



OVERLOAD RELAY 3...12 A FOR MOTOR PROTECTION SIZE S0,  
 CLASS 5...30 CONTACTOR ASS. MAIN CIRCUIT: SCREW CONN.  
 AUX.CIRCUIT: SCREW CONN. MANUAL-AUTOM.-RESET INT.  
 GROUND FAULT DETECTION

product brand name	SIRIUS
Product designation	solid-state overload relay

**General technical data:**

Size of contactor can be combined company-specific	S0
Active power loss total typical	0.6 W
Insulation voltage	690 V
<ul style="list-style-type: none"> <li>with degree of pollution 3 Rated value</li> </ul>	690 V
Surge voltage resistance Rated value	6 kV
Protection class IP	IP20
<ul style="list-style-type: none"> <li>on the front</li> <li>of the terminal</li> </ul>	IP20
Vibration resistance	1-6 Hz, 15 mm; 6-500 Hz, 20 m/s <sup>2</sup> ; 10 cycles
Type of assignment	2
Type of protection	II (2) G [Ex e] [Ex d] [Ex px] II (2) D [Ex t] [Ex p]
Equipment marking	F
<ul style="list-style-type: none"> <li>acc. to DIN EN 61346-2</li> <li>acc. to DIN EN 81346-2</li> </ul>	F

**Ambient conditions:**

Installation altitude at height above sea level maximum	2 000 m
Ambient temperature	-25 ... +60 °C
<ul style="list-style-type: none"> <li>during operation</li> <li>during storage</li> <li>during transport</li> </ul>	-40 ... +80 °C
Relative humidity during operation	95 %

Main circuit:	
Number of poles for main current circuit	3
Adjustable response value current of the current-dependent overload release	3 ... 12 A
Operating voltage	
• for remote-reset function for DC	24 V
• at AC-3 Rated value maximum	690 V
Operating frequency Rated value	50 ... 60 Hz
Operating current	
• at AC-3	
— at 400 V Rated value	12 A

Auxiliary circuit:	
Number of NC contacts	
• for auxiliary contacts	1
— Note	for contactor disconnection
Number of NO contacts	
• for auxiliary contacts	1
— Note	for message "tripped"
Number of CO contacts	
• for auxiliary contacts	0
Design of the auxiliary switch	integrated
Operating current of the auxiliary contacts at AC-15	
• 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
Operating current of the auxiliary contacts at DC-13	
• 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

Protective and monitoring functions:	
Trip class	CLASS 5, 10, 20 and 30 adjustable
Design of the overload circuit breaker	electronic

UL/CSA ratings:	
Contact rating of the auxiliary contacts acc. to UL	B300 / R300

Short-circuit:	
Design of the fuse link	

- for short-circuit protection of the main circuit
  - required
- for short-circuit protection of the auxiliary switch required

Fuse gG: 50 A  
fuse gG: 6 A

#### Installation/ mounting/ dimensions:

<b>mounting position</b>	any
<b>Mounting type</b>	direct mounting
<b>Height</b>	87 mm
<b>Width</b>	45 mm
<b>Depth</b>	84 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> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <li>• for grounded parts           <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> </ul> </li> <li>• for live parts           <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul>	<p>0 mm 0 mm 0 mm 0 mm 0 mm</p> <p>6 mm 0 mm 6 mm 6 mm 6 mm</p> <p>6 mm 0 mm 6 mm 6 mm 6 mm</p>

#### Connections/ Terminals:

<b>Product function</b>	
<ul style="list-style-type: none"> <li>• removable terminal for auxiliary and control circuit</li> </ul>	Yes
<b>Type of electrical connection</b>	
<ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control current circuit</li> </ul>	<p>screw-type terminals screw-type terminals</p>
<b>Arrangement of electrical connectors for main current circuit</b>	Top and bottom
<b>Type of connectable conductor cross-section</b>	
<ul style="list-style-type: none"> <li>• for main contacts           <ul style="list-style-type: none"> <li>— single or multi-stranded</li> </ul> </li> </ul>	1x (1 ... 10 mm <sup>2</sup> ), 2x (1 ... 10 mm <sup>2</sup> )

<ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> <li>• for AWG conductors for main contacts</li> </ul>	<p>1x (1 ... 6 mm<sup>2</sup>), 2 x (1 ... 6 mm<sup>2</sup>), 1x 10 mm<sup>2</sup></p> <p>1x (16 ... 8), 2x (16 ... 8)</p>
<b>Type of connectable conductor cross-section</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— single or multi-stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• for AWG conductors for auxiliary contacts</li> </ul>	<p>1x (0,5 ... 4 mm<sup>2</sup>), 2x (0,5 ... 1,5 mm<sup>2</sup>), 2x (0,75 ... 2,5 mm<sup>2</sup>)</p> <p>1x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.5 ... 1.5 mm<sup>2</sup>), 1x (0.5 ... 2.5 mm<sup>2</sup>)</p> <p>1x (20 ... 14), 2x (20 ... 14)</p>
<b>Mechanical data:</b>	
<b>Size of overload relay</b>	S0
<b>Communication/ Protocol:</b>	
<b>Protocol is supported</b> <ul style="list-style-type: none"> <li>• IO-Link protocol</li> </ul>	No
<b>Type of voltage supply via input/output link master</b>	No
<b>Electromagnetic compatibility:</b>	
<b>EMC emitted interference</b> <ul style="list-style-type: none"> <li>• acc. to IEC 60947-1</li> </ul>	CISPR 11, environment B (residential area)
<b>EMI immunity acc. to IEC 60947-1</b>	corresponds to degree of severity 3
<b>Conducted interference due to burst acc. to IEC 61000-4-4</b>	2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3
<b>Conducted interference due to conductor-earth surge acc. to IEC 61000-4-5</b>	2 kV (line to earth) corresponds to degree of severity 3
<b>Conducted interference due to conductor-conductor surge acc. to IEC 61000-4-5</b>	1 kV (line to line) corresponds to degree of severity 3
<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
<b>Display:</b>	
<b>Display version</b> <ul style="list-style-type: none"> <li>• for switching status</li> </ul>	Slide switch
<b>Certificates/ approvals:</b>	

