

Overload relay 160...630 A for motor protection size S10/S12, CLASS 5...30E Contactor/standalone mounting Main circuit: bus connection Aux. circuit: screw term. Manual/Auto RESET internal ground fault monit.



Figure similar

<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>	S10, S12
<b>Size of contactor can be combined company-specific</b>	S10, S12
Insulation voltage with degree of pollution 3 rated value	1 000 V
<b>Surge voltage resistance rated value</b>	8 kV
<b>maximum permissible voltage for safe isolation</b>	
<ul style="list-style-type: none"> <li>• in networks with grounded star point between auxiliary and auxiliary circuit</li> </ul>	300 V
<ul style="list-style-type: none"> <li>• in networks with grounded star point between auxiliary and auxiliary circuit</li> </ul>	300 V
<ul style="list-style-type: none"> <li>• in networks with grounded star point between main and auxiliary circuit</li> </ul>	600 V
<ul style="list-style-type: none"> <li>• in networks with grounded star point between main and auxiliary circuit</li> </ul>	690 V

<b>Protection class IP</b>	
<ul style="list-style-type: none"> <li>• on the front</li> <li>• of the terminal</li> </ul>	IP20 IP00
<b>Vibration resistance</b>	1-6 Hz, 15 mm; 6-500 Hz, 20 m/s <sup>2</sup> ; 10 cycles
<b>Thermal current</b>	630 A
<b>Recovery time</b>	
<ul style="list-style-type: none"> <li>• after overload trip with automatic reset typical</li> <li>• after overload trip with remote-reset</li> <li>• after overload trip with manual reset</li> </ul>	3 min 0 min 0 min
<b>Type of protection</b>	II (2) G [Ex e] [Ex d] [Ex px] II (2) D [Ex t] [Ex p]
<b>Protection against electrical shock</b>	Finger-safe with terminal covers for vertical contact from the front
Equipment marking acc. to DIN EN 81346-2	F

#### Ambient conditions

<b>Ambient temperature</b>	
<ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> <li>• during transport</li> </ul>	-25 ... +60 °C -40 ... +80 °C -40 ... +80 °C
<b>Temperature compensation</b>	60 ... -25 °C

#### Main circuit

<b>Number of poles for main current circuit</b>	3
<b>Adjustable pick-up value current of the current-dependent overload release</b>	50 ... 200 A
<b>Operating voltage</b>	
<ul style="list-style-type: none"> <li>• rated value</li> <li>• for remote-reset function at DC</li> <li>• at AC-3 rated value maximum</li> </ul>	1 000 V 24 V 1 000 V
<b>Operating frequency rated value</b>	50 ... 60 Hz
<b>Operating current rated value</b>	200 A
<b>Operating power for three-phase motors at 400 V at 50 Hz</b>	90 ... 355 kW

#### Auxiliary circuit

<b>Design of the auxiliary switch</b>	integrated
<b>Number of NC contacts</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> <li>— Note</li> </ul>	1 for contactor disconnection
<b>Number of NO contacts</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> <li>— Note</li> </ul>	1 for message "tripped"
<b>Number of CO contacts</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>	0
<b>Operating 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>Operating 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>

### Protective and monitoring functions

<b>Trip class</b>	CLASS 5E, 10E, 20E and 30E adjustable
<b>Design of the overload release</b>	electronic
<b>Response time of the ground fault protection in settled state</b>	1 000 ms
<b>Operating range of the ground fault protection relating to current setting value</b>	
<ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	<p><math>I_{Motor} &gt; \text{lower current setting value}</math></p> <p><math>I_{Motor} &lt; \text{upper current setting value} \times 3.5</math></p>

### UL/CSA ratings

<b>Full-load current (FLA) for three-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

### Short-circuit protection

<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: 800 A, Class L: 1600 A</p> <p>gG: 630 A</p> <p>fuse gG: 6 A</p>

### Installation/ mounting/ dimensions

<b>Mounting position</b>	any
<b>Mounting type</b>	direct mounting / stand-alone installation
<b>Height</b>	119 mm
<b>Width</b>	120 mm
<b>Depth</b>	155 mm
<b>Required spacing</b>	
<ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards</li> </ul> </li> </ul>	0 mm

— Backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
• for grounded parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— at the side	6 mm
— downwards	0 mm
• for live parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	6 mm

