

Overload relay 160...630 A for motor protection Size S10/S12, Class 10E  
 Contactor mounting/stand-alone installation Main circuit: busbar connection  
 Auxiliary circuit: Screw terminal Manual-Automatic-Reset



product brand name	SIRIUS
product designation	solid-state overload relay
product type designation	3RB2
<b>General technical data</b>	
size of overload relay	S10, S12
size of contactor can be combined company-specific	S10, S12
insulation voltage with degree of pollution 3 at AC rated value	1 000 V
surge voltage resistance rated value	8 kV
maximum permissible voltage for protective separation in networks with grounded star point	
• 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
shock resistance	15g / 11 ms
• according to IEC 60068-2-27	15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 11 ms
thermal current	630 A
reference code according to IEC 81346-2	F
Substance Prohibitance (Date)	07/01/2006
SVHC substance name	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
ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-40 ... +80 °C
• during transport	-40 ... +80 °C
temperature compensation	-25 ... +60 °C
relative humidity during operation	10 ... 95 %
<b>Main circuit</b>	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	160 ... 630 A
operating voltage	
• rated value	1 000 V
• at AC-3e rated value maximum	1 000 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	630 A
operational current at AC-3e at 400 V rated value	630 A
operating power	
• for 3-phase motors at 400 V at 50 Hz	90 ... 355 kW

• for AC motors at 500 V at 50 Hz	132 ... 400 kW
• for AC motors at 690 V at 50 Hz	160 ... 560 kW
<b>Auxiliary circuit</b>	
<b>design of the auxiliary switch</b>	integrated
<b>number of NC contacts for auxiliary contacts</b>	1
• note	for contactor disconnection
<b>number of NO contacts for auxiliary contacts</b>	1
• note	for message "tripped"
<b>number of CO contacts for auxiliary contacts</b>	0
<b>operational current of auxiliary contacts at AC-15</b>	
• at 24 V	4 A
• at 110 V	4 A
• at 120 V	4 A
• at 125 V	4 A
• at 230 V	3 A
<b>operational current of auxiliary contacts at DC-13</b>	
• at 24 V	2 A
• at 60 V	0.55 A
• at 110 V	0.3 A
• at 125 V	0.3 A
• at 220 V	0.11 A
<b>Protective and monitoring functions</b>	
<b>trip class</b>	CLASS 10E
<b>design of the overload release</b>	electronic
<b>UL/CSA ratings</b>	
<b>full-load current (FLA) for 3-phase AC motor</b>	
• at 480 V rated value	630 A
• at 600 V rated value	630 A
<b>contact rating of auxiliary contacts according to UL</b>	B600 / R300
<b>Short-circuit protection</b>	
<b>design of the fuse link</b>	
• for short-circuit protection of the main circuit	
— with type of coordination 1 required	gG: 800 A, Class L: 1600 A
— with type of assignment 2 required	gG: 630 A
• for short-circuit protection of the auxiliary switch required	fuse gG: 6 A
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	any
<b>fastening method</b>	Contactor 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>	
• for main current circuit	busbar connection
• for auxiliary and control circuit	screw-type terminals
<b>arrangement of electrical connectors for main current circuit</b>	Top and bottom
<b>type of connectable conductor cross-sections</b>	
• for auxiliary contacts	
— solid	1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
— solid or stranded	1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
— finely stranded with core end processing	1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
• for AWG cables for auxiliary contacts	2x (20 ... 14)
<b>tightening torque</b>	
• for main contacts with screw-type terminals	20 ... 22 N·m
• for auxiliary contacts with screw-type terminals	0.8 ... 1.2 N·m
<b>design of the thread of the connection screw</b>	
• for main contacts	M10
• of the auxiliary and control contacts	M3

<b>Electrical Safety</b>	
<b>protection class IP on the front according to IEC 60529</b>	IP00; IP20 with box terminal/cover
<b>touch protection on the front according to IEC 60529</b>	finger-safe, for vertical contact from the front with box terminal/cover
<b>Communication/ Protocol</b>	
<b>type of voltage supply via input/output link master</b>	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
<b>field-based interference according to IEC 61000-4-3</b>	10 V/m
<b>electrostatic discharge according to IEC 61000-4-2</b>	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](#)



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

Marine / Shipping	other

Environment
<a href="#">Environmental Confirmations</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=3RB2066-1MC2">https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RB2066-1MC2</a>
Cax online generator <a href="http://support.automation.siemens.com/WW/CAxorder/default.aspx?lang=en&amp;mlfb=3RB2066-1MC2">http://support.automation.siemens.com/WW/CAxorder/default.aspx?lang=en&amp;mlfb=3RB2066-1MC2</a>
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) <a href="https://support.industry.siemens.com/cs/ww/en/ps/3RB2066-1MC2">https://support.industry.siemens.com/cs/ww/en/ps/3RB2066-1MC2</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=3RB2066-1MC2&amp;lang=en">http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB2066-1MC2&amp;lang=en</a>
Characteristic: Tripping characteristics, I <sup>t</sup> , Let-through current <a href="https://support.industry.siemens.com/cs/ww/en/ps/3RB2066-1MC2/char">https://support.industry.siemens.com/cs/ww/en/ps/3RB2066-1MC2/char</a>
Further characteristics (e.g. electrical endurance, switching frequency) <a href="http://www.automation.siemens.com/bilddb/index.aspx?view=Search&amp;mlfb=3RB2066-1MC2&amp;objecttype=14&amp;gridview=view1">http://www.automation.siemens.com/bilddb/index.aspx?view=Search&amp;mlfb=3RB2066-1MC2&amp;objecttype=14&amp;gridview=view1</a>



