

Solid-state contactor 1-phase 3RF2 AC 15 / 30 A / 40 °C 48-600 V / 110-230 V AC Instantaneous switching Phased-out product, no successor available!

<b>product brand name</b>	SIRIUS
<b>product designation</b>	solid-state contactor
<b>product type designation</b>	3RF23
<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> <li>• _4 of the accessories that can be ordered</li> </ul>	<a href="#">3RF2900-3PA88</a> <a href="#">3RF2950-0HA36</a> <a href="#">3RF2950-0GA36</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> <li>• _4 of the accessories that can be ordered</li> </ul>	terminal cover power regulator load monitoring

### General technical data

<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>	117 W 117 W 3.5 W
<b>insulation voltage rated value</b>	600 V
<b>degree of pollution</b>	3
type of voltage of the control supply voltage	AC
surge voltage resistance of main circuit rated value	6 kV
<b>shock resistance according to IEC 60068-2-27</b>	15g / 11 ms
<b>vibration resistance according to IEC 60068-2-6</b>	2g
<b>reference code according to IEC 81346-2</b>	Q
<b>Substance Prohibitance (Date)</b>	05/28/2009








### Main circuit

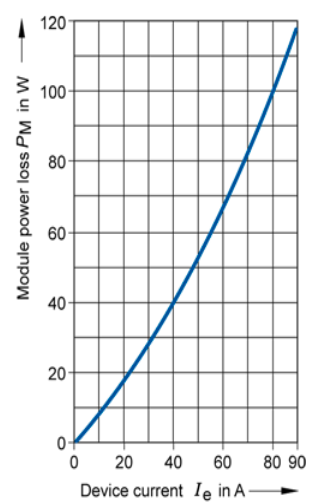
