



Overload relay 3...12 A Electronic For motor protection Size S00, Class 20E  
 Contactor mounting Main circuit: Screw Auxiliary circuit: Screw Manual-Automatic-Reset

<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>	S00
<b>size of contactor can be combined company-specific</b>	S00
power loss [W] for rated value of the current at AC in hot operating state	0.6 W
• per pole	0.2 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 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>	15g / 11 ms
• according to IEC 60068-2-27	15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 9g / 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>	12 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 Prohibition (Date)</b>	10/01/2009
<b>SVHC substance name</b>	Lead monoxide (lead oxide) - 1317-36-8
<b>Weight</b>	0.227 kg
<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>	
<b>number of poles for main current circuit</b>	3

<b>adjustable current response value current of the current-dependent overload release</b>	3 ... 12 A
<b>operating voltage</b>	
• rated value	690 V
• at AC-3e rated value maximum	690 V
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>operational current rated value</b>	12 A
operational current at AC-3e at 400 V rated value	12 A
<b>operating power</b>	
• for 3-phase motors at 400 V at 50 Hz	1.5 ... 5.5 kW
• for AC motors at 500 V at 50 Hz	1.5 ... 5.5 kW
• for AC motors at 690 V at 50 Hz	2.2 ... 7.5 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	12 A
• at 600 V rated value	12 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: 50 A, RK5: 45 A
— with type of assignment 2 required	gG: 50 A, J: 45 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>	Contactor mounting
<b>height</b>	79 mm
<b>width</b>	45 mm
<b>depth</b>	73 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	screw-type terminals
• for auxiliary and control circuit	screw-type terminals
<b>arrangement of electrical connectors for main current circuit</b>	Top and bottom
type of connectable conductor cross-sections for main contacts	
• solid	1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 4 mm <sup>2</sup> )

<ul style="list-style-type: none"> <li>• solid or stranded</li> <li>• finely stranded with core end processing</li> </ul>	<p>1x (0,5 ... 4 mm<sup>2</sup>), 2x (0,5 ... 1,5 mm<sup>2</sup>), 2x (0,75 ... 4 mm<sup>2</sup>)</p> <p>1x (0,5 ... 2,5 mm<sup>2</sup>), 2x (0,5 ... 2,5 mm<sup>2</sup>)</p>
<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> </ul> </li> <li>• for AWG cables for auxiliary contacts</li> </ul>	<p>1x (0,5 ... 4 mm<sup>2</sup>), 2x (0,5 ... 2,5 mm<sup>2</sup>)</p> <p>1x (0,5 ... 4 mm<sup>2</sup>), 2x (0,5 ... 2,5 mm<sup>2</sup>)</p> <p>1x (0,5 ... 2,5 mm<sup>2</sup>), 2x (0,5 ... 1,5 mm<sup>2</sup>)</p> <p>1x (20 ... 14), 2x (20 ... 14)</p>
<b>tightening torque</b> <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> <li>• for auxiliary contacts with screw-type terminals</li> </ul>	<p>0.8 ... 1.2 N·m</p> <p>0.8 ... 1.2 N·m</p>
<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> <li>• of the auxiliary and control contacts</li> </ul>	<p>M3</p> <p>M3</p>

<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</li> <li>• due to conductor-earth surge according to IEC 61000-4-5</li> <li>• due to conductor-conductor surge according to IEC 61000-4-5</li> <li>• due to high-frequency radiation according to IEC 61000-4-6</li> </ul>	<p>2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3</p> <p>2 kV (line to earth) corresponds to degree of severity 3</p> <p>1 kV (line to line) corresponds to degree of severity 3</p> <p>10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz</p>
<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>	



[Confirmation](#)



<b>EMV</b>	<b>For use in hazardous locations</b>	<b>Test Certificates</b>	<b>Marine / Shipping</b>
<p>RCM</p>	<p><a href="#">KC</a></p> <p>ATEX</p>	<p><a href="#">Type Test Certificates/Test Report</a></p> <p><a href="#">Special Test Certificate</a></p>	<p>ABS</p>

