



Solid-state contactor 3-phase 3RF3 AC 53 / 9.2 A / 40 °C 48-480 V / 24 V DC 2-phase controlled Instantaneous switching screw terminal

<b>product brand name</b>	SIRIUS
<b>product designation</b>	solid-state contactor
<b>design of the product</b>	2-pole controlled
<b>product type designation</b>	3RF34
<b>manufacturer's 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-QQA88</a>
<b>product designation</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>	Link module Connection adapter
<b>General technical data</b>	
<b>certificate of suitability</b>	CE / UL / CSA / CCC / C-Tick (RCM)
<b>product function</b>	instantaneous switching
<b>power loss [W] for rated value of the current</b>	
<ul style="list-style-type: none"> <li>• at AC in hot operating state</li> <li>• at AC in hot operating state per pole</li> <li>• without load current share typical</li> </ul>	16 W 5.33 W 0.4 W
<b>type of calculation of power loss current-dependent</b>	linear
<b>insulation voltage rated value</b>	600 V
<b>degree of pollution</b>	3
surge voltage resistance of main circuit rated value	6 kV
<b>protection class IP</b>	IP20
protection class IP on the front according to IEC 60529	IP20
<b>shock resistance according to IEC 60068-2-27</b>	15 g / 11 ms
<b>vibration resistance according to IEC 60068-2-6</b>	2 g
<b>reference code according to IEC 81346-2</b>	Q
<b>Substance Prohibitance (Date)</b>	05/28/2009
<b>SVHC substance name</b>	Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1
<b>Net Weight</b>	0.49 kg
<b>Main circuit</b>	
<b>number of poles for main current circuit</b>	3
<b>number of NO contacts for main contacts</b>	2
<b>number of NC contacts for main contacts</b>	0
<b>type of voltage of the operating voltage</b>	AC
<b>operating voltage</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	

— at 50 Hz rated value	48 ... 480 V
— at 60 Hz rated value	48 ... 480 V
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>relative symmetrical tolerance of the operating frequency</b>	10 %
<b>operating range relative to the operating voltage at AC</b>	
• at 50 Hz	40 ... 506 V
• at 60 Hz	40 ... 506 V
<b>operational current</b>	
• at AC-3 at 400 V rated value	9.2 A
• at AC-53a at 400 V at ambient temperature 40 °C rated value	9.2 A
<b>operational current minimum</b>	500 mA
<b>operating power</b>	
• at AC-3 at 400 V rated value	4 kW
<b>rate of voltage rise at the thyristor for main contacts maximum permissible</b>	1 000 V/ $\mu$ s
<b>blocking voltage at the thyristor for main contacts maximum permissible</b>	1 200 V
<b>reverse current of the thyristor</b>	10 mA
<b>derating temperature</b>	40 °C
<b>surge current resistance rated value</b>	600 A
<b>I<sup>2</sup>t value maximum</b>	1 800 A <sup>2</sup> ·s
<b>Control circuit/ Control</b>	
<b>type of voltage of the control supply voltage</b>	DC
<b>control supply voltage at DC rated value</b>	24 V
<b>control supply voltage at DC</b>	
• initial value for signal <1> detection	15 V
• full-scale value for signal<0> recognition	5 V
<b>symmetrical line frequency tolerance</b>	5 Hz
<b>operating range factor control supply voltage rated value at DC</b>	
• initial value	0.63
• full-scale value	1.25
<b>control current at minimum control supply voltage</b>	
• at DC	2 mA
control current at DC rated value	15 mA
<b>ON-delay time</b>	1 ms
<b>OFF-delay time</b>	1 ms; additionally max. one half-wave
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	vertical
fastening method side-by-side mounting	Yes
<b>fastening method</b>	screw and snap-on mounting onto 35 mm DIN rail
<b>design of the thread of the screw for securing the equipment</b>	M4
<b>height</b>	95 mm
<b>width</b>	90 mm
<b>depth</b>	100.8 mm
required spacing with side-by-side mounting	
• upwards	70 mm
• downwards	50 mm
<b>Connections/ Terminals</b>	
<b>product component removable terminal for auxiliary and control circuit</b>	Yes
<b>type of electrical connection</b>	
• for main current circuit	screw-type terminals
• for auxiliary and control circuit	screw-type terminals
<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>

