



SOLID-STATE CONTACTOR 3-PH 3RF3 AC53 5.2A 40 DEGREES C 48-480V / 110-230V AC 2-PH. CONTROLLED INSTANTANEOUS SCREW TERMINALS

General technical data:		
<b>product brand name</b>		SIRIUS
<b>product designation</b>		solid-state motor contactor
<ul style="list-style-type: none"> <li>• _1 / of the accessories that can be ordered</li> <li>• _2 / of the accessories that can be ordered</li> </ul>		Link module Connection adapter
<b>Manufacturer article number</b>		
<ul style="list-style-type: none"> <li>• _1 / of the accessories that can be ordered</li> <li>• _2 / of the accessories that can be ordered</li> </ul>		<a href="#">3RA2921-1BA00</a> <a href="#">3RF3900-0QA88</a>
<b>Protection class IP</b>		IP20
<b>Insulation voltage / rated value</b>	V	600
<b>Installation altitude / at a height over sea level / maximum</b>	m	1,000
<b>Ambient temperature</b>		
<ul style="list-style-type: none"> <li>• during storage</li> <li>• during operating</li> </ul>	°C	-55 ... +80
	°C	-25 ... +60
<b>Resistance against shock</b>		
<ul style="list-style-type: none"> <li>• according to IEC 60068-2-27</li> </ul>		15g / 11 ms
<b>Resistance against vibration</b>		
<ul style="list-style-type: none"> <li>• according to IEC 60068-2-6</li> </ul>		2g
<b>Resistance against the impulse current / rated value</b>	A	200
<b>Active power loss / total / typical</b>	W	10

<b>Item designation</b>		
<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
<b>Product function</b>		instantaneous switching

### 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>		2
<b>Operating frequency</b>		
<ul style="list-style-type: none"> <li>• rated value</li> </ul>	Hz	60 ... 50
<b>Operating voltage</b>		
<ul style="list-style-type: none"> <li>• at 60 Hz / at AC / rated value</li> <li>• at 50 Hz / at AC / rated value</li> </ul>	V	48 ... 480
	V	48 ... 480
<b>Operating current</b>		
<ul style="list-style-type: none"> <li>• minimum</li> <li>• at AC-3 / at 400 V / rated value</li> </ul>	mA	100
	A	5.2
<b>Working area related to the operating voltage</b>		
<ul style="list-style-type: none"> <li>• at 50 Hz / for AC</li> <li>• at 60 Hz / for AC</li> </ul>	V	40 ... 506
	V	40 ... 506
<b>Service power / at AC-3 / at 400 V</b>		
<ul style="list-style-type: none"> <li>• rated value</li> </ul>	kW	2.2
<b>Derating temperature</b>	°C	40
<b>Tolerance of the line frequency</b>	Hz	5
<b>Relative symmetrical tolerance / of the operation frequency</b>	%	10
<b>I<sup>2</sup>t-level / maximum</b>	A <sup>2</sup> ·s	200
<b>Voltage slew rate / at the thyristor / for main contacts</b>		
<ul style="list-style-type: none"> <li>• maximum permissible</li> </ul>	V/μs	1,000
<b>Block voltage / at the thyristor / for main contacts</b>		
<ul style="list-style-type: none"> <li>• maximum permissible</li> </ul>	V	1,200
<b>Reverse current / of the thyristor</b>	mA	10

### Control circuit:

<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> <li>• 2 / rated value</li> </ul>	Hz	50
	Hz	60
<b>Relative symmetrical tolerance</b>		
<ul style="list-style-type: none"> <li>• of the control supply voltage frequency</li> <li>• of the supply voltage frequency</li> </ul>	%	10
	%	10

<b>Control supply voltage</b>		
• 1		
• at 50 Hz / for AC		
• initial rated value	V	90
• final rated value	V	253
• at 60 Hz / for AC		
• initial rated value	V	90
• final rated value	V	253
• at 50 Hz / for AC / final value for signal<0>-recognition	V	40
• at 60 Hz / for AC / final value for signal<0>-recognition	V	40
<b>Control current</b>		
• for AC / rated value	mA	15
• at minimum control supply voltage / for AC	mA	2

#### Auxiliary circuit:

<b>Number of NC contacts / for auxiliary contacts</b>		0
<b>Number of NO contacts / for auxiliary contacts</b>		0
<b>Number of change-over switches / for auxiliary contacts</b>		0

#### Installation/mounting/dimensions:

<b>mounting position</b>		vertical
<b>Type of mounting</b>		screw and snap-on mounting onto 35 mm standard mounting rail
<b>Type of fixing/fixation / series installation</b>		Yes
<b>Tightening torque / of the screw for fastening of the operating resource</b>	N·m	1.5
<b>Design of the thread / of the screw for fastening of the operating resource</b>		M4
<b>Width</b>	mm	45
<b>Height</b>	mm	95
<b>Depth</b>	mm	100.8
<b>Distance, to be maintained, to the ranks assembly</b>		
• upwards	mm	70
• downwards	mm	50

