



Overload relay 20...80 A Electronic For motor protection Size S2, Class 5E...30E  
Stand-alone installation Main circuit: Straight-through transformer Auxiliary circuit:  
Spring-type terminal Manual-Automatic-Reset Internal ground fault detection

<b>product brand name</b>	SIRIUS
<b>product designation</b>	solid-state overload relay
<b>product type designation</b>	3RB3
<b>General technical data</b>	
<b>size of overload relay</b>	S2
<b>size of contactor can be combined company-specific</b>	S2
power loss [W] for rated value of the current at AC in hot operating state	0.2 W
• per pole	0.07 W
<b>type of calculation of power loss current-dependent</b>	quadratic
insulation voltage with degree of pollution 3 at AC rated value	690 V
<b>surge voltage resistance rated value</b>	6 kV
<b>maximum permissible voltage for protective separation</b>	
• in networks with ungrounded star point between auxiliary and auxiliary circuit	300 V
• in networks with grounded star point between auxiliary and auxiliary circuit	300 V
• in networks with ungrounded star point between main and auxiliary circuit	600 V
• in networks with grounded star point between main and auxiliary circuit	690 V
<b>shock resistance</b>	15 g / 11 ms
• according to IEC 60068-2-27	15 g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 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>	80 A
<b>recovery time after overload trip</b>	
• with automatic reset typical	3 min
• with remote-reset	0 min
• with manual reset	0 min
<b>reference code according to IEC 81346-2</b>	F
<b>Substance Prohibitance (day/month/year)</b>	10/15/2014
<b>SVHC substance name</b>	Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1
<b>Net Weight</b>	0.291 g
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
<b>ambient temperature</b>	
• during operation	-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>	-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>	20 ... 80 A
<b>operating voltage</b>	
<ul style="list-style-type: none"> <li>rated value</li> </ul>	690 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-3e rated value maximum</li> </ul>	690 V
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>operational current rated value</b>	80 A
operational current at AC-3e at 400 V rated value	80 A
<b>operating power</b>	
<ul style="list-style-type: none"> <li>for 3-phase motors at 400 V at 50 Hz</li> </ul>	11 ... 37 kW
<ul style="list-style-type: none"> <li>for AC motors at 500 V at 50 Hz</li> </ul>	15 ... 55 kW
<ul style="list-style-type: none"> <li>for AC motors at 690 V at 50 Hz</li> </ul>	18.5 ... 75 kW
<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> </ul>	4 A
<ul style="list-style-type: none"> <li>at 110 V</li> </ul>	4 A
<ul style="list-style-type: none"> <li>at 120 V</li> </ul>	4 A
<ul style="list-style-type: none"> <li>at 125 V</li> </ul>	4 A
<ul style="list-style-type: none"> <li>at 230 V</li> </ul>	3 A
<b>operational current of auxiliary contacts at DC-13</b>	
<ul style="list-style-type: none"> <li>at 24 V</li> </ul>	2 A
<ul style="list-style-type: none"> <li>at 60 V</li> </ul>	0.55 A
<ul style="list-style-type: none"> <li>at 110 V</li> </ul>	0.3 A
<ul style="list-style-type: none"> <li>at 125 V</li> </ul>	0.3 A
<ul style="list-style-type: none"> <li>at 220 V</li> </ul>	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
response value current of the grounding protection minimum	0.75 x IMotor
<b>response time of the grounding protection in settled state</b>	1 000 ms
<b>operating range of the grounding protection relating to current set value</b>	
<ul style="list-style-type: none"> <li>minimum</li> </ul>	IMotor > lower current setting value
<ul style="list-style-type: none"> <li>maximum</li> </ul>	IMotor < upper current setting value x 3.5
<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> </ul>	80 A
<ul style="list-style-type: none"> <li>at 600 V rated value</li> </ul>	80 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>	
<ul style="list-style-type: none"> <li>for short-circuit protection of the main circuit</li> </ul>	
<ul style="list-style-type: none"> <li>— with type of coordination 1 required</li> </ul>	gG: 250 A, RK5: 300 A
<ul style="list-style-type: none"> <li>— with type of coordination 2 required</li> </ul>	gG: 250 A
<ul style="list-style-type: none"> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	fuse gG: 6 A
<b>Installation/ mounting/ dimensions</b>	

<b>mounting position</b>	any
<b>fastening method</b>	stand-alone installation
<b>height</b>	81 mm
<b>width</b>	55 mm
<b>depth</b>	109 mm
<b>required spacing</b>	
<ul style="list-style-type: none"> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards 10 mm</li> <li>— backwards 0 mm</li> <li>— upwards 10 mm</li> <li>— at the side 10 mm</li> <li>— downwards 10 mm</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards 10 mm</li> <li>— backwards 0 mm</li> <li>— upwards 10 mm</li> <li>— downwards 10 mm</li> <li>— at the side 10 mm</li> </ul> </li> </ul>	
<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 straight-through transformers</li> <li>• for auxiliary and control circuit spring-loaded terminals</li> </ul>	
<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>— solid or 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>• for AWG cables for auxiliary contacts 1x (24 ... 16), 2x (24 ... 16)</li> </ul>	
<b>design of screwdriver shaft</b>	Diameter 5 to 6 mm
<b>size of the screwdriver tip</b>	Pozidriv PZ 2
<b>Electrical Safety</b>	
<b>protection class IP on the front according to IEC 60529</b>	IP20
<b>touch protection on the front according to IEC 60529</b>	finger-safe, for vertical contact from the front
<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 2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3</li> <li>• due to conductor-earth surge according to IEC 61000-4-5 2 kV (line to earth) corresponds to degree of severity 3</li> <li>• due to conductor-conductor surge according to IEC 61000-4-5 1 kV (line to line) corresponds to degree of severity 3</li> <li>• due to high-frequency radiation according to IEC 61000-4-6 10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz</li> </ul>	
<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>Environment</b>	General Product Approval