<ul style="list-style-type: none"> <li>for AWG cables for main contacts</li> </ul>	2x (14 ... 10)
<b>connectable conductor cross-section for main contacts</b>	
<ul style="list-style-type: none"> <li>solid or stranded</li> </ul>	1.5 ... 6 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>finely stranded with core end processing</li> </ul>	1 ... 10 mm <sup>2</sup>
<b>type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>for auxiliary and control contacts <ul style="list-style-type: none"> <li>— solid</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul> </li> </ul>	1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>for AWG cables for auxiliary and control contacts</li> </ul>	1x (20 ... 12)
<b>AWG number as coded connectable conductor cross section for main contacts</b>	14 ... 10
<b>tightening torque</b>	
<ul style="list-style-type: none"> <li>for main contacts with screw-type terminals</li> </ul>	2 ... 2.5 N·m
<ul style="list-style-type: none"> <li>for auxiliary and control contacts with screw-type terminals</li> </ul>	0.5 ... 0.6 N·m
<b>tightening torque [lbf·in]</b>	
<ul style="list-style-type: none"> <li>for main contacts with screw-type terminals</li> </ul>	18 ... 22 lbf·in
<ul style="list-style-type: none"> <li>for auxiliary and control contacts with screw-type terminals</li> </ul>	7.5 ... 5.3 lbf·in
<b>design of the thread of the connection screw</b>	
<ul style="list-style-type: none"> <li>for main contacts</li> </ul>	M4
<ul style="list-style-type: none"> <li>of the auxiliary and control contacts</li> </ul>	M3
<b>stripped length of the cable</b>	
<ul style="list-style-type: none"> <li>for main contacts</li> </ul>	10 mm
<ul style="list-style-type: none"> <li>for auxiliary and control contacts</li> </ul>	7 mm
<b>UL/CSA ratings</b>	
<b>full-load current (FLA) for 3-phase AC motor</b>	
<ul style="list-style-type: none"> <li>at 480 V rated value</li> </ul>	4.8 A
yielded mechanical performance [hp] for 3-phase AC motor	
<ul style="list-style-type: none"> <li>at 200/208 V rated value</li> </ul>	1.5 hp
<ul style="list-style-type: none"> <li>at 220/230 V rated value</li> </ul>	2 hp
<ul style="list-style-type: none"> <li>at 460/480 V rated value</li> </ul>	3 hp
<b>Safety related data</b>	
proportion of dangerous failures with high demand rate according to SN 31920	50 %
<b>MTTF with high demand rate</b>	76 a
IEC 61508	
T1 value for proof test interval or service life according to IEC 61508	20 a
Electrical Safety	
<b>touch protection on the front according to IEC 60529</b>	finger-safe, for vertical contact from the front
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	1 000 m
<b>ambient temperature</b>	
<ul style="list-style-type: none"> <li>during operation</li> </ul>	-25 ... +60 °C
<ul style="list-style-type: none"> <li>during storage</li> </ul>	-55 ... +80 °C
<b>Electromagnetic compatibility</b>	
<b>conducted interference</b>	
<ul style="list-style-type: none"> <li>due to burst according to IEC 61000-4-4</li> </ul>	2 kV / 5 kHz, behavior criterion 2
<ul style="list-style-type: none"> <li>due to conductor-earth surge according to IEC 61000-4-5</li> </ul>	2 kV, behavior criterion 2
<ul style="list-style-type: none"> <li>due to conductor-conductor surge according to IEC 61000-4-5</li> </ul>	1 kV, behavior criterion 2
<ul style="list-style-type: none"> <li>due to high-frequency radiation according to IEC 61000-4-6</li> </ul>	140 dBuV in the frequency range 0.15 ... 80 MHz, behavior criterion 1
<b>electrostatic discharge according to IEC 61000-4-2</b>	4 kV contact discharging / 8 kV air discharging, behavior criterion 2
<b>conducted HF interference emissions according to CISPR11</b>	Class A for industrial environment
<b>field-bound HF interference emission according to CISPR11</b>	Class A for industrial environment
<b>Short-circuit protection, design of the fuse link</b>	
manufacturer's article number	

