

STAR-DELTA COMB. AC3,7,5KW/400V AC24V,  
50/60HZ, 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	0.7
Item designation		
• according to DIN 40719 extendable after IEC 204-2 / according to IEC 750		K
• according to DIN EN 61346-2		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> </ul>		<a href="#">3RA2816-0EW20</a>
<ul style="list-style-type: none"> <li>• 1 / of the contactor included in the scope of supply</li> </ul>		<a href="#">3RT2017-1AP01</a>
<ul style="list-style-type: none"> <li>• 2 / of the contactor included in the scope of supply</li> </ul>		<a href="#">3RT2017-1AP01</a>
<ul style="list-style-type: none"> <li>• 3 / of the contactor included in the scope of supply</li> </ul>		<a href="#">3RT2015-1AP01</a>
<ul style="list-style-type: none"> <li>• of the RS applied assembly kit</li> </ul>		<a href="#">3RA2913-2BB1</a>
<b>Mechanical operating cycles as operating time</b>		
<ul style="list-style-type: none"> <li>• of the main contacts / typical</li> </ul>		10,000,000
<ul style="list-style-type: none"> <li>• of the auxiliary contacts / typical</li> </ul>		10,000,000
<ul style="list-style-type: none"> <li>• of the contactor / typical</li> </ul>		10,000,000
<ul style="list-style-type: none"> <li>• of the contactor with added auxiliary switch block / typical</li> </ul>		10,000,000

### Communication:

<b>Product function</b>		
<ul style="list-style-type: none"> <li>• bus-communication</li> </ul>		No
<ul style="list-style-type: none"> <li>• control circuit interface with IO link</li> </ul>		No
<b>Protocol / will be supported / AS interface protocol</b>		No

### Main circuit:

<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>Operational 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> </ul>	A	18
	A	16
	A	17
	A	17
<b>Service power</b>		
<ul style="list-style-type: none"> <li>• at AC-2 / at 400 V / rated value</li> </ul>	kW	7.5
<ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>• at 400 V / rated value</li> <li>• at 500 V / rated value</li> <li>• at 690 V / rated value</li> </ul> </li> </ul>	kW	7.5
	kW	10.3
	kW	9.2
<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> <li>• at AC-2 / according to IEC 60947-6-2 / maximum</li> <li>• at AC-3 / according to IEC 60947-6-2 / maximum</li> </ul>	1/h	1,000
	1/h	1,000
	1/h	1,000

- at AC-4 / according to IEC 60947-6-2 / maximum

1/h	300
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#### 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>		
• 1 / rated value	Hz	50
• 2 / rated value	Hz	60
<b>Control supply voltage / 1</b>		
• at 50 Hz / for AC / rated value	V	24
<b>Operating range factor control supply voltage rated value / of the magnet coil</b>		
• at 50 Hz / for AC		0.8 ... 1.1
• at 60 Hz / for AC		0.85 ... 1.1
<b>Apparent pull-in power / of the solenoid / for AC</b>	V·A	27
<b>Apparent holding power / of the solenoid / for AC</b>	V·A	4.2
<b>Inductive power factor</b>		
• with the pull-in power of the coil		0.8
• with the pull-in power of the coil		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
- at 60 V
- at 110 V
- at 220 V

A	2
A	2
A	1
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: 35 A  
 gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20 A  
 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
- backwards
- upwards
- downwards
- sideways

mm 6  
 mm 0  
 mm 6  
 mm 6  
 mm 6

#### Distance, to be maintained, to earthed part

- forwards
- backwards
- upwards
- downwards
- sideways

mm 6  
 mm 0  
 mm 6  
 mm 6  
 mm 6

#### Distance, to be maintained, conductive elements

- forwards
- backwards
- upwards
- downwards
- sideways

mm 6  
 mm 0  
 mm 6  
 mm 6  
 mm 6



### Connections:

#### Design of the electrical connection

<ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control current circuit</li> </ul>	<p>screw-type terminals</p> <p>screw-type terminals</p>
<b>Type of the connectable conductor cross-section</b> <ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>• solid</li> <li>• stranded</li> <li>• finely stranded <ul style="list-style-type: none"> <li>• with conductor end processing</li> </ul> </li> </ul> </li> <li>• for AWG conductors / for main contacts</li> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded <ul style="list-style-type: none"> <li>• with conductor end processing</li> </ul> </li> </ul> </li> <li>• for AWG conductors / for auxiliary contacts</li> </ul>	<p>2 x (0.5 ... 1.5 mm<sup>2</sup>), 2 x (0.75 ... 2.5 mm<sup>2</sup>), 2 x (0.5 ... 4 mm<sup>2</sup>)</p> <p>2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>), 2x (0.5 ... 4 mm<sup>2</sup>)</p> <p>2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)</p> <p>2x (20 ... 16), 2x (18 ... 14)</p> <p>2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)</p> <p>2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)</p> <p>2x (20 ... 16), 2x (18 ... 14)</p>

