



SOLID-STATE CONTACTOR 3-PH 3RF3 AC53 12.5A  
 40 DEGREES C 48-600V / 110-230V AC 2-PH.  
 CONTROLLED INSTANTANEOUS SCREW  
 TERMINALS

General technical data:

product brand name		SIRIUS
Product designation _2 of the accessories that can be ordered		Connection adapter
Product designation _1 of the accessories that can be ordered		Link module
Manufacturer article number		
<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>
Protection class IP		IP20
Insulation voltage Rated value	V	600
Installation altitude at height above sea level maximum	m	1 000
Ambient temperature		
<ul style="list-style-type: none"> <li>• during storage</li> <li>• during operation</li> </ul>	°C	-55 ... +80
	°C	-25 ... +60
Shock resistance acc. to IEC 60068-2-27		15g / 11 ms
Vibration resistance acc. to IEC 60068-2-6		2g
Surge current resistance Rated value	A	1 150
Active power loss total typical	W	22
Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		K
Equipment marking acc. to DIN EN 61346-2		Q
Product function		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
Operating frequency Rated value	Hz	60 ... 50
Operating voltage with AC		
• at 60 Hz Rated value	V	48 ... 600
• at 50 Hz Rated value	V	48 ... 600
<b>Operating current</b>		
• minimum	mA	500
• at AC-3 at 400 V Rated value	A	12.5
Operating range relative to the operating voltage with AC		
• at 50 Hz	V	40 ... 660
• at 60 Hz	V	40 ... 660
Operating power at AC-3 at 400 V Rated value	kW	5.5
<b>Derating temperature</b>	°C	40
<b>Symmetrical line frequency tolerance</b>	Hz	5
<b>Relative symmetrical tolerance of the operating frequency</b>	%	10
<b>I<sup>2</sup>t value maximum</b>	A <sup>2</sup> ·s	6 600
Rate of voltage rise at the thyristor for main contacts maximum permissible	V/μs	1 000
Blocking voltage at the thyristor for main contacts maximum permissible	V	1 600
<b>Reverse current of the thyristor</b>	mA	10

#### Control circuit/ Control:

<b>Type of voltage of the control supply voltage</b>		AC
<b>Control supply voltage frequency</b>		
• 1 Rated value	Hz	50
• 2 Rated value	Hz	60
<b>Relative symmetrical tolerance</b>		
• of the control supply voltage frequency	%	10
• of the supply voltage frequency	%	10
<b>Control supply voltage 1</b>		
• with AC		
— at 50 Hz Initial rated value	V	90
— at 50 Hz Final rated value	V	253
— at 60 Hz Initial rated value	V	90
— at 60 Hz Final rated value	V	253
<b>Control supply voltage with AC</b>		
• at 50 Hz Full-scale value for signal<0> recognition	V	40

<ul style="list-style-type: none"> <li>at 60 Hz Full-scale value for signal&lt;0&gt; recognition</li> </ul>	V	40
<b>Control current</b> <ul style="list-style-type: none"> <li>with AC Rated value</li> <li>at minimum control supply voltage <ul style="list-style-type: none"> <li>with AC</li> </ul> </li> </ul>	mA	15
	mA	2
<b>switching times</b> <ul style="list-style-type: none"> <li>ON delay</li> <li>OFF delay</li> </ul>		5 ms 30 ms + in addition max. one half-wave

#### 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 CO contacts for auxiliary contacts</b>		0

#### Installation/ mounting/ dimensions:

<b>mounting position</b>		vertical
<b>Mounting type</b>		screw and snap-on mounting onto 35 mm standard mounting rail
<b>Mounting type Side-by-side mounting</b>		Yes
<b>Tightening torque of the screw for securing the equipment</b>	N·m	1.5
<b>Design of the thread of the screw for securing the equipment</b>		M4
<b>Width</b>	mm	90
<b>Height</b>	mm	95
<b>Depth</b>	mm	100.8
<b>Required spacing with side-by-side mounting</b>		
<ul style="list-style-type: none"> <li>upwards</li> <li>downwards</li> </ul>	mm	70
	mm	50

#### Connections/ Terminals:

<b>Type of electrical connection</b> <ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control current circuit</li> </ul>		screw-type terminals screw-type terminals
<b>Design of the thread of the connection screw</b> <ul style="list-style-type: none"> <li>for main contacts</li> <li>of the auxiliary and control contacts</li> </ul>		M4 M3
<b>Product function removable terminal for auxiliary and control circuit</b>		Yes
<b>Type of 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</li> <li>with core end processing</li> </ul> </li> </ul>		2x (0.5 ... 2.5 mm <sup>2</sup> ) 2x (0.5 ... 1.5 mm <sup>2</sup> )

<ul style="list-style-type: none"> <li>• for AWG conductors <ul style="list-style-type: none"> <li>— for main contacts</li> <li>— for auxiliary and control contacts</li> </ul> </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 core end processing</li> <li>— without core end processing</li> </ul> </li> </ul> </li> </ul>		2x (18 ... 14) 1x (AWG 20 ... 12)  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> )
<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>Wire stripping 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:

