



Solid-state contactor 1-phase 3RF2 AC 51 / 10 A / 40 °C 48-600 V / 24 V DC  
Spring-type terminal

<b>product brand name</b>	SIRIUS
<b>product designation</b>	solid-state contactor
<b>design of the product</b>	single-phase
<b>product type designation</b>	3RF23
<b>manufacturer's article number</b>	
<ul style="list-style-type: none"> <li>_3 of the accessories that can be ordered</li> </ul>	<a href="#">3RF2900-0EA18</a>
<b>product designation</b>	
<ul style="list-style-type: none"> <li>_3 of the accessories that can be ordered</li> </ul>	converter
<b>General technical data</b>	
<b>product function</b>	zero-point 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> </ul>	11 W
<ul style="list-style-type: none"> <li>at AC in hot operating state per pole</li> </ul>	11 W
<ul style="list-style-type: none"> <li>without load current share typical</li> </ul>	0.4 W
<b>insulation voltage rated value</b>	600 V
<b>degree of pollution</b>	3
<b>type of voltage</b>	
<ul style="list-style-type: none"> <li>of the operating voltage</li> </ul>	AC
<ul style="list-style-type: none"> <li>of the control supply voltage</li> </ul>	DC
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 DIN 40719 extended according to IEC 204-2 according to IEC 750</b>	K
<b>reference code according to EN 61346-2</b>	Q
<b>reference code according to IEC 81346-2</b>	Q
<b>Substance Prohibitance (Date)</b>	05/28/2009
<b>SVHC substance name</b>	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 Dibutylbis(pentane-2,4-dionato-O,O')tin - 22673-19-4
<b>Main circuit</b>	
<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
<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>	
<ul style="list-style-type: none"> <li>at 50 Hz rated value</li> </ul>	48 ... 600 V
<ul style="list-style-type: none"> <li>at 60 Hz rated value</li> </ul>	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
<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>	10.5 A 7.5 A 9.6 A
<b>operational current minimum</b>	100 mA
<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>	1 600 V
<b>reverse current of the thyristor</b>	10 mA
<b>derating temperature</b>	40 °C
<b>surge current resistance rated value</b>	400 A
<b>I<sup>2</sup>t value maximum</b>	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 1 at DC</b>	
<ul style="list-style-type: none"> <li>• rated value maximum permissible</li> <li>•</li> </ul>	30 V 15 ... 24 V
<b>control supply voltage</b>	
<ul style="list-style-type: none"> <li>• at DC initial value for signal &lt;1&gt; detection</li> <li>• at DC full-scale value for signal&lt;0&gt; recognition</li> </ul>	15 V 5 V
<b>control current at minimum control supply voltage</b>	
<ul style="list-style-type: none"> <li>• at DC</li> </ul>	13 mA
control current at DC rated value	15 mA
<b>ON-delay time</b>	1 ms; additionally max. one half-wave
<b>OFF-delay time</b>	1 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>	
fastening method side-by-side mounting	Yes
<b>fastening method</b>	screw fixing and snap-on mounting on standard mounting rail 35 mm according to IEC 60715
<b>design of the thread of the screw for securing the equipment</b>	M4
<b>height</b>	95 mm
<b>width</b>	22.5 mm
<b>depth</b>	88 mm
<b>Connections/ Terminals</b>	
<b>product component removable terminal for auxiliary and control circuit</b>	Yes
<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>	spring-loaded terminals spring-loaded terminals
<b>type of connectable conductor cross-sections</b>	
<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> <li>— finely stranded without core end processing</li> </ul> </li> <li>• for AWG cables for main contacts</li> </ul>	2x (0.5 ... 2.5 mm <sup>2</sup> ) 2x (0.5 ... 1.5 mm <sup>2</sup> ) 2x (0.5 ... 2.5 mm <sup>2</sup> ) 2x (18 ... 14)
<b>connectable conductor cross-section for main contacts</b>	
<ul style="list-style-type: none"> <li>• solid or stranded</li> <li>• finely stranded with core end processing</li> <li>• finely stranded without core end processing</li> </ul>	0.5 ... 2.5 mm <sup>2</sup> 0.5 ... 1.5 mm <sup>2</sup> 0.5 ... 2.5 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>	0.5 ... 1.5 mm <sup>2</sup> 0.5 ... 2.5 mm <sup>2</sup> 0.5 ... 2.5 mm <sup>2</sup>

