

SOLID-STATE CONTACTOR 3-PH 3RF3 AC53 3.8A  
40 DEGREES C 48-480V / 24V DC REVERSE  
SWITCHING INSTANTANEOUS SCREW TERMINALS



General technical data		
product brandname		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's 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	600

Power loss [W] total typical	W	7
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		reversing switch

#### Main circuit

Number of poles for main current circuit		3
Number of NO contacts for main contacts		2
Operating frequency rated value	Hz	60 ... 50
Operating voltage at AC		
• at 60 Hz rated value	V	48 ... 480
• at 50 Hz rated value	V	48 ... 480
Operating current		
• minimum	mA	500
• at AC-53a at 400 V at ambient temperature 40 °C rated value	A	3.8
Operating range relative to the operating voltage at AC		
• at 50 Hz	V	40 ... 506
• at 60 Hz	V	40 ... 506
Operating power at AC-3 at 400 V rated value	kW	1.5
Derating temperature	°C	40
Symmetrical line frequency tolerance	Hz	5
Relative symmetrical tolerance of the operating frequency	%	10
I <sup>2</sup> t value maximum	A <sup>2</sup> ·s	1 800
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	1 200
Reverse current of the thyristor	mA	10

#### Control circuit/ Control

Type of voltage of the control supply voltage		DC
Control supply voltage 1		
• at DC		
— Initial rated value	V	15
— Final rated value	V	24
— rated value maximum permissible	V	30
Control supply voltage at DC		
• initial value for signal <1> detection	V	15
• Full-scale value for signal <0> recognition	V	5
Control current		
• at minimum control supply voltage		

— at DC	mA	2
• at DC rated value	mA	15
<b>Switchover delay of reversing contactor</b>	ms	60 ... 100
<b>switching times</b>		
• ON delay		5 ms
• OFF delay		5 ms + in addition max. one half-wave

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	45
<b>Height</b>	mm	95
<b>Depth</b>	mm	113.8
<b>Required spacing with side-by-side mounting</b>		
• upwards	mm	70
• downwards	mm	50

Connections/Terminals		
<b>Type of 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 contacts		M3
<b>Product function removable terminal for auxiliary and control circuit</b>		Yes
<b>Type of connectable conductor cross-sections</b>		
• for main contacts		
— solid		2x (1.5 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> )
— finely stranded		
— with core end processing		2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup>
• at AWG conductors		
— for main contacts		2x (14 ... 10)
— for auxiliary and control contacts		1x (AWG 20 ... 12)
• for auxiliary and control contacts		
— solid		1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )
— finely stranded		
— with core end processing		1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )

— without core end processing		1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )
<b>Tightening torque</b>		
• for main contacts with screw-type terminals	N·m	2 ... 2.5
• for auxiliary and control contacts with screw-type terminals	N·m	0.5 ... 0.6
<b>Tightening torque [lbf·in]</b>		
• for main contacts with screw-type terminals	lbf·in	18 ... 22
• for auxiliary and control contacts with screw-type terminals	lbf·in	7.5 ... 5.3
<b>Wire stripping length of the cable</b>		
• for main contacts	mm	10
• for auxiliary and control contacts	mm	7

### UL/CSA ratings

<b>Full-load current (FLA) for three-phase AC motor</b>		
• at 480 V rated value	A	3.4
<b>Yielded mechanical performance [hp] for three-phase AC motor</b>		
• at 200/208 V rated value	hp	0.5
• at 220/230 V rated value	hp	0.75
• at 460/480 V rated value	hp	2

### Certificates/approvals

<b>General Product Approval</b>	<b>EMC</b>	<b>Declaration of Conformity</b>
 CCC	 EAC	 EG-Konf.
 CSA	 UL	 C-Tick

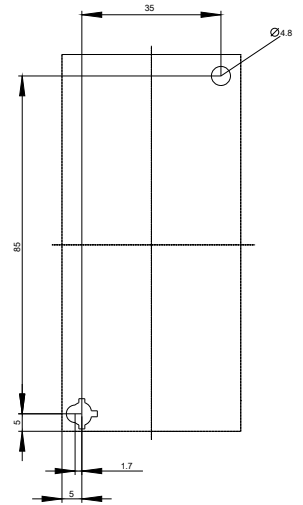
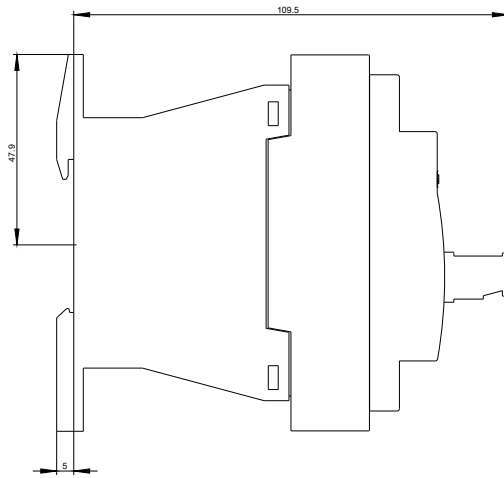
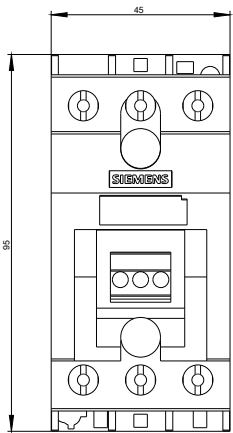
<b>Test Certificates</b>	<b>other</b>
<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Environmental Confirmations</a>
	<a href="#">Confirmation</a>