[Environmental Confirmations](#)



EMV	For use in hazardous locations	Test Certificates	Maritime application
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Maritime application	other
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[Confirmation](#)

[Confirmation](#)



### Further information

**Information on the packaging**

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

**Information for data generation and storage**

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

**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=3RB3133-4WX1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3133-4WX1>

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

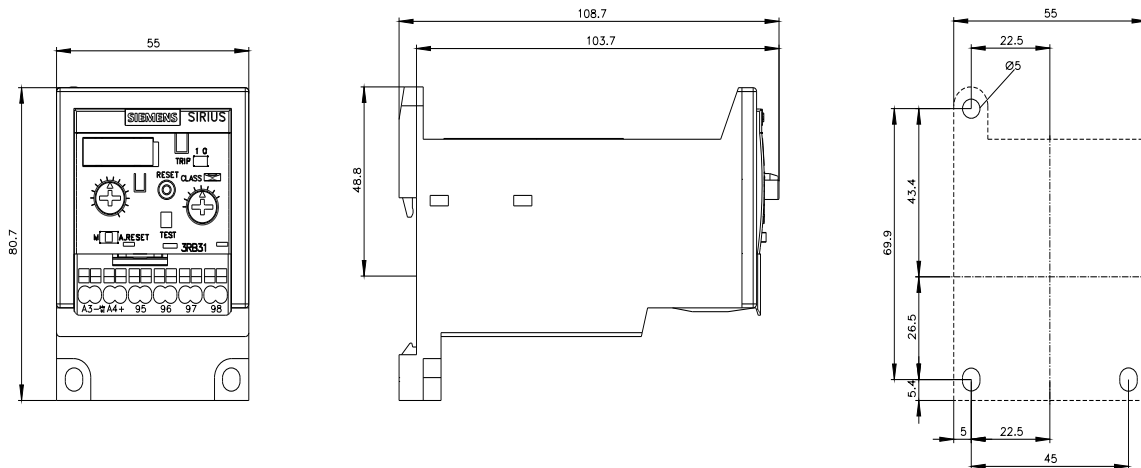
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB3133-4WX1&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3133-4WX1&lang=en)

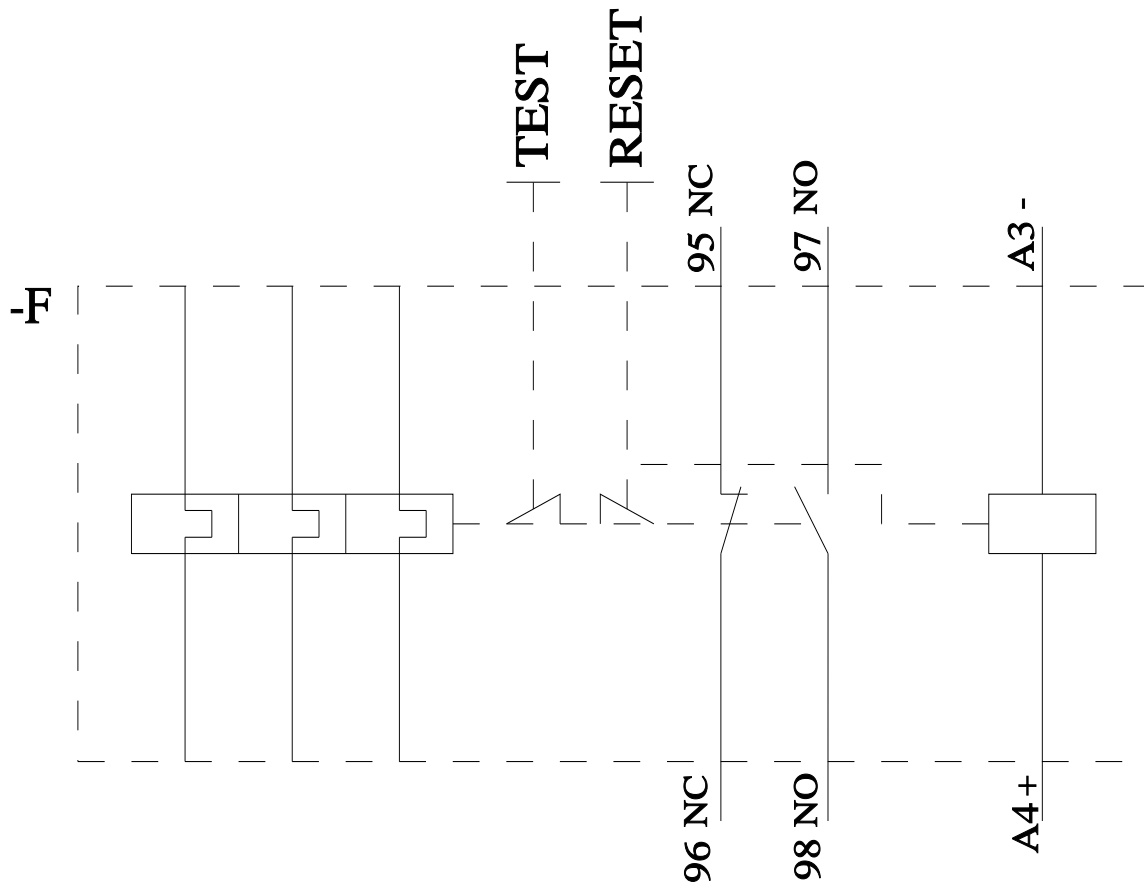
**Cax online generator**

<https://support.automation.siemens.com/WW/CAxorder/default.aspx?lang=en&mlfb=3RB3133-4WX1>

**Characteristic curves**

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)





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