**Certificates/approvals:**


<b>Verification of suitability</b>	CE / UL / CSA / CCC
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<b>General Product Approval</b>	<b>Declaration of Conformity</b>	<b>Test Certificates</b>
 GOST	 EG-Konf.	<a href="#">Special Test Certificate</a>

**Shipping Approval**

 ABS	 BUREAU VERITAS	 DNV	 GL	 LRS	 PRS
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<b>Shipping Approval</b>	<b>other</b>
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 RINA	 RMRS	<a href="#">other</a>
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**UL/CSA ratings**

<b>Contact rating designation / for auxiliary contacts / according to UL</b>	A600 / Q600
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**Safety:**

<b>B10 value / with high demand rate</b> <ul style="list-style-type: none"> <li>• according to SN 31920</li> </ul>	1,000,000
<b>Failure rate (FIT value) / with low demand rate</b> <ul style="list-style-type: none"> <li>• according to SN 31920</li> </ul>	FIT 100

<b>Proportion of dangerous failures</b>		
• with low demand rate / according to SN 31920	%	40
• with high demand rate / according to SN 31920	%	75
<b>T1 value / for proof test interval or service life</b>		
• according to IEC 61508	a	20
<b>Protection against electrical shock</b>		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**

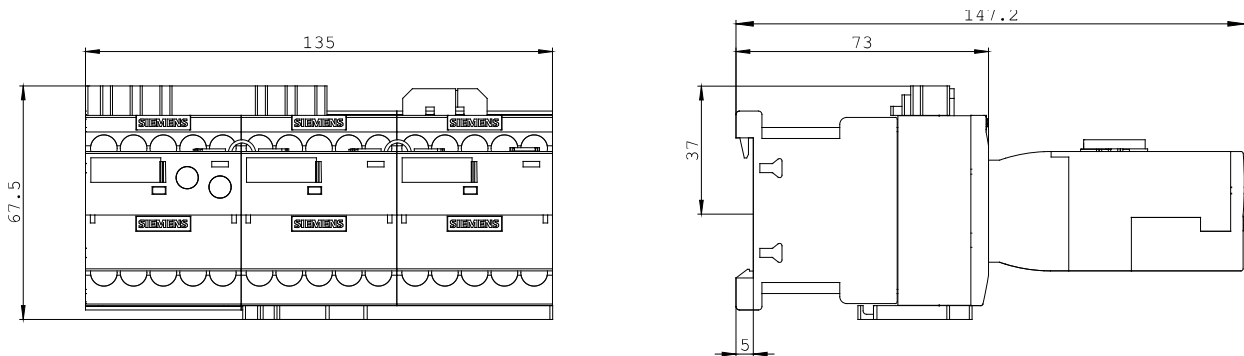
<http://www.siemens.com/cax>

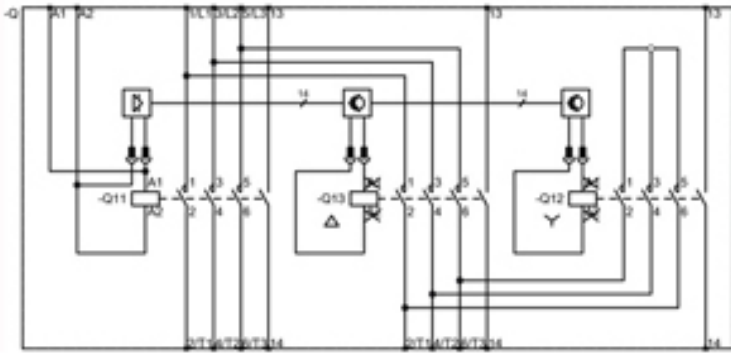
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<http://support.automation.siemens.com/WW/view/en/3RA2416-8XF31-1AB0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RA2416-8XF31-1AB0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RA2416-8XF31-1AB0)





last change:

Feb 4, 2013