



Overload relay 160...630 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

<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 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>	630 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 06 ATEX 3001
<b>reference code acc. to IEC 81346-2</b>	F
Substance Prohibitance (Date)	01.07.2006 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>	

<b>number of poles for main current circuit</b>	3
<b>adjustable current response value current of the current-dependent overload release</b>	160 ... 630 A
<b>operating voltage</b> <ul style="list-style-type: none"> <li>• rated value</li> <li>• at AC-3 rated value maximum</li> </ul>	1 000 V 1 000 V
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>operational current rated value</b>	630 A
<b>operating power</b> <ul style="list-style-type: none"> <li>• for 3-phase motors at 400 V at 50 Hz</li> <li>• for AC motors at 500 V at 50 Hz</li> <li>• for AC motors at 690 V at 50 Hz</li> </ul>	90 ... 355 kW 132 ... 400 kW 160 ... 560 kW
<b>Auxiliary circuit</b>	
<b>design of the auxiliary switch</b>	integrated
<b>number of NC contacts for auxiliary contacts</b> <ul style="list-style-type: none"> <li>• note</li> </ul>	1 for contactor disconnection
<b>number of NO contacts for auxiliary contacts</b> <ul style="list-style-type: none"> <li>• note</li> </ul>	1 for message "tripped"
<b>number of CO contacts for auxiliary contacts</b>	0
<b>operational current of auxiliary contacts at AC-15</b> <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 110 V</li> <li>• at 120 V</li> <li>• at 125 V</li> <li>• at 230 V</li> </ul>	4 A 4 A 4 A 4 A 3 A
<b>operational current of auxiliary contacts at DC-13</b> <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 60 V</li> <li>• at 110 V</li> <li>• at 125 V</li> <li>• at 220 V</li> </ul>	2 A 0.55 A 0.3 A 0.3 A 0.11 A
<b>Protective and monitoring functions</b>	
<b>trip class</b>	CLASS 10E
<b>design of the overload release</b>	electronic
<b>UL/CSA ratings</b>	
<b>full-load current (FLA) for 3-phase AC motor</b> <ul style="list-style-type: none"> <li>• at 480 V rated value</li> <li>• at 600 V rated value</li> </ul>	630 A 630 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> <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: 800 A, Class L: 1600 A gG: 630 A fuse gG: 6 A
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	any
<b>fastening method</b>	Contactor 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> <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control circuit</li> </ul>	busbar connection screw-type terminals

arrangement of electrical connectors for main current circuit	Top and bottom		
type of connectable conductor cross-sections <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>at AWG cables for auxiliary contacts</li></ul>	1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²) 1x (0,5 ... 4 mm²), 2x (0,5 ... 2,5 mm²) 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²) 2x (20 ... 14)		
tightening torque <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>	20 ... 22 N·m 0.8 ... 1.2 N·m		
design of the thread of the connection screw <ul style="list-style-type: none"><li>for main contacts</li><li>of the auxiliary and control contacts</li></ul>	M10 M3		
Safety related data			
protection class IP on the front acc. to IEC 60529	IP00; IP20 with box terminal/cover		
touch protection on the front acc. 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		
Electromagnetic compatibility			
conducted interference <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		
field-based interference acc. to IEC 61000-4-3	10 V/m		
electrostatic discharge acc. to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge		
Display			
display version for switching status	Slide switch		
Certificates/ approvals			
General Product Approval		EMC	For use in hazardous locations



<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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[Miscellaneous](#)

[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=3RB2066-1MC2>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB2066-1MC2>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB2066-1MC2>

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

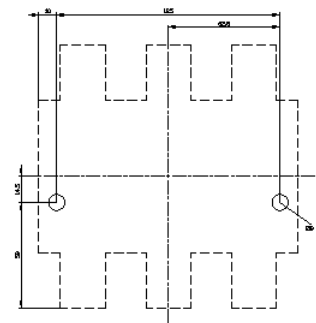
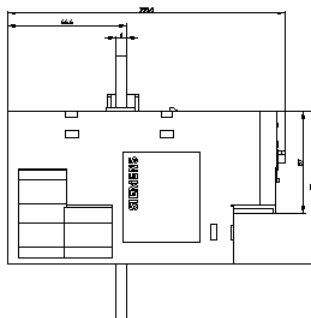
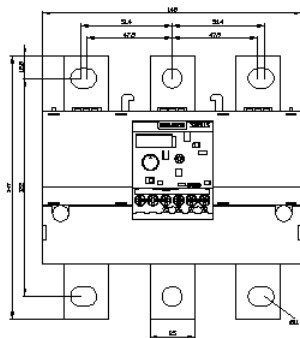
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RB2066-1MC2&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB2066-1MC2&lang=en)

