



Overload relay 12.5...50 A Electronic For motor protection Size S3, Class 10E Stand-alone installation Main circuit: Straight-through transformer 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>	S3
<b>size of contactor can be combined company-specific</b>	S3
power loss [W] for rated value of the current at AC in hot operating state	0.2 W
• per pole	0.07 W
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 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>	8g / 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>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
<b>Substance Prohibitance (Date)</b>	01.03.2017
<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>	12.5 ... 50 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>• at AC-3e rated value maximum</li> </ul>	1 000 V
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>operational current rated value</b>	50 A
operational current at AC-3e at 400 V rated value	50 A
<b>operating power</b>	
<ul style="list-style-type: none"> <li>• for 3-phase motors at 400 V at 50 Hz</li> </ul>	7.5 ... 22 kW
<ul style="list-style-type: none"> <li>• for AC motors at 500 V at 50 Hz</li> </ul>	11 ... 30 kW
<ul style="list-style-type: none"> <li>• for AC motors at 690 V at 50 Hz</li> </ul>	11 ... 45 kW

#### Auxiliary circuit

<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

#### Protective and monitoring functions

<b>trip class</b>	CLASS 10E
<b>design of the overload release</b>	electronic

#### UL/CSA ratings

<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>	50 A
<ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>	50 A
<b>contact rating of auxiliary contacts according to UL</b>	B600 / R300

#### Short-circuit protection

<b>design of the fuse link</b>	
<ul style="list-style-type: none"> <li>• for short-circuit protection of the main circuit <ul style="list-style-type: none"> <li>— with type of coordination 1 required</li> <li>— with type of assignment 2 required</li> </ul> </li> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 200 A gG: 200 A fuse gG: 6 A

#### Installation/ mounting/ dimensions

<b>mounting position</b>	any
<b>fastening method</b>	stand-alone installation
<b>height</b>	106 mm
<b>width</b>	70 mm
<b>depth</b>	124 mm

#### Connections/ Terminals

<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</li> </ul>	straight-through transformers
<ul style="list-style-type: none"> <li>• for auxiliary and control circuit</li> </ul>	screw-type 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</li> </ul> </li> </ul>	1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )

— solid or stranded	1x (0,5 ... 4 mm <sup>2</sup> ), 2x (0,5 ... 2,5 mm <sup>2</sup> )
— finely stranded with core end processing	1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
• at AWG cables for auxiliary contacts	2x (20 ... 14)
<b>tightening torque</b>	
• for auxiliary contacts with screw-type terminals	0.8 ... 1.2 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>	
• of the auxiliary and control contacts	M3

#### Safety related data

<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

#### Communication/ Protocol

<b>type of voltage supply via input/output link master</b>	No
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#### Electromagnetic compatibility

<b>conducted interference</b>	
• due to burst acc. to IEC 61000-4-4	2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3
• due to conductor-earth surge acc. to IEC 61000-4-5	2 kV (line to earth) corresponds to degree of severity 3
• due to conductor-conductor surge acc. to IEC 61000-4-5	1 kV (line to line) corresponds to degree of severity 3
• due to high-frequency radiation acc. 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 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

#### Display

display version for switching status	Slide switch
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#### Certificates/ approvals

<b>General Product Approval</b>	<b>EMC</b>	<b>For use in hazardous locations</b>
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<b>Declaration of Conformity</b>	<b>Test Certificates</b>	<b>Marine / Shipping</b>
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[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



<b>Marine / Shipping</b>	<b>other</b>
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[Confirmation](#)

#### 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=3RB3046-1UW1>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3046-1UW1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3046-1UW1>

