

Overload relay 55...250 A for motor protection Size S10/S12, Class 10E  
 Contactor mounting/stand-alone installation Main circuit: busbar connection  
 Auxiliary circuit: Screw terminal Manual-Automatic-Reset



product brand name	SIRIUS
product designation	solid-state overload relay
product type designation	3RB2

### General technical data

size of overload relay	S10, S12
size of contactor can be combined company-specific	S10, S12
insulation voltage with degree of pollution 3 at AC rated value	1 000 V
surge voltage resistance rated value	8 kV
maximum permissible voltage for safe isolation in networks with grounded star point	
<ul style="list-style-type: none"> <li>between auxiliary and auxiliary circuit</li> <li>between auxiliary and auxiliary circuit</li> <li>between main and auxiliary circuit</li> <li>between main and auxiliary circuit</li> </ul>	300 V 300 V 600 V 690 V
shock resistance	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
vibration resistance	1-6 Hz, 15 mm; 6-500 Hz, 20 m/s <sup>2</sup> ; 10 cycles
thermal current	250 A
type of protection according to ATEX directive 2014/34/EU	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 06 ATEX 3001
reference code according to IEC 81346-2	F
Substance Prohibitance (Date)	07/01/2006

### Ambient conditions

installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul style="list-style-type: none"> <li>during operation</li> <li>during storage</li> <li>during transport</li> </ul>	-25 ... +60 °C -40 ... +80 °C -40 ... +80 °C
temperature compensation	-25 ... +60 °C
relative humidity during operation	10 ... 95 %

### Main circuit

number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	55 ... 250 A
operating voltage	
<ul style="list-style-type: none"> <li>rated value</li> <li>at AC-3e rated value maximum</li> </ul>	1 000 V 1 000 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	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

#### Auxiliary circuit

<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

#### 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>	
• 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

#### Short-circuit protection

<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 assignment 2 required	gG: 500 A
• for short-circuit protection of the auxiliary switch required	fuse gG: 6 A

#### Installation/ mounting/ dimensions

<b>mounting position</b>	any
<b>fastening method</b>	Contacteur mounting/stand-alone installation
<b>height</b>	119 mm
<b>width</b>	120 mm
<b>depth</b>	155 mm

#### Connections/ Terminals

<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	screw-type 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	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 main contacts with screw-type terminals	20 ... 22 N·m
• for auxiliary contacts with screw-type terminals	0.8 ... 1.2 N·m
<b>design of the thread of the connection screw</b>	

- for main contacts
- of the auxiliary and control contacts

M10  
M3

#### Safety related data

protection class IP on the front according to IEC 60529	IP00; IP20 with box terminal/cover
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with box terminal/cover

#### Communication/ Protocol

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

<b>conducted interference</b>	
<ul style="list-style-type: none"> <li>• due to burst according to IEC 61000-4-4</li> </ul>	2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3
<ul style="list-style-type: none"> <li>• due to conductor-earth surge according to IEC 61000-4-5</li> </ul>	2 kV (line to earth) corresponds to degree of severity 3
<ul style="list-style-type: none"> <li>• due to conductor-conductor surge according to IEC 61000-4-5</li> </ul>	1 kV (line to line) corresponds to degree of severity 3
<ul style="list-style-type: none"> <li>• due to high-frequency radiation according to IEC 61000-4-6</li> </ul>	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

#### Display

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

General Product Approval

EMC



[Confirmation](#)



For use in hazardous locations

Declaration of Conformity

Test Certificates

Marine / Shipping



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping

other



[Confirmation](#)

[Miscellaneous](#)

#### Further information

Siemens has decided to exit the Russian market (see here).

