

OVERLOAD RELAY 32...115 A FOR MOTOR PROTECTION SIZE S3, CLASS 5E...30E STAND-ALONE INSTALLATION MAIN CIRCUIT: STR.-THR. TRANSF. AUX. CIRCUIT: SPRING-T. TERM. MANUAL-AUTOMATIC RESET



Figure similar

Product brand name	SIRIUS
Product designation	solid-state overload relay
Product type designation	3RB3

General technical data	
Size of overload relay	S3
Size of contactor can be combined company-specific	S3
Power loss [W] total typical	0.6 W
Insulation voltage with degree of pollution 3 rated value	1 000 V
Surge voltage resistance rated value	8 kV
maximum permissible voltage for safe isolation	
<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> </ul>	IP20
<ul style="list-style-type: none"> <li>of the terminal</li> </ul>	IP20
<b>Shock resistance</b>	8g / 11 ms
<ul style="list-style-type: none"> <li>acc. to IEC 60068-2-27</li> </ul>	15g / 11 ms
<b>Vibration resistance</b>	1-6 Hz, 15 mm; 6-500 Hz, 20 m/s <sup>2</sup> ; 10 cycles
<b>Thermal current</b>	115 A
<b>Recovery time</b>	
<ul style="list-style-type: none"> <li>after overload trip with automatic reset typical</li> </ul>	3 min
<ul style="list-style-type: none"> <li>after overload trip with remote-reset</li> </ul>	0 min
<ul style="list-style-type: none"> <li>after overload trip with manual reset</li> </ul>	0 min
<b>Type of protection</b>	II (2) G [Ex e] [Ex d] [Ex px] II (2) D [Ex t] [Ex p]
Certificate of suitability relating to ATEX	PTB 09 ATEX 3001
<b>Protection against electrical shock</b>	finger-safe
Equipment marking acc. to DIN EN 81346-2	F

#### Ambient conditions

<b>Installation altitude at height above sea level</b>	
<ul style="list-style-type: none"> <li>maximum</li> </ul>	2 000 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>	-40 ... +80 °C
<ul style="list-style-type: none"> <li>during transport</li> </ul>	-40 ... +80 °C
<b>Temperature compensation</b>	60 ... -25 °C
Relative humidity during operation	10 ... 95 %

#### 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>	32 ... 115 A
<b>Operating voltage</b>	
<ul style="list-style-type: none"> <li>rated value</li> </ul>	1 000 V
<ul style="list-style-type: none"> <li>for remote-reset function at DC</li> </ul>	24 V
<ul style="list-style-type: none"> <li>at AC-3 rated value maximum</li> </ul>	1 000 V
<b>Operating frequency rated value</b>	50 ... 60 Hz
<b>Operating current rated value</b>	115 A
<b>Operating power for three-phase motors at 400 V at 50 Hz</b>	18.5 ... 55 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> </ul>	1

— Note	for contactor disconnection
<b>Number of NO contacts</b>	
• for auxiliary contacts	1
— Note	for message "tripped"
<b>Number of CO contacts</b>	
• for auxiliary contacts	0
<b>Operating 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>Operating 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 5E, 10E, 20E and 30E adjustable
<b>Design of the overload release</b>	electronic
<b>Response value current</b>	
• of the ground fault protection minimum	0.75 x IMotor
<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>	
• minimum	IMotor > lower current setting value
• maximum	IMotor < upper current setting value x 3.5

<b>UL/CSA ratings</b>	
<b>Full-load current (FLA) for three-phase AC motor</b>	
• at 480 V rated value	115 A
• at 600 V rated value	115 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: 315 A
— with type of assignment 2 required	gG: 315 A
• for short-circuit protection of the auxiliary switch required	fuse gG: 6 A