<ul style="list-style-type: none"> <li>for AWG cables for auxiliary and control contacts</li> </ul>	1x (AWG 20 ... 12)
AWG number as coded connectable conductor cross section for main contacts	10 ... 14
<b>stripped length of the cable</b>	
<ul style="list-style-type: none"> <li>for main contacts</li> </ul>	7 mm
<ul style="list-style-type: none"> <li>for auxiliary and control contacts</li> </ul>	7 mm
<b>Electrical Safety</b>	
<b>protection class IP on the front according to IEC 60529</b>	IP20
<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>field-based interference according to IEC 61000-4-3</b>	80 MHz ... 1 GHz 10 V/m, 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 B for the domestic, business and commercial environments
<b>Short-circuit protection, design of the fuse link</b>	
manufacturer's article number	
<ul style="list-style-type: none"> <li>of gS fuse for semiconductor protection at NH design usable</li> </ul>	<a href="#">3NE1813-0</a>
<ul style="list-style-type: none"> <li>of full range R fuse link for semiconductor protection at cylindrical design usable</li> </ul>	<a href="#">5SE1316</a>
<ul style="list-style-type: none"> <li>of back-up R fuse link for semiconductor protection at NH design usable</li> </ul>	<a href="#">3NE8015-1</a>
<ul style="list-style-type: none"> <li>of back-up R fuse link for semiconductor protection at cylindrical design 10 x 38 mm usable</li> </ul>	<a href="#">3NC1032</a>
<ul style="list-style-type: none"> <li>of back-up R fuse link for semiconductor protection at cylindrical design 14 x 51 mm usable</li> </ul>	<a href="#">3NC1440</a>
<ul style="list-style-type: none"> <li>of back-up R fuse link for semiconductor protection at cylindrical design 22 x 58 mm usable</li> </ul>	<a href="#">3NC2240</a>
manufacturer's article number of the gG fuse	
<ul style="list-style-type: none"> <li>at NH design usable</li> </ul>	<a href="#">3NA6803-6</a>

<b>Approvals Certificates</b>	
<b>General Product Approval</b>	EMV



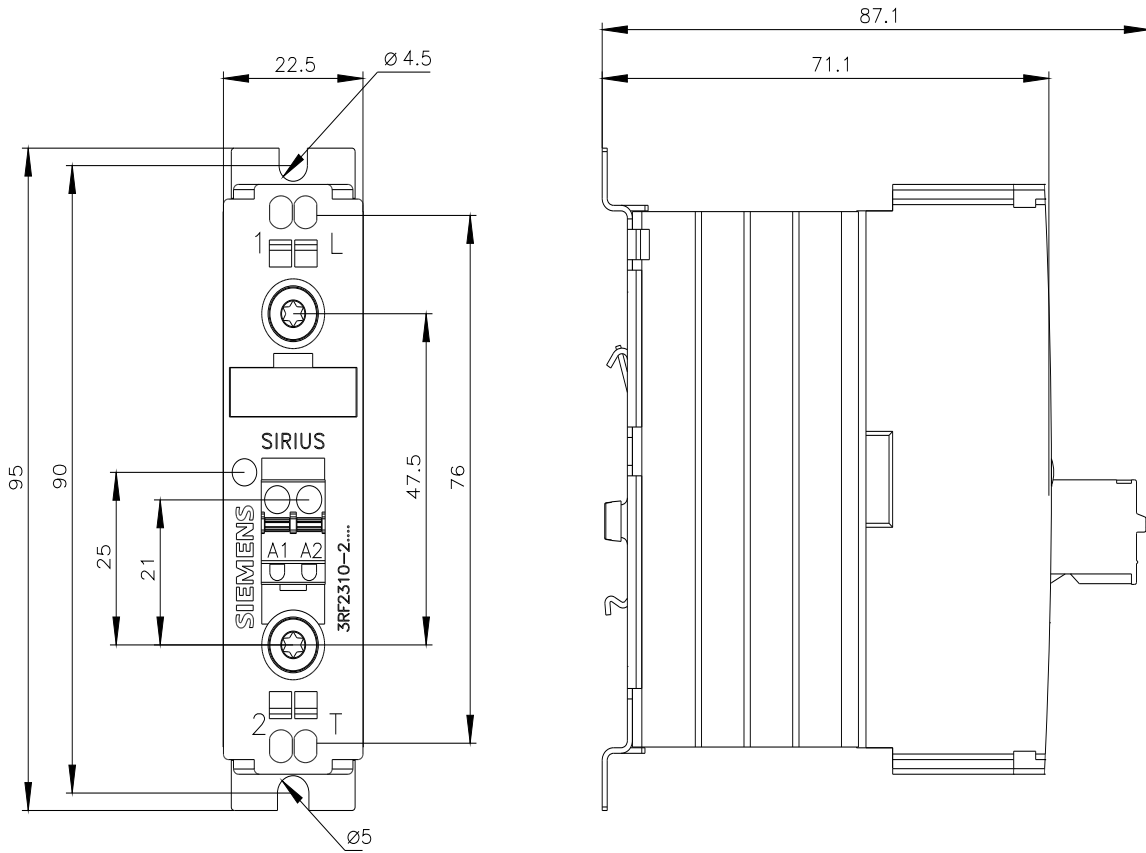
[Confirmation](#)