<b>Marine / Shipping</b>	<b>other</b>
<p>BUREAU VERITAS</p> <p>DNV</p> <p>LRS</p> <p>PRS</p> <p>RINA</p>	<p><a href="#">Confirmation</a></p>

<b>Environment</b>
<p><a href="#">Environmental Confirmations</a></p>

## Further information

### Information on the packaging

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

### 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=3RB3016-2SB0>

### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3016-2SB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-2SB0>

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

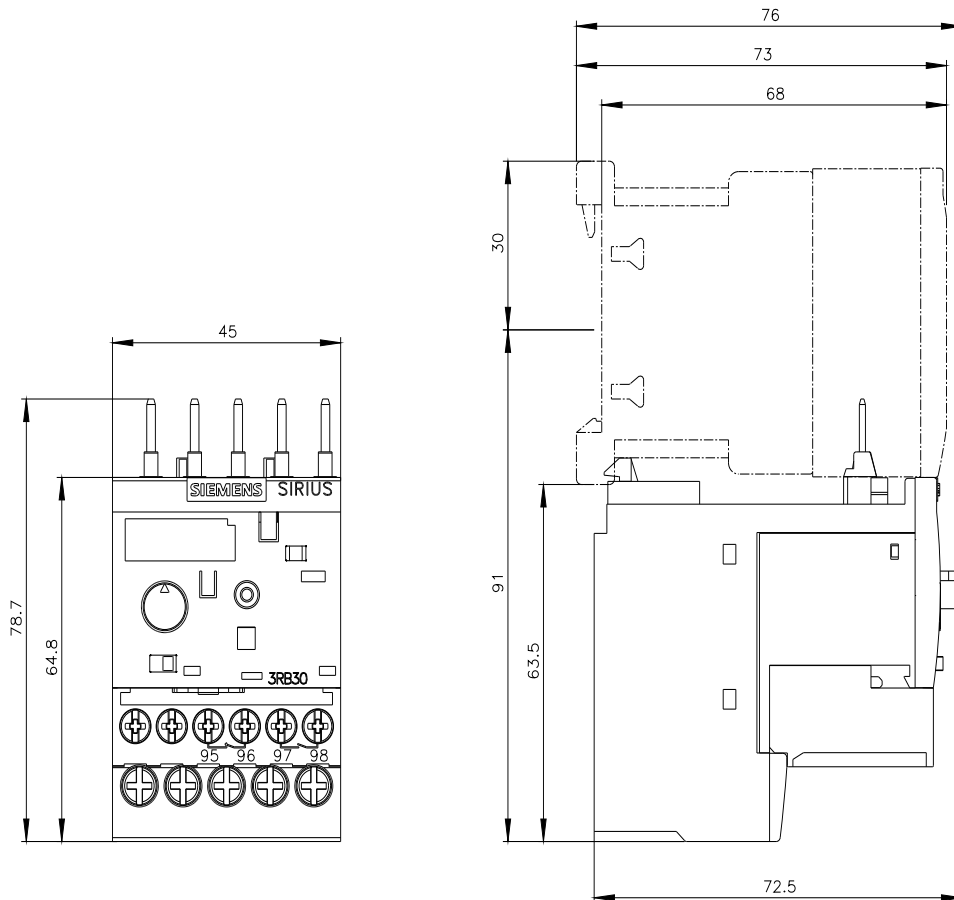
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB3016-2SB0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3016-2SB0&lang=en)

