



Overload relay 12.5...50 A Electronic For motor protection Size S2, Class 5E...30E Contactor mounting Main circuit: Screw 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	1.8 W
• per pole	0.6 W
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 safe isolation in networks with grounded star point</b>	
• between auxiliary and auxiliary circuit	300 V
• between auxiliary and auxiliary circuit	300 V
• between main and auxiliary circuit	600 V
• between main and auxiliary circuit	690 V
<b>shock resistance</b>	15g / 11 ms
• acc. to IEC 60068-2-27	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>	50 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>type of protection according to ATEX directive 2014/34/EU</b>	Ex II (2) G [Ex e] [Ex d] [Ex px] ; Ex II (2) D [Ex t] [Ex p]
certificate of suitability according to ATEX directive 2014/34/EU	PTB 09 ATEX 3001
<b>reference code acc. to IEC 81346-2</b>	F
Substance Prohibition (Date)	15.10.2014 00:00:00
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
<b>ambient temperature</b>	
• during operation	-25 ... +60 °C
• during storage	-40 ... +80 °C
• during transport	-40 ... +80 °C
<b>temperature compensation</b>	-25 ... +60 °C

relative humidity during operation	10 ... 95 %
<b>Main circuit</b>	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	12.5 ... 50 A
operating voltage	
• rated value	690 V
• for remote-reset function at DC	24 V
• at AC-3 rated value maximum	690 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	50 A
operating power	
• for 3-phase motors at 400 V at 50 Hz	7.5 ... 22 kW
• for AC motors at 500 V at 50 Hz	11 ... 30 kW
• for AC motors at 690 V at 50 Hz	11 ... 45 kW
<b>Auxiliary circuit</b>	
design of the auxiliary switch	integrated
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
operational current of 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
operational current of 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
<b>Protective and monitoring functions</b>	
trip class	CLASS 5E, 10E, 20E and 30E adjustable
design of the overload release	electronic
response value current of the grounding protection minimum	0.75 x IMotor
response time of the grounding protection in settled state	1 000 ms
operating range of the grounding protection relating to current set value	
• minimum	IMotor > lower current setting value
• maximum	IMotor < upper current setting value x 3.5
<b>UL/CSA ratings</b>	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	50 A
• at 600 V rated value	50 A
contact rating of auxiliary contacts according to UL	B600 / R300
<b>Short-circuit protection</b>	
design of the fuse link	
• for short-circuit protection of the main circuit	
— with type of coordination 1 required	gG: 250 A
— with type of assignment 2 required	gG: 200 A
• for short-circuit protection of the auxiliary switch required	fuse gG: 6 A
<b>Installation/ mounting/ dimensions</b>	
mounting position	any

<b>fastening method</b>	Contactor mounting	
<b>height</b>	99 mm	
<b>width</b>	55 mm	
<b>depth</b>	104 mm	
<b>Connections/ Terminals</b>		
product function removable terminal for auxiliary and control circuit	Yes	
<b>type of electrical connection</b>		
<ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control circuit</li> </ul>	screw-type terminals 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 main contacts               <ul style="list-style-type: none"> <li>— solid</li> <li>— stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• at AWG cables for main contacts</li> </ul>	1x (1 ... 50 mm <sup>2</sup> ), 2x (1 ... 35 mm <sup>2</sup> ) 2x (10 ... 35 mm <sup>2</sup> ), 1x 50 mm <sup>2</sup> 1x (1 ... 35 mm <sup>2</sup> ), 2x (1 ... 25 mm <sup>2</sup> ) 2x (18 ... 2), 1x (18 ... 1)	
<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</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul> </li> <li>• at AWG cables for auxiliary contacts</li> </ul>	2x (0.25 ... 1.5 mm <sup>2</sup> ) 2x (0,25 ... 1,5 mm <sup>2</sup> ) 2x (0.25 ... 1.5 mm <sup>2</sup> ) 2x (0.25 ... 1.5 mm <sup>2</sup> ) 1x (24 ... 16), 2x (24 ... 16)	
<b>tightening torque</b>		
<ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> </ul>	3 ... 4.5 N·m	
<b>design of screwdriver shaft</b>	Diameter 5 to 6 mm	
<b>size of the screwdriver tip</b>	Pozidriv PZ 2	
<b>design of the thread of the connection screw</b>		
<ul style="list-style-type: none"> <li>• for main contacts</li> </ul>	M6	
<b>Safety related data</b>		
<b>protection class IP on the front acc. to IEC 60529</b>	IP20	
<b>touch protection on the front acc. 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 acc. to IEC 61000-4-4</li> <li>• due to conductor-earth surge acc. to IEC 61000-4-5</li> <li>• due to conductor-conductor surge acc. to IEC 61000-4-5</li> <li>• due to high-frequency radiation acc. to IEC 61000-4-6</li> </ul>	2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3 2 kV (line to earth) corresponds to degree of severity 3 1 kV (line to line) corresponds to degree of severity 3 10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz	
<b>field-based interference 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>		
display version for switching status	Slide switch	
<b>Certificates/ approvals</b>		
<b>General Product Approval</b>	<b>EMC</b>	<b>For use in hazardous locations</b>



Declaration of Conformity	Test Certificates	Marine / Shipping
 EG-Konf.	<a href="#">Miscellaneous</a> <a href="#">Type Test Certificates/Test Report</a> <a href="#">Special Test Certificate</a>	 ABS  LRS

Marine / Shipping	other
 PRS  RINA  RMRS  DNV-GL	<a href="#">Confirmation</a>

### Further information

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=3RB3133-4UD0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3133-4UD0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3133-4UD0>