Installation/ mounting/ dimensions	
<b>Mounting position</b>	any
<b>Mounting type</b>	stand-alone installation
<b>Height</b>	106 mm
<b>Width</b>	70 mm
<b>Depth</b>	124 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 0 mm</li> <li>— Backwards 0 mm</li> <li>— upwards 0 mm</li> <li>— downwards 0 mm</li> <li>— at the side 0 mm</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— Backwards 0 mm</li> <li>— upwards 0 mm</li> <li>— at the side 6 mm</li> <li>— downwards 0 mm</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— Backwards 0 mm</li> <li>— upwards 0 mm</li> <li>— downwards 0 mm</li> <li>— at the side 6 mm</li> </ul> </li> </ul>	

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>	straight-through transformers spring-loaded terminals
<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 2x (0.25 ... 1.5 mm<sup>2</sup>)</li> <li>— single or multi-stranded 2x (0,25 ... 1,5 mm<sup>2</sup>)</li> <li>— finely stranded with core end processing 2x (0.25 ... 1.5 mm<sup>2</sup>)</li> <li>— finely stranded without core end processing 2x (0.25 ... 1.5 mm<sup>2</sup>)</li> </ul> </li> <li>• at AWG conductors for auxiliary contacts 2x (24 ... 16)</li> </ul>	

Design of screwdriver shaft	Diameter 5 to 6 mm
Size of the screwdriver tip	Pozidriv PZ 2

### Communication/ Protocol

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




<b>Conducted interference</b>	
<ul style="list-style-type: none"> <li>• due to burst acc. to IEC 61000-4-4</li> </ul>	2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3
<ul style="list-style-type: none"> <li>• due to conductor-earth surge acc. to IEC 61000-4-5</li> </ul>	2 kV (line to earth) corresponds to degree of severity 3
<ul style="list-style-type: none"> <li>• due to conductor-conductor surge acc. to IEC 61000-4-5</li> </ul>	1 kV (line to line) corresponds to degree of severity 3
<ul style="list-style-type: none"> <li>• due to high-frequency radiation acc. to IEC 61000-4-6</li> </ul>	10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz
Field-bound parasitic coupling acc. to IEC 61000-4-3	10 V/m
Electrostatic discharge acc. to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge

### Display

<b>Display version</b> <ul style="list-style-type: none"> <li>• for switching status</li> </ul>	Slide switch
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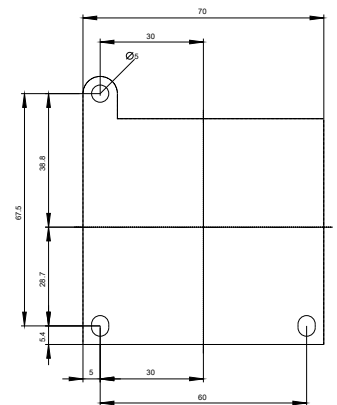
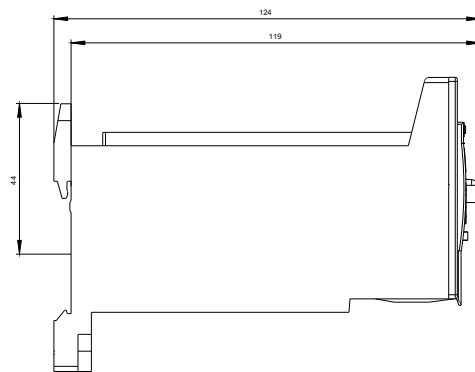
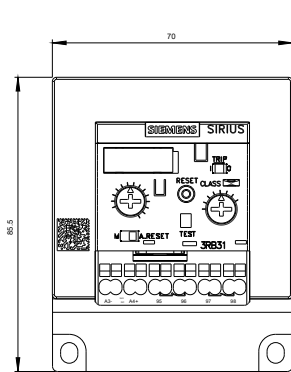
### Certificates/approvals