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3RB2066-1GC2>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB2066-1GC2>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB2066-1GC2>

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

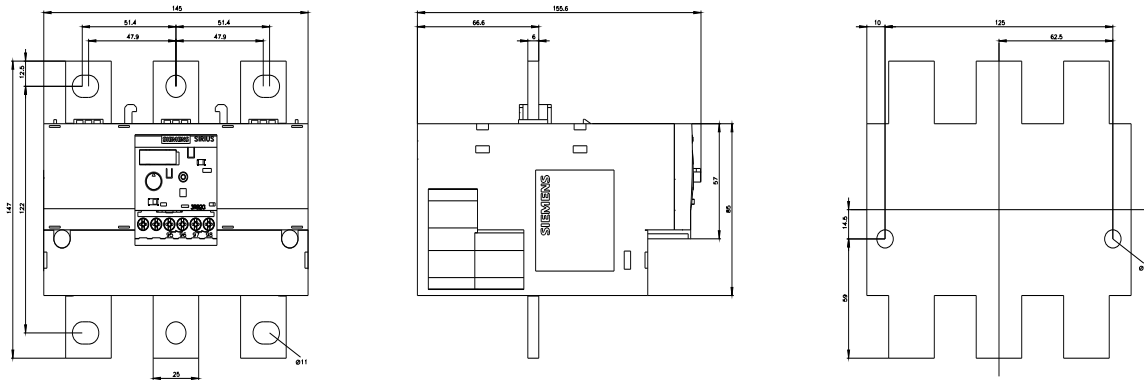
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB2066-1GC2&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB2066-1GC2&lang=en)

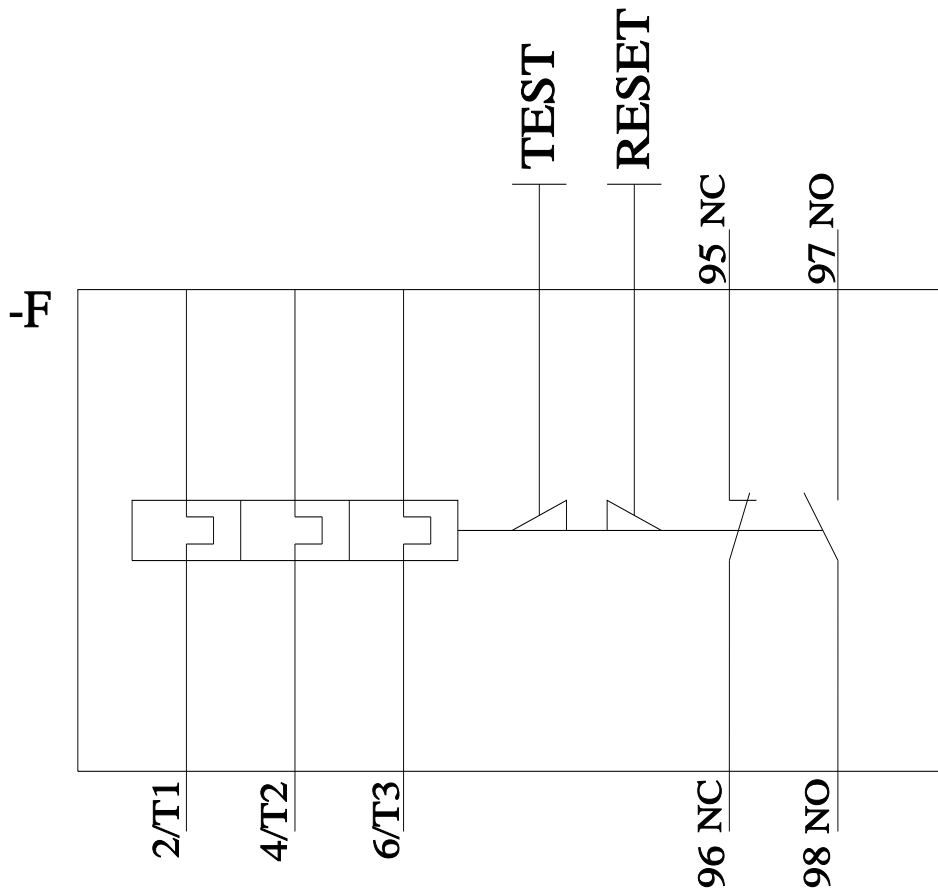
**Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RB2066-1GC2/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB2066-1GC2&objecttype=14&gridview=view1>





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