- of full range R fuse link for semiconductor protection at NH design usable
- of full range R fuse link for semiconductor protection at cylindrical design usable
- of back-up R fuse link for semiconductor protection at NH design usable
- of back-up R fuse link for semiconductor protection at cylindrical design 10 x 38 mm usable
- of back-up R fuse link for semiconductor protection at cylindrical design 14 x 51 mm usable
- of back-up R fuse link for semiconductor protection at cylindrical design 22 x 58 mm usable

[3NE1802-0](#)

[5SE1335](#)

[3NE8020-1](#)

[3NC1032](#)

[3NC1450](#)

[3NC2263](#)

manufacturer's article number of the gG fuse

- at NH design usable
- at cylindrical design 10 x 38 mm usable
- at cylindrical design 14 x 51 mm usable
- at cylindrical design 22 x 58 mm usable

[3NA3805-6](#)

[3NW6005-1](#)

[3NW6105-1](#)

[3NW6205-1](#)

#### Approvals Certificates

Environment

General Product Approval

[Environmental Confirmations](#)



General Product Approval

EMV

Test Certificates

other



[Type Test Certificates/Test Report](#)

[Confirmation](#)

[Confirmation](#)



#### Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RF3410-1BB04>

Cax online generator

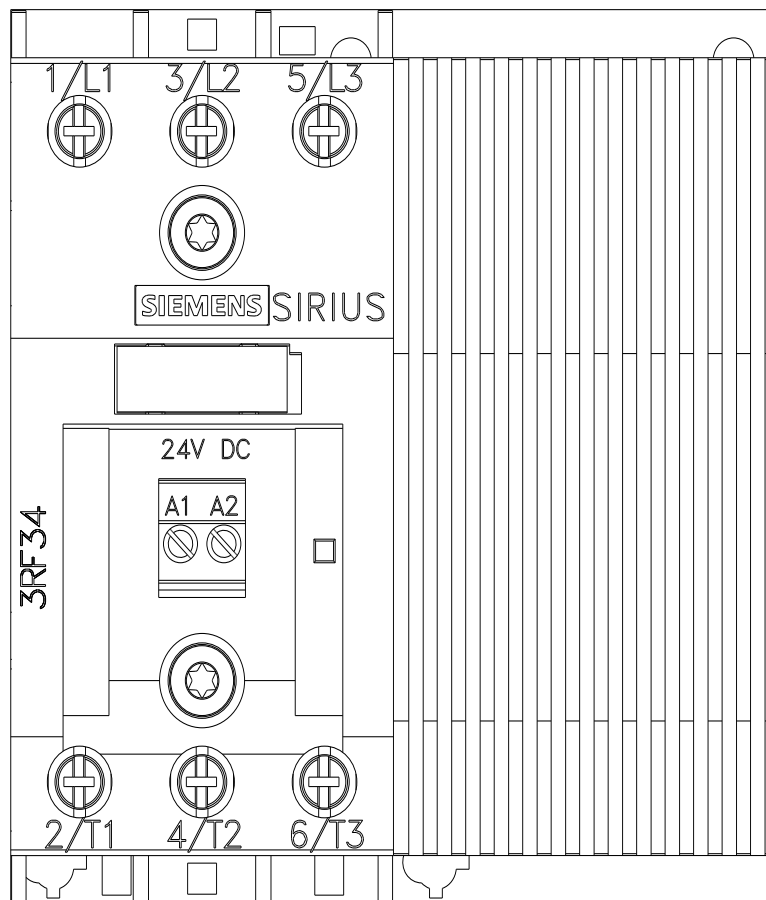
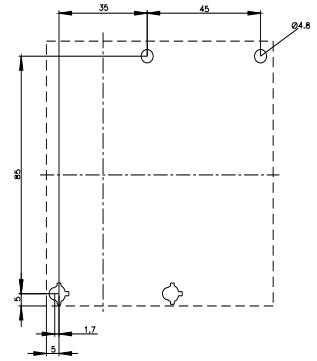
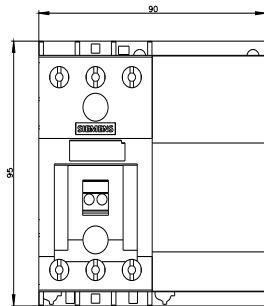
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF3410-1BB04>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RF3410-1BB04>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RF3410-1BB04&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF3410-1BB04&lang=en)





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