### Connections/Terminals

<b>Product function</b>	
• removable terminal for auxiliary and control circuit	Yes
<b>Type of electrical connection</b>	
• for main current circuit	busbar connection
• for auxiliary and control current 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> )
— single or multi-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> )
• at AWG conductors for auxiliary contacts	2x (20 ... 14)
<b>Tightening torque</b>	
• for main contacts with screw-type terminals	10 ... 12 N·m
• for auxiliary contacts with screw-type terminals	0.8 ... 1.2 N·m

### Communication/ Protocol

<b>Type of voltage supply via input/output link master</b>	No
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### Electromagnetic compatibility

<b>Field-bound parasitic coupling acc. to IEC 61000-4-3</b>	10 V/m
<b>Electrostatic discharge acc. to IEC 61000-4-2</b>	6 kV contact discharge / 8 kV air discharge

### Display

## Display version

- for switching status

Slide switch

## Certificates/approvals

General Product Approval	EMC	For use in hazardous locations
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Declaration of Conformity	Test Certificates	Marine / Shipping
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EG-Konf.

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ABS



LRS

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## Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RB2163-4MC2>

**Cax online generator**

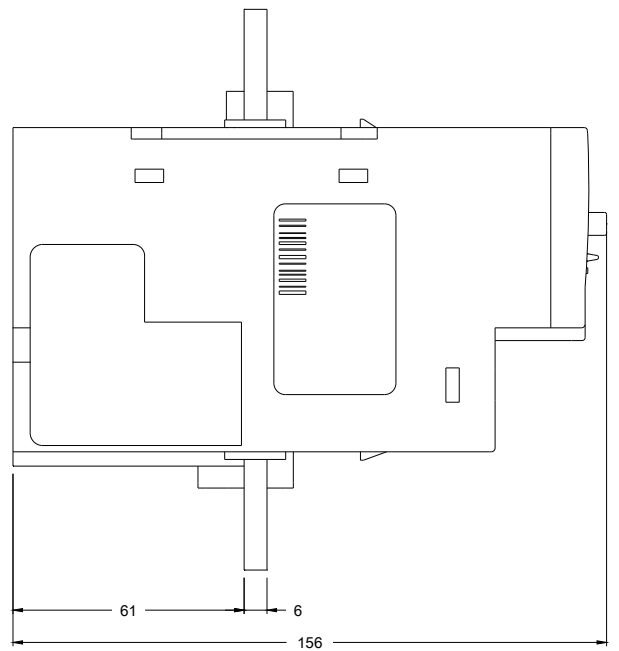
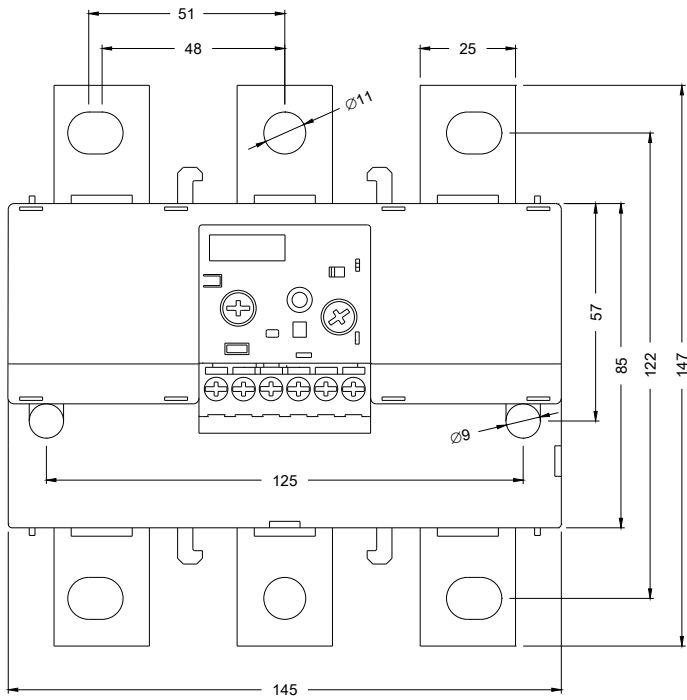
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB2163-4MC2>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB2163-4MC2>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB2163-4MC2&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB2163-4MC2&lang=en)



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