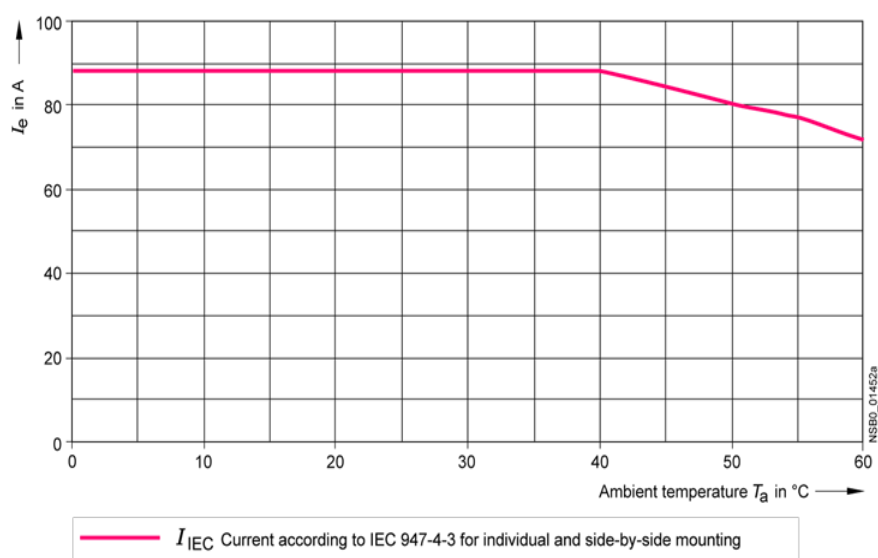
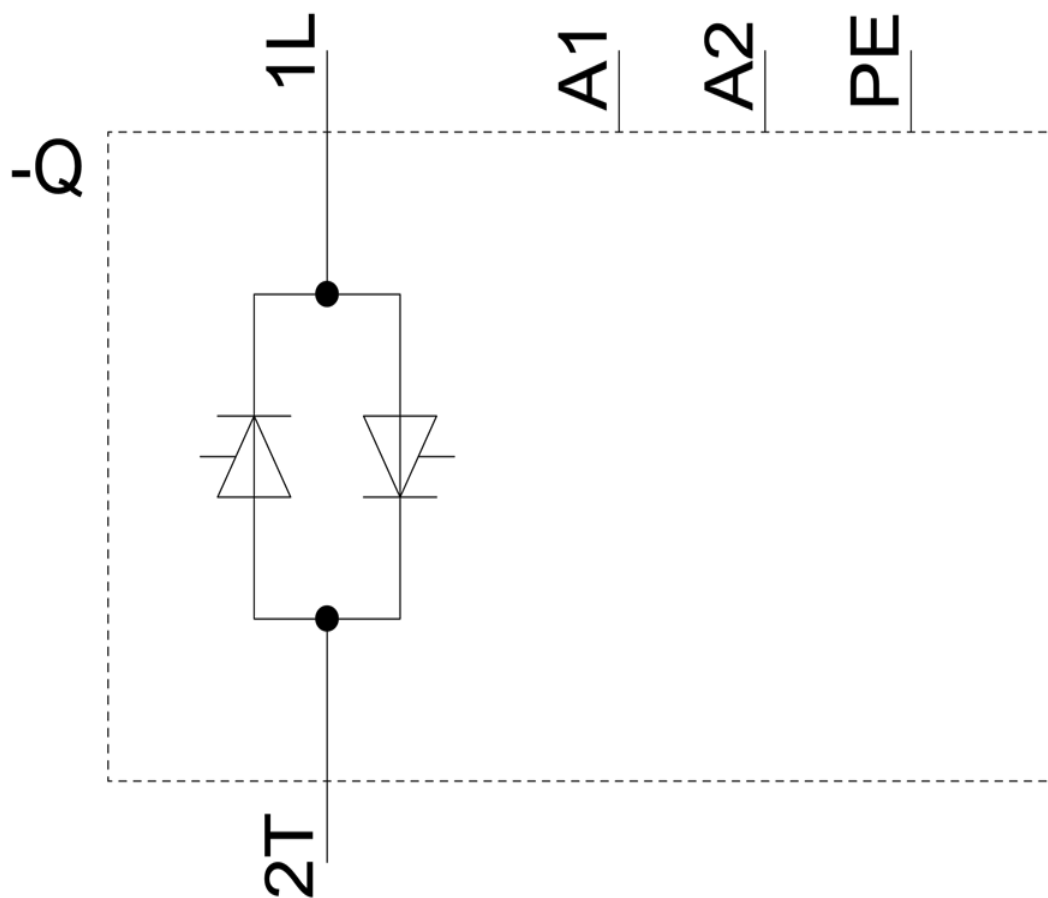
<b>number of poles for main current circuit</b>	1
<b>number of NO contacts for main contacts</b>	1
<b>number of NC contacts for main contacts</b>	0
operating voltage at AC	
<ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> <li>• at 60 Hz rated value</li> </ul>	48 ... 600 V 48 ... 600 V
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>operating range relative to the operating voltage at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>	40 ... 660 V 40 ... 660 V
<b>operational current</b>	
<ul style="list-style-type: none"> <li>• at AC-51 rated value</li> <li>• at AC-51 according to IEC 60947-4-3</li> <li>• according to UL 508 rated value</li> </ul>	50 A 50 A 30 A
<b>operational current minimum</b>	500 mA
<b>rate of voltage rise at the thyristor for main contacts</b>	1 000 V/μs
<b>maximum permissible</b>	
<b>blocking voltage at the thyristor for main contacts</b>	1 600 V
<b>maximum permissible</b>	
<b>reverse current of the thyristor</b>	10 mA
<b>derating temperature</b>	40 °C
<b>surge current resistance rated value</b>	1 150 A
<b>I2t value maximum</b>	6 600 A²·s