General Product Approval	EMC	For use in hazardous locations
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Declaration of Conformity	Test Certificates	Shipping Approval
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[Typprüfbescheinigung/Werkszeugnis](#)

[spezielle Prüfbescheinigungen](#)



Shipping Approval	other
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[Umweltbestätigung](#)

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#### Further information

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

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

**Industry Mall (Online ordering system)**

<http://www.siemens.com/industrymall>

**Cax online generator**

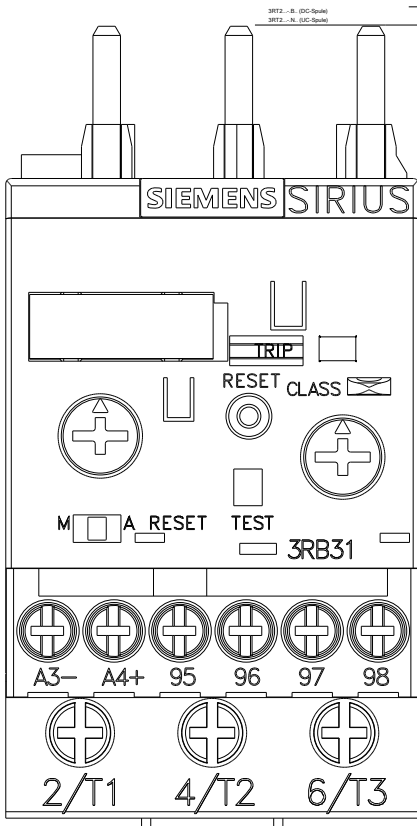
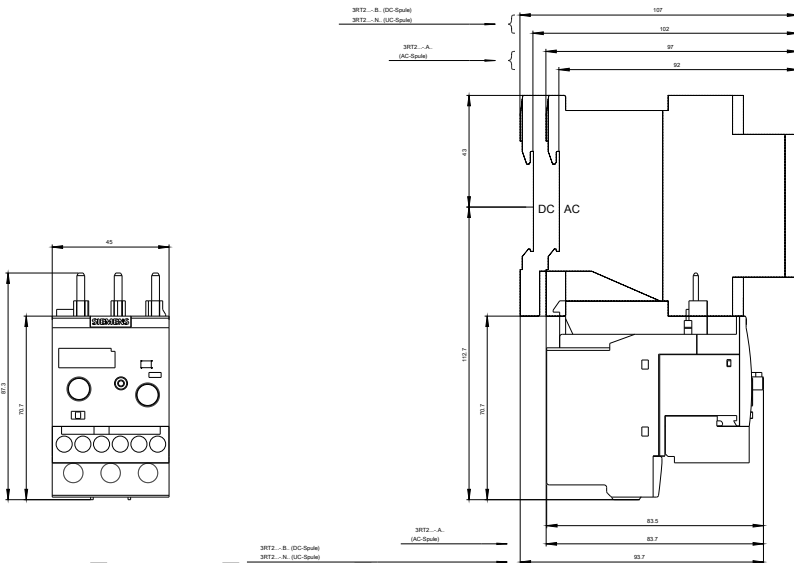
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB31234SB0>

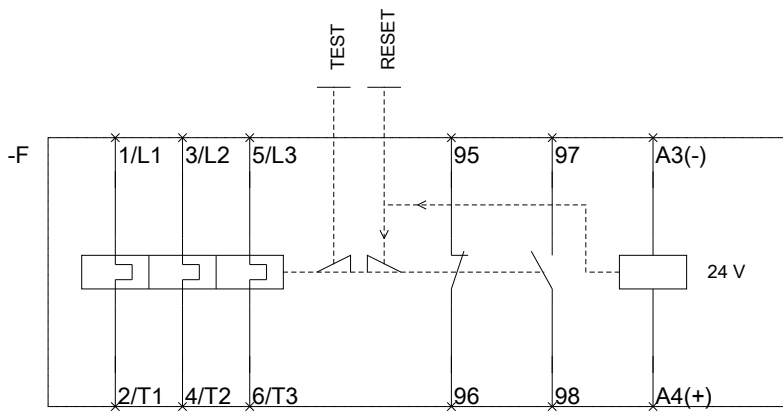
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RB31234SB0>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB31234SB0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB31234SB0&lang=en)





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