<b>Certificate of suitability</b>	CE / UL / CSA / CCC / C-TICK
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<b>General Product Approval</b>	<b>EMC</b>	<b>Declaration of Conformity</b>
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<b>Test Certificates</b>	<b>other</b>
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[Type Test Certificates/Test Report](#)

[Environmental Confirmations](#)

UL/CSA ratings:

<b>yielded mechanical performance [hp] for three-phase AC motor</b>		
<ul style="list-style-type: none"> <li>• at 200/208 V Rated value</li> <li>• at 220/230 V Rated value</li> </ul>	metric hp metric hp	2 2

- at 460/480 V Rated value

metric	5
hp	

- at 575/600 V Rated value

metric	5
hp	

#### Full-load current (FLA) for three-phase AC motor

- at 480 V Rated value
- at 600 V Rated value

A	7.6
A	6.1

#### Further information

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

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

##### Industry Mall (Online ordering system)

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

##### Cax online generator

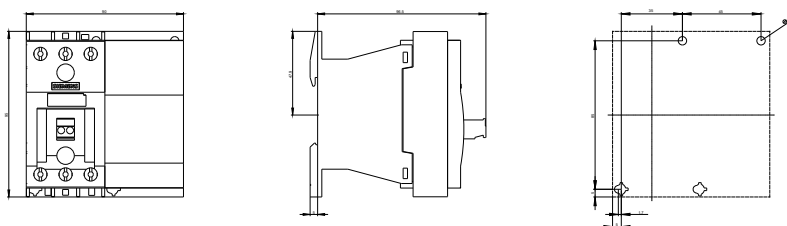
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF34121BB26>

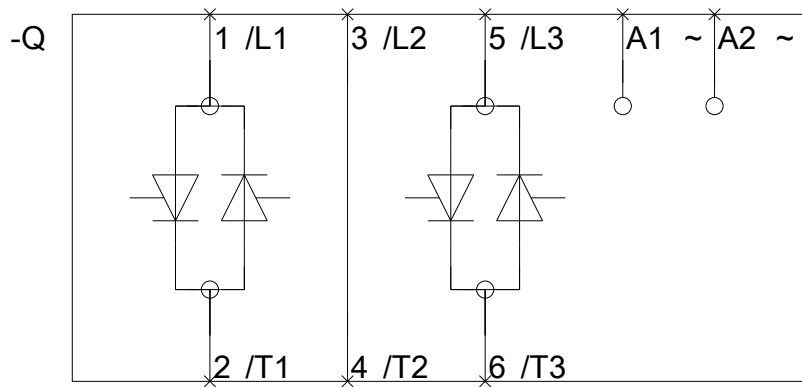
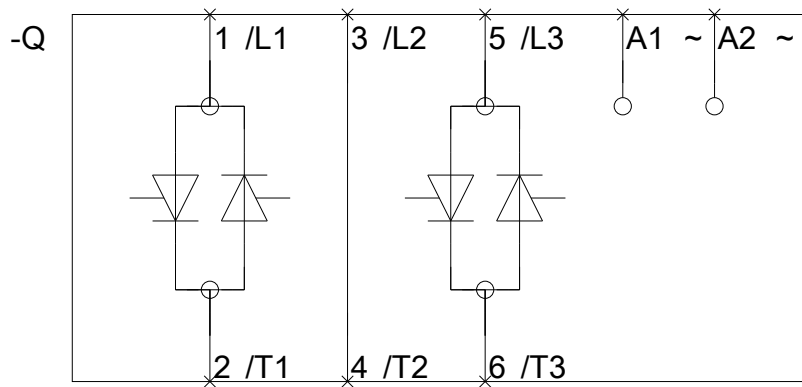
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

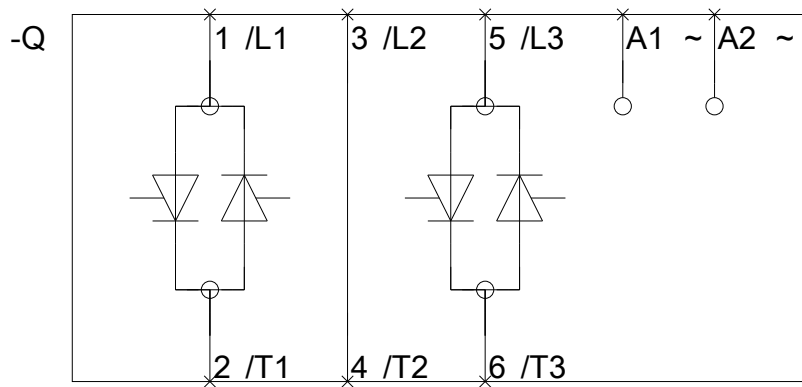
<http://support.automation.siemens.com/WW/view/en/3RF34121BB26/all>

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

<http://www.automation.siemens.com/bilddb/index.aspx?attID9=3RF34121BB26&lang=en>







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