### Control circuit/ Control

<b>type of voltage of the control supply voltage</b>	AC
<b>control supply voltage 1 at AC</b>	

<ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>	110 ... 230 V
<b>control supply voltage frequency</b>	110 ... 230 V
<ul style="list-style-type: none"> <li>• 1 rated value</li> <li>• 2 rated value</li> </ul>	50 Hz
<b>control supply voltage at AC</b>	60 Hz
<ul style="list-style-type: none"> <li>• at 50 Hz full-scale value for signal&lt;0&gt; recognition</li> <li>• at 60 Hz full-scale value for signal&lt;0&gt; recognition</li> </ul>	40 V
<b>control supply voltage</b>	40 V
<ul style="list-style-type: none"> <li>• at AC initial value for signal &lt;1&gt; detection</li> </ul>	90 V
<b>symmetrical line frequency tolerance</b>	5 Hz
<b>control current at minimum control supply voltage</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	2 mA
control current at AC rated value	15 mA
<b>ON-delay time</b>	40 ms
<b>OFF-delay time</b>	40 ms; additionally max. one half-wave
<b>Auxiliary circuit</b>	
<b>number of NC contacts for auxiliary contacts</b>	0
<b>number of NO contacts for auxiliary contacts</b>	0
number of CO contacts for auxiliary contacts	0
<b>Installation/ mounting/ dimensions</b>	
<b>fastening method</b>	screw fixing
<ul style="list-style-type: none"> <li>• side-by-side mounting</li> </ul>	Yes
<b>design of the thread of the screw for securing the equipment</b>	M4
<b>height</b>	200 mm
<b>width</b>	180 mm
<b>depth</b>	163 mm
<b>Connections/ Terminals</b>	
<b>type of electrical connection</b>	
<ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control circuit</li> </ul>	screw-type terminals
<b>type of connectable conductor cross-sections</b>	screw-type terminals
<ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>— solid</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• at AWG cables for main contacts</li> </ul>	2x (1.5 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> )
<b>connectable conductor cross-section for main contacts</b>	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>• solid or stranded</li> <li>• finely stranded with core end processing</li> </ul>	2x (14 ... 10)
<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> <li>• at AWG cables for auxiliary and control contacts</li> </ul>	1.5 ... 6 mm <sup>2</sup>
AWG number as coded connectable conductor cross section for main contacts	1 ... 10 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>	2 ... 2.5 N·m
<b>tightening torque [lbf·in]</b>	0.5 ... 0.6 N·m
<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>	18 ... 22 lbf·in
<b>design of the thread of the connection screw</b>	4.5 ... 5.3 lbf·in
<ul style="list-style-type: none"> <li>• for main contacts</li> <li>• of the auxiliary and control contacts</li> </ul>	M4
<b>stripped length of the cable</b>	M3
<ul style="list-style-type: none"> <li>• for main contacts</li> <li>• for auxiliary and control contacts</li> </ul>	7 mm
	7 mm
<b>Safety related data</b>	

protection class IP on the front according to IEC 60529		IP20			
touch protection on the front according to IEC 60529		finger-safe, for vertical contact from the front			
Ambient conditions					
installation altitude at height above sea level maximum		1 000 m			
ambient temperature					
• during operation		-25 ... +60 °C			
• during storage		-55 ... +80 °C			
Electromagnetic compatibility					
conducted interference					
• due to burst according to IEC 61000-4-4		2 kV / 5 kHz behavior criterion 2			
• due to conductor-earth surge according to IEC 61000-4-5		2 kV behavior criterion 2			
• due to conductor-conductor surge according to IEC 61000-4-5		1 kV behavior criterion 2			
• due to high-frequency radiation according to IEC 61000-4-6		140 dBuV in the frequency range 0.15 ... 80 MHz, behavior criterion 1			
field-based interference according to IEC 61000-4-3		80 MHz ... 1 GHz 10 V/m, behavior criterion 1			
electrostatic discharge according to IEC 61000-4-2		4 kV contact discharging / 8 kV air discharging, behavior criterion 2			
conducted HF interference emissions according to CISPR11		Class A for industrial environment			
field-bound HF interference emission according to CISPR11		Class B for the domestic, business and commercial environments			
Short-circuit protection, design of the fuse link					
manufacturer's article number					
• of full range R fuse link for semiconductor protection at NH design usable		<a href="#">3NE1020-2</a> ; These fuses have a smaller rated current than the semiconductor relays			
• of back-up R fuse link for semiconductor protection at NH design usable		<a href="#">3NE8021-1</a>			
• of back-up R fuse link for semiconductor protection at cylindrical design 22 x 58 mm usable		<a href="#">3NC2280</a> ; These fuses have a smaller rated current than the semiconductor relays			
Certificates/ approvals					
General Product Approval		EMC	Declaration of Conformity		
	<a href="#">Confirmation</a>				
Declaration of Conformity		Test Certificates		other	Railway
	<a href="#">Special Test Certificate</a>	<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Confirmation</a>		<a href="#">Vibration and Shock</a>
Further information					
Information on the packaging <a href="https://support.industry.siemens.com/cs/ww/en/view/109813875">https://support.industry.siemens.com/cs/ww/en/view/109813875</a>					
Information- and Downloadcenter (Catalogs, Brochures,...) <a href="https://www.siemens.com/ic10">https://www.siemens.com/ic10</a>					
Industry Mall (Online ordering system) <a href="https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RF2390-1BA26">https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RF2390-1BA26</a>					
Cax online generator <a href="http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&amp;mlfb=3RF2390-1BA26">http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&amp;mlfb=3RF2390-1BA26</a>					
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) <a href="https://support.industry.siemens.com/cs/ww/en/ps/3RF2390-1BA26">https://support.industry.siemens.com/cs/ww/en/ps/3RF2390-1BA26</a>					
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <a href="http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2390-1BA26&amp;lang=en">http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2390-1BA26&amp;lang=en</a>					



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