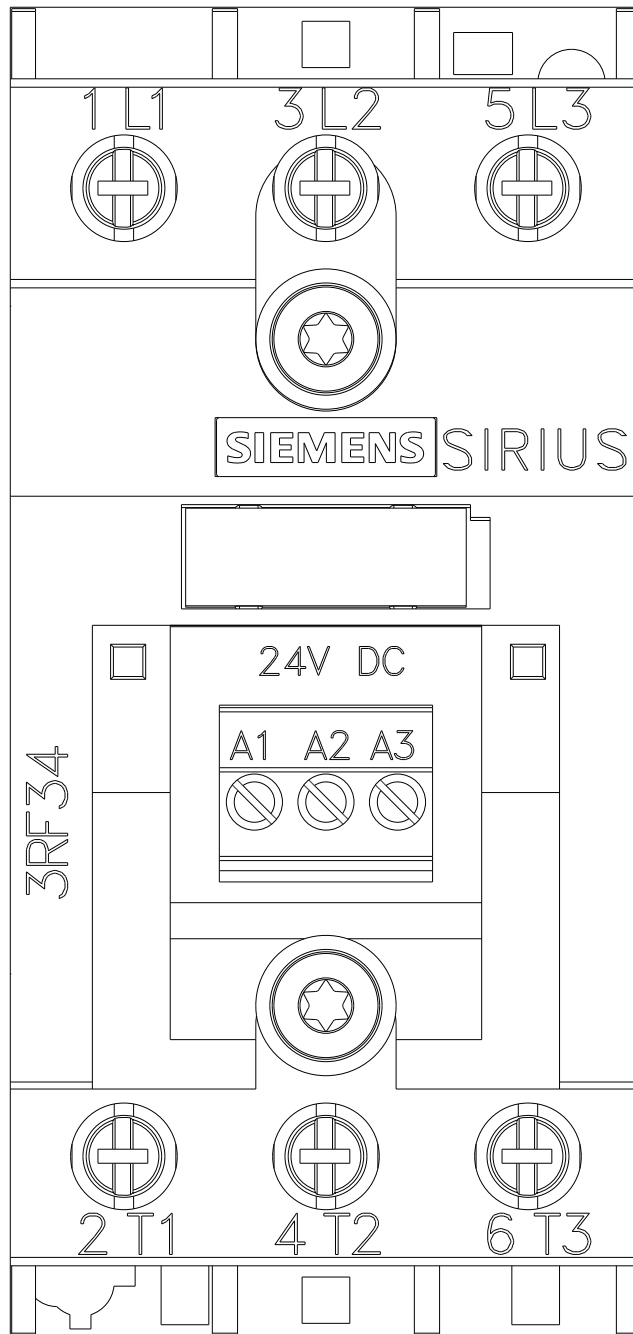
### Further information

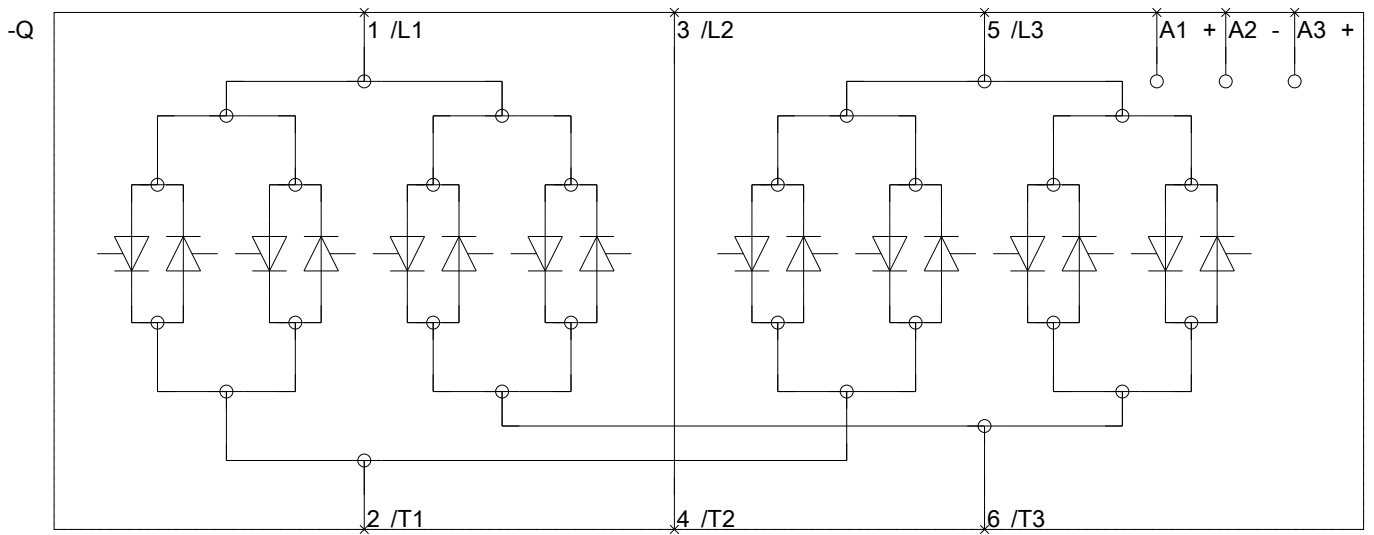
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