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

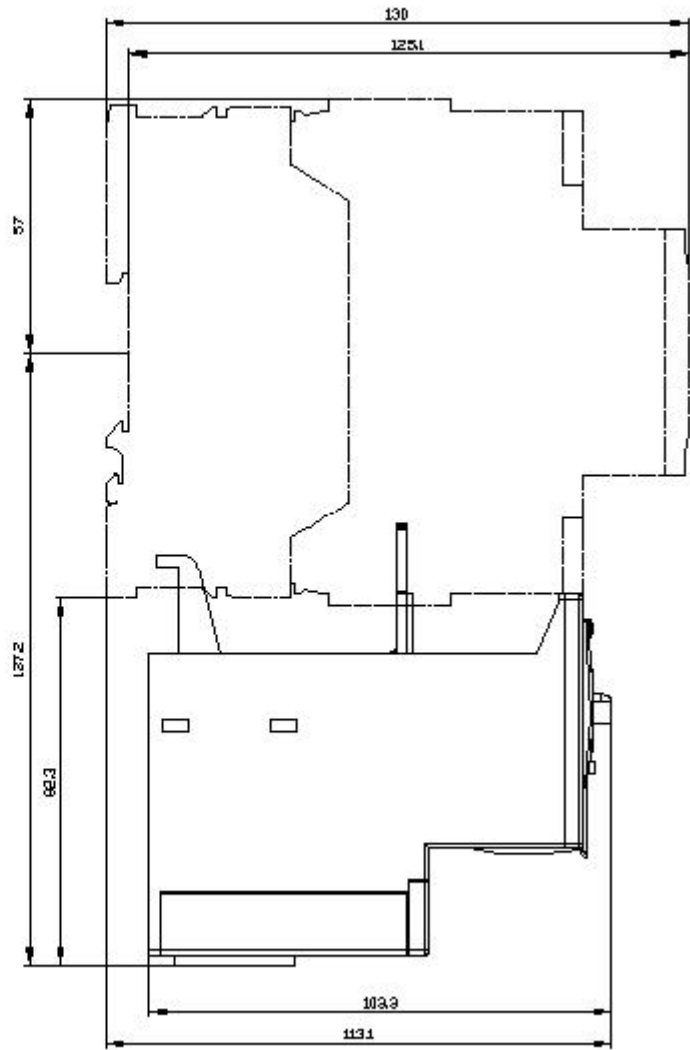
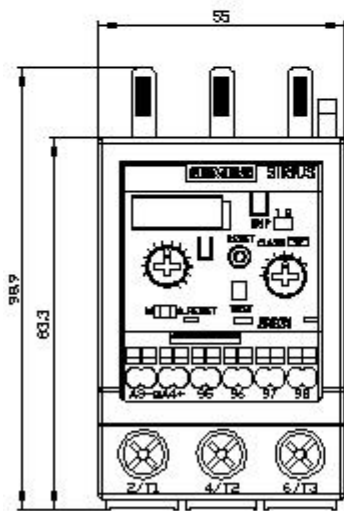
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB3133-4UD0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3133-4UD0&lang=en)

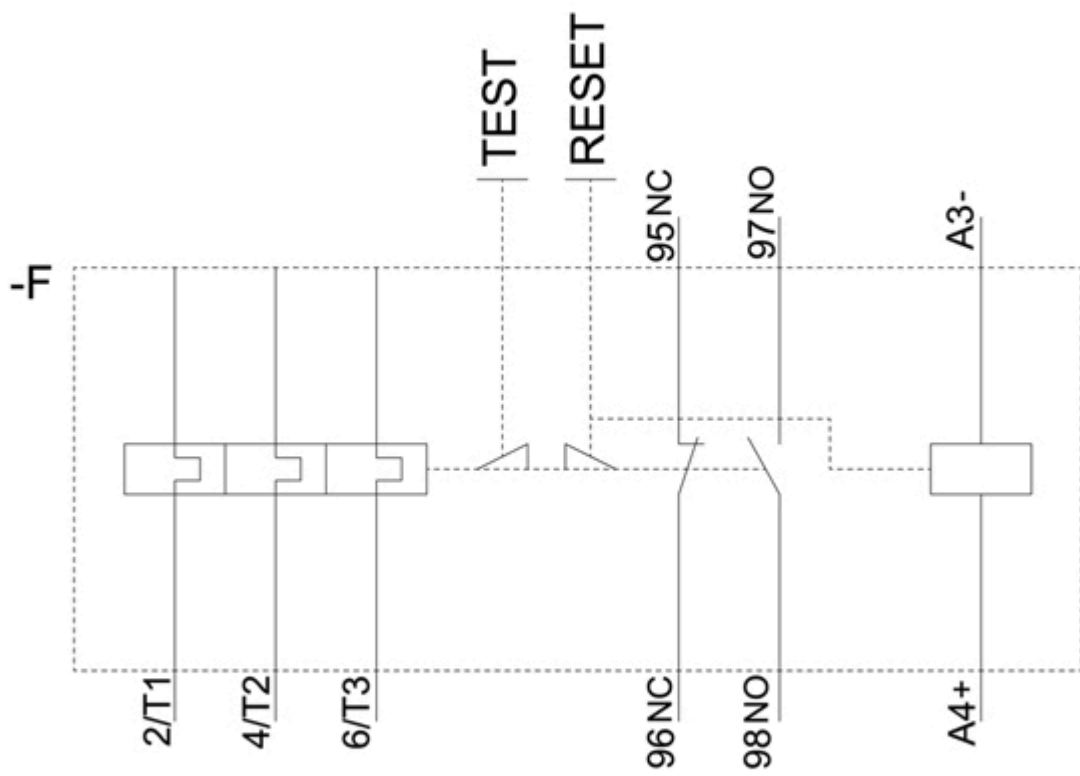
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3133-4UD0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3133-4UD0&objecttype=14&gridview=view1>





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