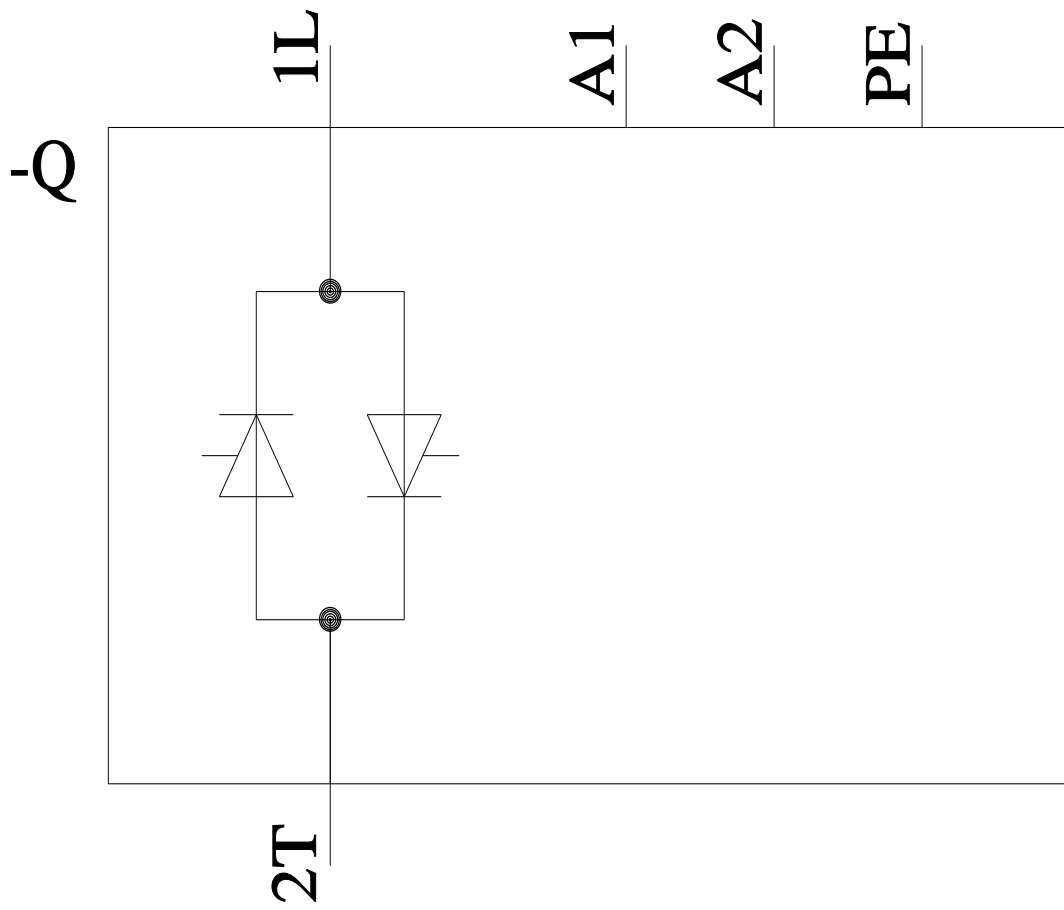


<b>Test Certificates</b>	<b>other</b>	<b>Railway</b>	<b>Environment</b>
<a href="#">Special Test Certificate</a>	<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Confirmation</a>	<a href="#">Environmental Confirmations</a>
			<a href="#">Special Test Certificate</a>

**Further information**

Information on the packaging  
<https://support.industry.siemens.com/cs/ww/en/view/109813875>  
 Information- and Downloadcenter (Catalogs, Brochures,...)  
<https://www.siemens.com/ic10>  
 Industry Mall (Online ordering system)





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