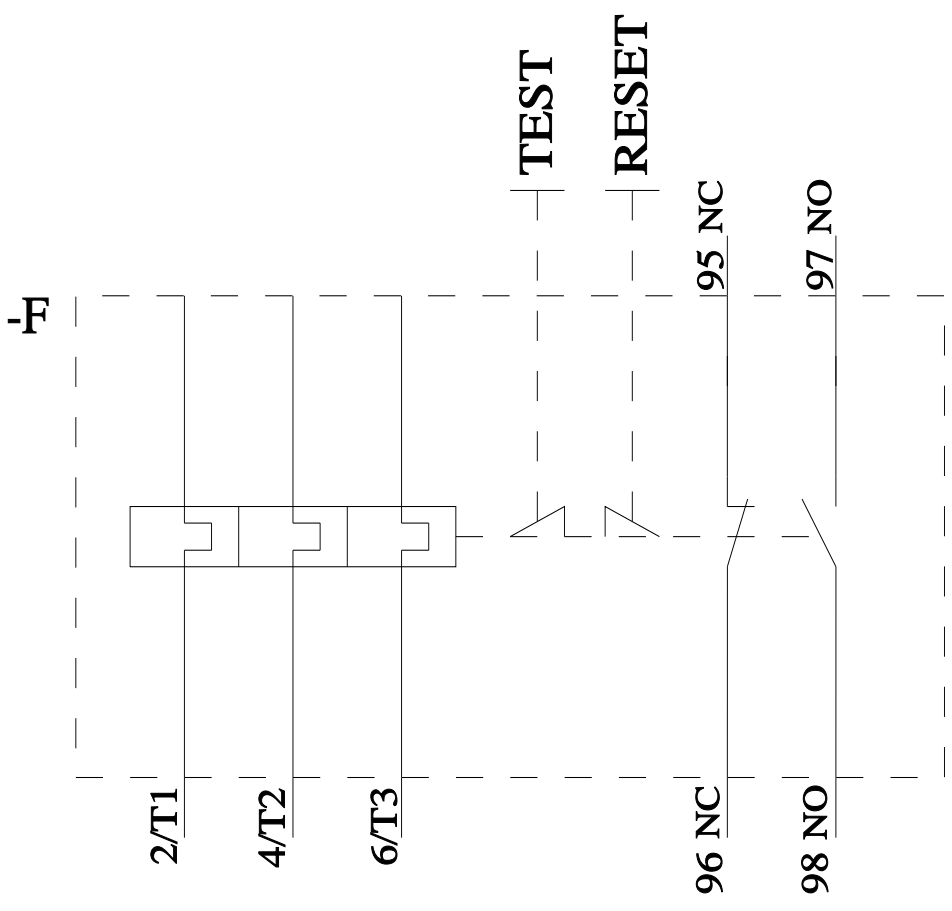
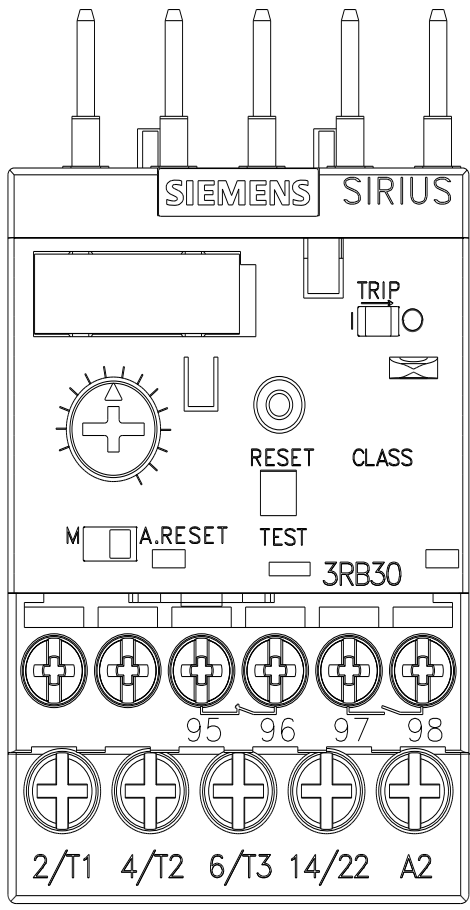
### Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-2SB0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3016-2SB0&objecttype=14&gridview=view1>





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