#### 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>Design of the thread / of the connection screw</b>		
• for main contacts		M4
• of the auxiliary and control pins		M3

<b>Product function / removable terminal for auxiliary and control circuit</b>		Yes
<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>• 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 and control 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> <li>• without conductor final cutting</li> </ul> </li> </ul> </li> <li>• for AWG conductors / for auxiliary and control contacts</li> </ul>		2x (0.5 ... 2.5 mm <sup>2</sup> )  2x (0.5 ... 1.5 mm <sup>2</sup> )  2x (18 ... 14)  1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )  1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )  1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )  1x (AWG 20 ... 12)
<b>Tightening torque</b>		
<ul style="list-style-type: none"> <li>• for main contacts / with screw-type terminals</li> <li>• for auxiliary and control contacts / with screw-type terminals</li> </ul>	N-m N-m	2 ... 2.5 0.5 ... 0.6
<b>Tightening torque (lbf-in)</b>		
<ul style="list-style-type: none"> <li>• for main contacts / with screw-type terminals</li> <li>• for auxiliary and control contacts / with screw-type terminals</li> </ul>	lbf-in lbf-in	18 ... 22 7.5 ... 5.3
<b>Skinning length / of the cable</b>		
<ul style="list-style-type: none"> <li>• for main contacts</li> <li>• for auxiliary and control contacts</li> </ul>	mm mm	7 7

#### Certificates/approvals:

##### Verification of suitability

CE / UL / CSA / CCC / C-TICK

##### General Product Approval

##### EMC

##### Declaration of Conformity

##### Test Certificates



CSA



GOST



UL



C-TICK



EG-Konf.

[Type Test Certificates/Test Report](#)

#### UL/CSA ratings

##### yielded mechanical performance (hp) / for three-phase squirrel cage motors

- at 200/208 V / rated value
- at 220/230 V / rated value
- at 460/480 V / rated value

hp 0.5  
hp 0.75  
hp 2

##### Operating current (FLA) / for three-phase squirrel cage motors

- at 480 V / rated value

A 3.4

#### 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

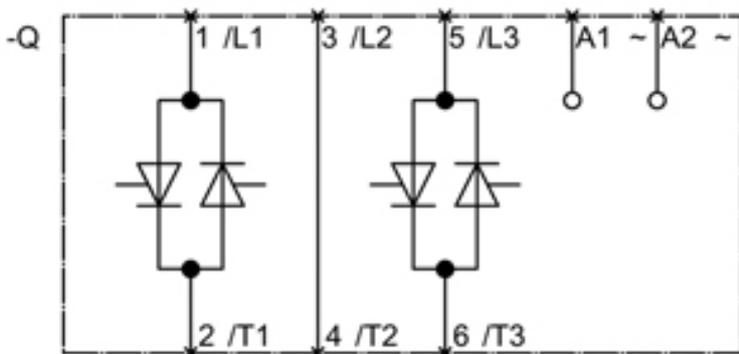
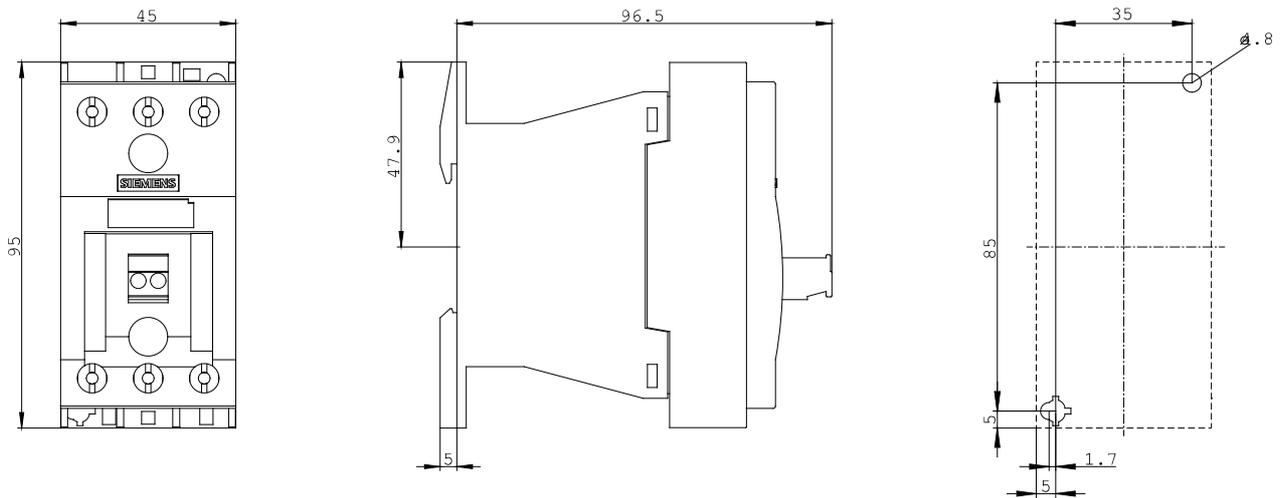
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RF3405-1BB24/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RF3405-1BB24](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF3405-1BB24)



last change:

Feb 4, 2013