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

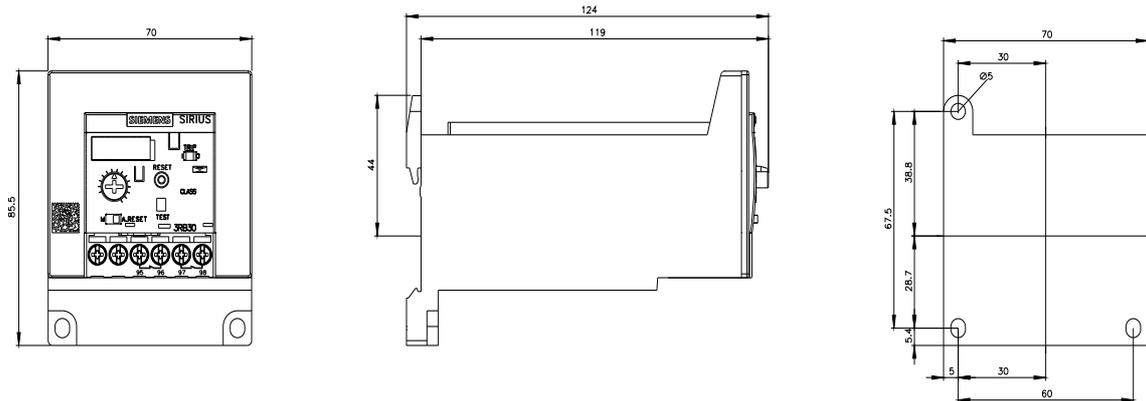
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB3046-1UW1&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3046-1UW1&lang=en)

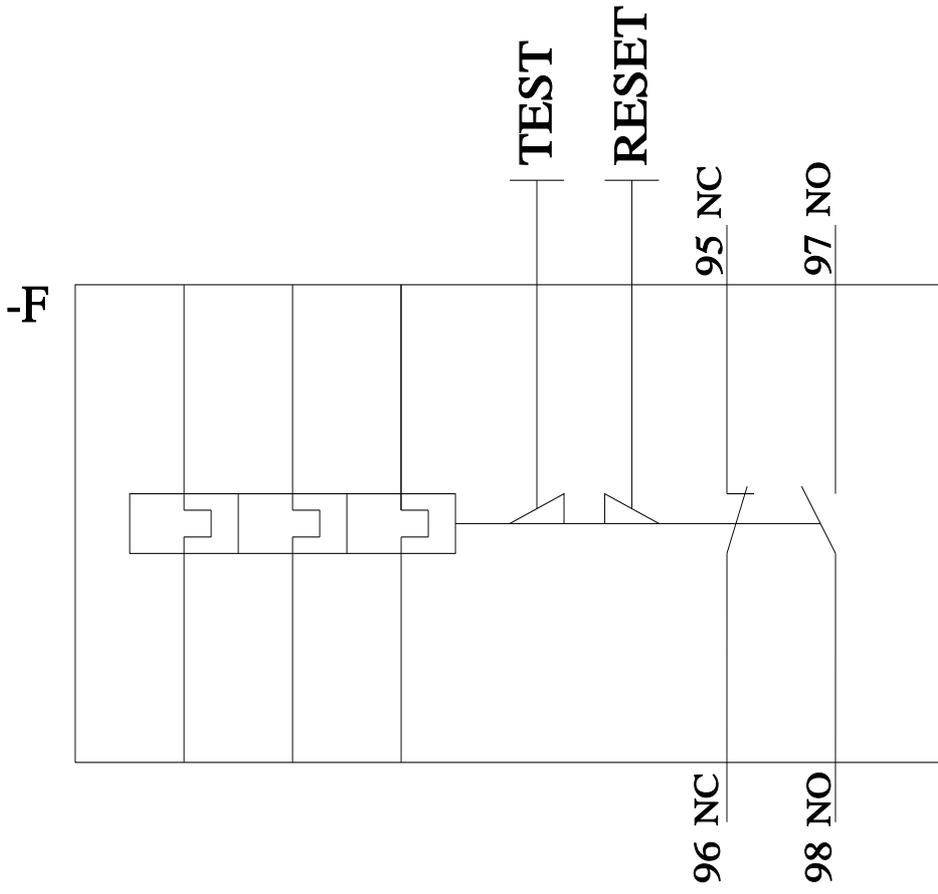
Characteristic: Tripping characteristics, I<sup>t</sup>, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3046-1UW1/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3046-1UW1&objecttype=14&gridview=view1>





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