

Overload relay 50...200 A for motor protection Size S6, Class 20E Contactor mounting/stand-alone installation Main circuit: busbar connection Auxiliary circuit: Screw terminal Manual-Automatic-Reset



<b>product brand name</b>	SIRIUS
<b>product designation</b>	solid-state overload relay
<b>product type designation</b>	3RB2
<b>General technical data</b>	
<b>size of overload relay</b>	S6
<b>size of contactor can be combined company-specific</b>	S6
insulation voltage with degree of pollution 3 at AC rated value	1 000 V
<b>surge voltage resistance rated value</b>	8 kV
<b>maximum permissible voltage for protective separation in networks with grounded star point</b>	
• between auxiliary and auxiliary circuit	300 V
• between auxiliary and auxiliary circuit	300 V
• between main and auxiliary circuit	600 V
• between main and auxiliary circuit	690 V
<b>shock resistance</b>	15g / 11 ms
• according to IEC 60068-2-27	15g / 11 ms
<b>thermal current</b>	200 A
<b>reference code according to IEC 81346-2</b>	F
<b>Substance Prohibitance (Date)</b>	07/01/2006
<b>SVHC substance name</b>	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
<b>ambient temperature</b>	
• during operation	-25 ... +60 °C
• during storage	-40 ... +80 °C
• during transport	-40 ... +80 °C
<b>temperature compensation</b>	-25 ... +60 °C
relative humidity during operation	10 ... 95 %
<b>Main circuit</b>	
<b>number of poles for main current circuit</b>	3
<b>adjustable current response value current of the current-dependent overload release</b>	50 ... 200 A
<b>operating voltage</b>	
• rated value	1 000 V
• at AC-3e rated value maximum	1 000 V
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>operational current rated value</b>	200 A
operational current at AC-3e at 400 V rated value	200 A
<b>operating power</b>	
• for 3-phase motors at 400 V at 50 Hz	30 ... 90 kW

<ul style="list-style-type: none"> <li>for AC motors at 500 V at 50 Hz</li> <li>for AC motors at 690 V at 50 Hz</li> </ul>	<p>30 ... 132 kW</p> <p>55 ... 160 kW</p>
<b>Auxiliary circuit</b>	
<b>design of the auxiliary switch</b>	integrated
<b>number of NC contacts for auxiliary contacts</b>	1
<ul style="list-style-type: none"> <li>note</li> </ul>	for contactor disconnection
<b>number of NO contacts for auxiliary contacts</b>	1
<ul style="list-style-type: none"> <li>note</li> </ul>	for message "tripped"
number of CO contacts for auxiliary contacts	0
<b>operational current of auxiliary contacts at AC-15</b>	
<ul style="list-style-type: none"> <li>at 24 V</li> <li>at 110 V</li> <li>at 120 V</li> <li>at 125 V</li> <li>at 230 V</li> </ul>	<p>4 A</p> <p>4 A</p> <p>4 A</p> <p>4 A</p> <p>3 A</p>
<b>operational current of auxiliary contacts at DC-13</b>	
<ul style="list-style-type: none"> <li>at 24 V</li> <li>at 60 V</li> <li>at 110 V</li> <li>at 125 V</li> <li>at 220 V</li> </ul>	<p>2 A</p> <p>0.55 A</p> <p>0.3 A</p> <p>0.3 A</p> <p>0.11 A</p>
<b>Protective and monitoring functions</b>	
<b>trip class</b>	CLASS 20E
<b>design of the overload release</b>	electronic
<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> <li>at 600 V rated value</li> </ul>	<p>200 A</p> <p>200 A</p>
<b>contact rating of auxiliary contacts according to UL</b>	B600 / R300
<b>Short-circuit protection</b>	
<b>design of the fuse link</b>	
<ul style="list-style-type: none"> <li>for short-circuit protection of the main circuit <ul style="list-style-type: none"> <li>with type of coordination 1 required</li> <li>with type of assignment 2 required</li> </ul> </li> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	<p>gG: 355 A, Class L: 601 A</p> <p>gG: 315 A</p> <p>fuse gG: 6 A</p>
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	any
<b>fastening method</b>	Contacting mounting/stand-alone installation
<b>height</b>	119 mm
<b>width</b>	120 mm
<b>depth</b>	155 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>	<p>busbar connection</p> <p>screw-type terminals</p>
<b>arrangement of electrical connectors for main current circuit</b>	Top and bottom
<b>type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>for auxiliary contacts <ul style="list-style-type: none"> <li>solid</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> </ul> </li> <li>for AWG cables for auxiliary contacts</li> </ul>	<p>1x (0.5 ... 4 mm<sup>2</sup>), 2x (0.5 ... 2.5 mm<sup>2</sup>)</p> <p>1x (0.5 ... 4 mm<sup>2</sup>), 2x (0.5 ... 2.5 mm<sup>2</sup>)</p> <p>1x (0.5 ... 2.5 mm<sup>2</sup>), 2x (0.5 ... 1.5 mm<sup>2</sup>)</p> <p>2x (20 ... 14)</p>
<b>tightening torque</b>	
<ul style="list-style-type: none"> <li>for main contacts with screw-type terminals</li> <li>for auxiliary contacts with screw-type terminals</li> </ul>	<p>10 ... 12 N·m</p> <p>0.8 ... 1.2 N·m</p>
<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>	<p>M8</p> <p>M3</p>

<b>Electrical Safety</b>	
protection class IP on the front according to IEC 60529	IP00; IP20 with box terminal/cover
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with box terminal/cover
<b>Communication/ Protocol</b>	
type of voltage supply via input/output link master	No
<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> <li>• due to conductor-earth surge according to IEC 61000-4-5</li> <li>• due to conductor-conductor surge according to IEC 61000-4-5</li> <li>• due to high-frequency radiation according to IEC 61000-4-6</li> </ul>	2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3 2 kV (line to earth) corresponds to degree of severity 3 1 kV (line to line) corresponds to degree of severity 3  10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz
field-based interference according to IEC 61000-4-3	10 V/m
electrostatic discharge according to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge
<b>Display</b>	
display version for switching status	Slide switch
<b>Approvals Certificates</b>	
<b>General Product Approval</b>	



[Confirmation](#)



<b>General Product Approval</b>	<b>EMV</b>	<b>For use in hazardous locations</b>	<b>Test Certificates</b>	
		<a href="#">KC</a>		<a href="#">Special Test Certificate</a> <a href="#">Type Test Certificates/Test Report</a>

<b>Marine / Shipping</b>	<b>other</b>			
				<a href="#">Confirmation</a> <a href="#">Miscellaneous</a>

**Environment**

[Environmental Confirmations](#)

**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)  
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RB2056-2FC2>
- Cax online generator  
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB2056-2FC2>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)  
<https://support.industry.siemens.com/cs/ww/en/ps/3RB2056-2FC2>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)  
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB2056-2FC2&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB2056-2FC2&lang=en)
- Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current  
<https://support.industry.siemens.com/cs/ww/en/ps/3RB2056-2FC2/char>
- Further characteristics (e.g. electrical endurance, switching frequency)  
<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB2056-2FC2&objecttype=14&gridview=view1>



