

Overload relay 55...250 A for motor protection Size S10/S12, Class 20E Contactor mounting/stand-alone installation Main circuit: busbar connection Auxiliary circuit: Spring-type terminal Manual-Automatic-Reset



<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 at AC rated value	1 000 V
<b>surge voltage resistance rated value</b>	8 kV
<b>maximum permissible voltage for protective separation</b>	
<ul style="list-style-type: none"> <li>in networks with ungrounded 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 ungrounded 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>shock resistance</b>	15g / 11 ms
<ul style="list-style-type: none"> <li>according to IEC 60068-2-27</li> </ul>	15g / 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>	250 A
<b>recovery time after overload trip</b>	
<ul style="list-style-type: none"> <li>with automatic reset typical</li> </ul>	3 min
<ul style="list-style-type: none"> <li>with remote-reset</li> </ul>	0 min
<ul style="list-style-type: none"> <li>with manual reset</li> </ul>	0 min
<b>reference code according to IEC 81346-2</b>	F
<b>Substance Prohibition (Date)</b>	07/01/2006
<b>SVHC substance name</b>	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1
<b>Weight</b>	1.593 kg
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	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>	-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-</b>	55 ... 250 A

<b>dependent overload release</b>	
<b>operating voltage</b>	
• rated value	1 000 V
• at AC-3e rated value maximum	1 000 V
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>operational current rated value</b>	250 A
operational current at AC-3e at 400 V rated value	250 A
<b>operating power</b>	
• for 3-phase motors at 400 V at 50 Hz	30 ... 132 kW
• for AC motors at 500 V at 50 Hz	45 ... 160 kW
• for AC motors at 690 V at 50 Hz	55 ... 250 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"
number of CO contacts for auxiliary contacts	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 20E
<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	250 A
• at 600 V rated value	250 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: 500 A, Class L: 700 A
— with type of coordination 2 required	gG: 500 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>	Contacting 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	spring-loaded 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	2x (0.25 ... 1.5 mm <sup>2</sup> )

— solid or stranded	2x (0,25 ... 1,5 mm <sup>2</sup> )
— finely stranded with core end processing	2x (0,25 ... 1,5 mm <sup>2</sup> )
— finely stranded without core end processing	2x (0,25 ... 1,5 mm <sup>2</sup> )
• for AWG cables for auxiliary contacts	2x (24 ... 16)
<b>tightening torque</b>	
• for main contacts with screw-type terminals	20 ... 22 N·m
<b>design of the thread of the connection screw</b>	
• for main contacts	M10

<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>	
• due to burst according to IEC 61000-4-4	2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3
• due to conductor-earth surge according to IEC 61000-4-5	2 kV (line to earth) corresponds to degree of severity 3
• due to conductor-conductor surge according to IEC 61000-4-5	1 kV (line to line) corresponds to degree of severity 3
• 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
<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>	EMV



<b>EMV</b>	<b>For use in hazardous locations</b>	<b>Test Certificates</b>	<b>Maritime application</b>
<a href="#">KC</a>		<a href="#">Special Test Certificate</a>	
		<a href="#">Type Test Certificates/Test Report</a>	

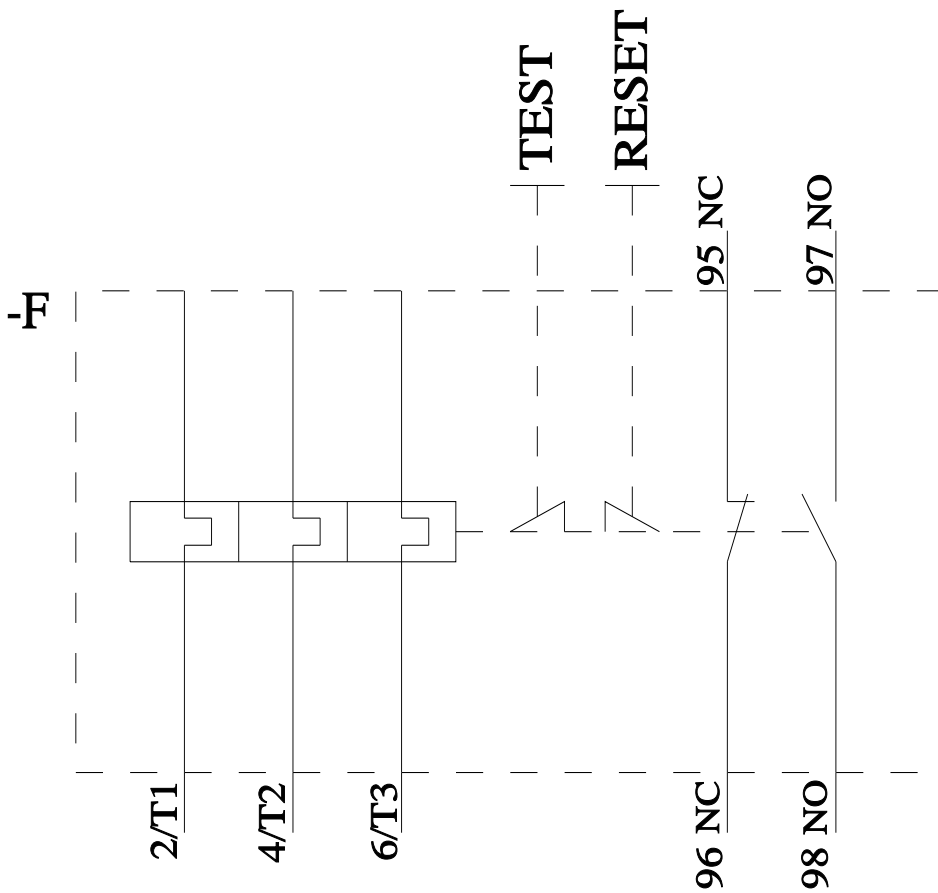
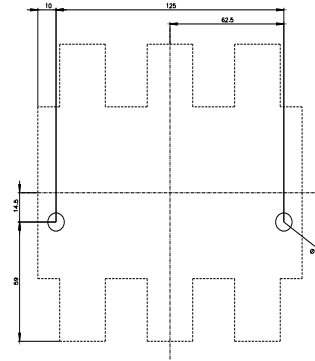
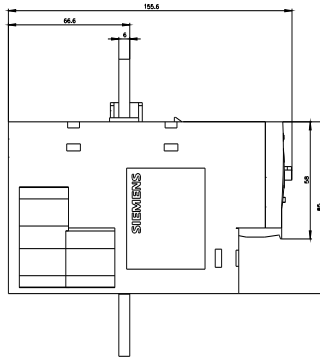
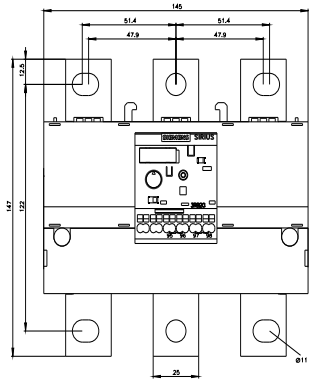
<b>Maritime application</b>	<b>other</b>	<b>Environment</b>
		<a href="#">Miscellaneous</a>
		<a href="#">Environmental Confirmations</a>

**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=3RB2066-2GF2>
- Cax online generator <https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB2066-2GF2>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...) <https://support.industry.siemens.com/cs/ww/en/ps/3RB2066-2GF2>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) [https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB2066-2GF2&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB2066-2GF2&lang=en)
- Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current <https://support.industry.siemens.com/cs/ww/en/ps/3RB2066-2GF2/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB2066-2GF2&objecttype=14&gridview=view1>



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