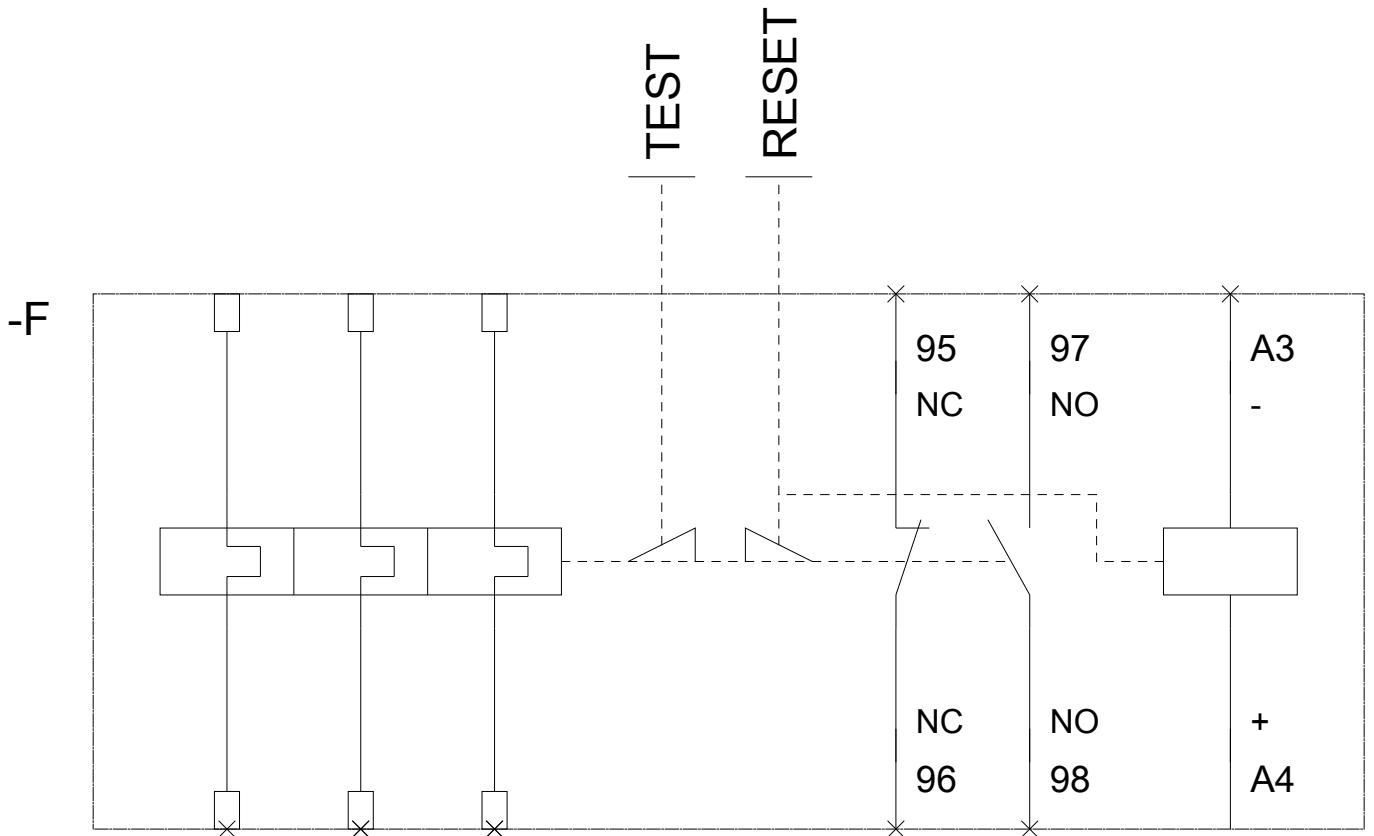
General Product Approval	For use in hazardous locations	Declaration of Conformity	Test Certificates
 CSA	 UL	 EAC	 ATEX
 EG-Konf.			<a href="#">Type Test Certificates/Test Report</a>

Marine / Shipping	other
 ABS	<a href="#">Confirmation</a>
 PRS	
 RINA	

### 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?mfb=3RB3143-4XX1>
- Cax online generator**  
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RB3143-4XX1>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**  
<https://support.industry.siemens.com/cs/ww/en/ps/3RB3143-4XX1>





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