·A	65
<b>Apparent holding power / of the solenoid / for AC</b>	V·A	8.5
<b>Inductive power factor</b>		
<ul style="list-style-type: none"> <li>• with the pull-in power of the coil</li> </ul>		0.82
<ul style="list-style-type: none"> <li>• with the pull-in power of the coil</li> </ul>		0.25

#### Auxiliary circuit:

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

gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 63 A

gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25 A

fuse gL/gG: 10 A

#### Installation/mounting/dimensions:

<b>Built in orientation</b>		any
<b>Type of mounting</b>		screw and snap-on mounting onto 35 mm standard mounting rail
<b>Width</b>	mm	135
<b>Height</b>	mm	101
<b>Depth</b>	mm	171

<b>Distance, to be maintained, to the ranks assembly</b>		
• forwards	mm	6
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sideways	mm	6
<b>Distance, to be maintained, to earthed part</b>		
• forwards	mm	6
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sideways	mm	6
<b>Distance, to be maintained, conductive elements</b>		
• forwards	mm	6
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sideways	mm	6

#### Connections:

<b>Design of the electrical connection</b>		
• for main current circuit		screw-type terminals
• for auxiliary and control current circuit		screw-type terminals
<b>Type of the connectable conductor cross-section</b>		
• for main contacts		
• solid		2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 10 mm <sup>2</sup> )
• stranded		2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 10 mm <sup>2</sup> )
• finely stranded		
• with conductor end processing		2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup>
• for AWG conductors / for main contacts		2x (16 ... 12), 2x (14 ... 8)
• for auxiliary contacts		
• solid		2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
• finely stranded		
• with conductor end processing		2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
• for AWG conductors / for auxiliary contacts		2x (20 ... 16), 2x (18 ... 14)

#### Certificates/approvals:

<b>Verification of suitability</b>		CE / UL / CSA / CCC
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<b>General Product Approval</b>	<b>Test Certificates</b>
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[ROSTEST](#)

[Manufacturer](#)

#### Shipping Approval



ABS



DNV



GL



LRS



PRS



RINA

#### Shipping Approval

other



RMRS

[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
- with high demand rate / according to SN 31920

%

40

%

75

**T1 value / for proof test interval or service life**

- according to IEC 61508

a

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**

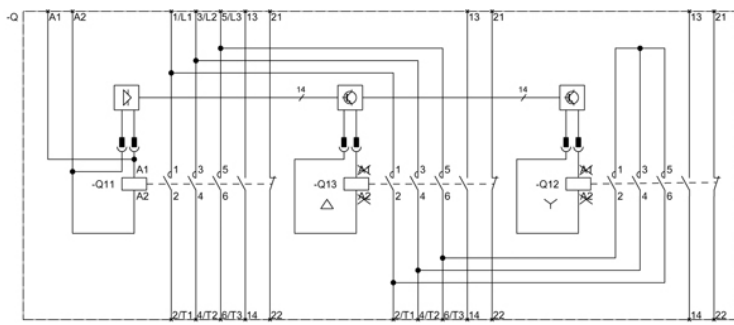
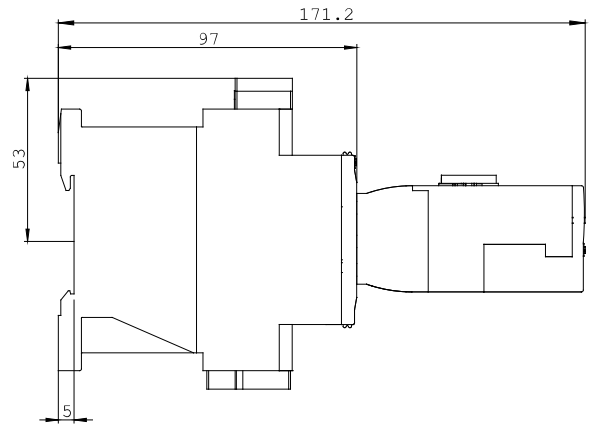
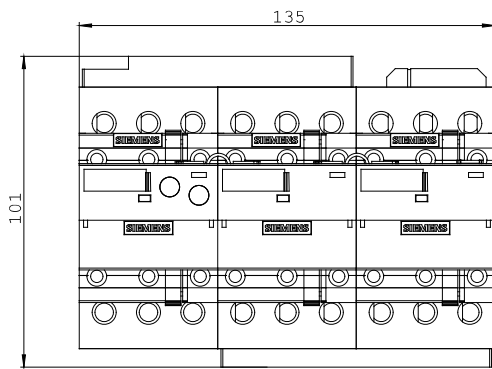
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RA2423-8XF32-1AG2/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RA2423-8XF32-1AG2](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RA2423-8XF32-1AG2)



last change:

Oct 17, 2011