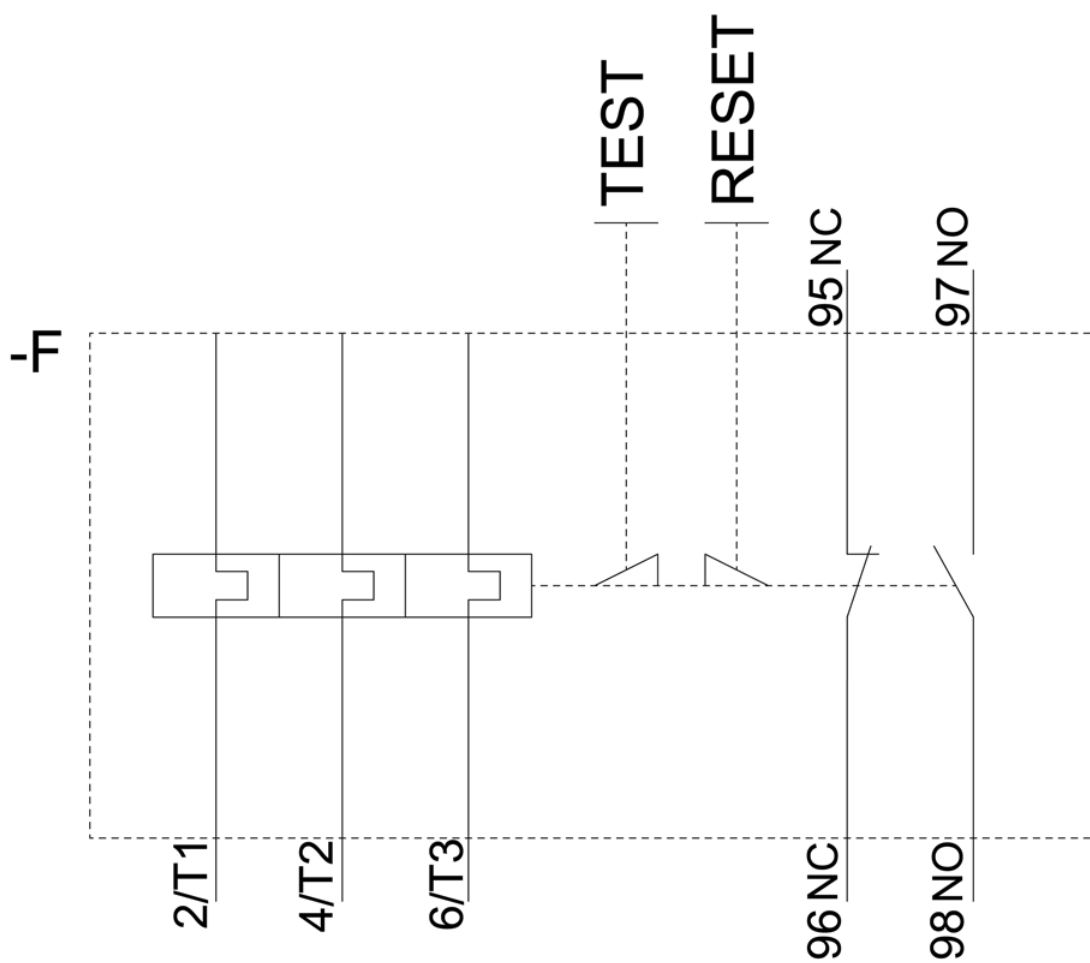
Characteristic: Tripping characteristics,  $I^2t$ , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RB2066-1MC2/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB2066-1MC2&objecttype=14&gridview=view1>





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