

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



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"> • between auxiliary and auxiliary circuit • between auxiliary and auxiliary circuit • between main and auxiliary circuit • between main and auxiliary circuit 	300 V 300 V 600 V 690 V
shock resistance	15g / 11 ms
<ul style="list-style-type: none"> • acc. to IEC 60068-2-27 	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 ² ; 10 cycles
thermal current	630 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 acc. to IEC 81346-2	F
Substance Prohibitance (Date)	01.07.2006
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul style="list-style-type: none"> • during operation • during storage • during transport 	-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	160 ... 630 A
operating voltage	
<ul style="list-style-type: none"> • rated value 	1 000 V
operating frequency rated value	50 ... 60 Hz

operational current rated value	630 A
operating power	
<ul style="list-style-type: none"> • for 3-phase motors at 400 V at 50 Hz • for AC motors at 500 V at 50 Hz • for AC motors at 690 V at 50 Hz 	90 ... 355 kW 132 ... 400 kW 160 ... 560 kW
Auxiliary circuit	
design of the auxiliary switch	integrated
number of NC contacts for auxiliary contacts	1
<ul style="list-style-type: none"> • note 	for contactor disconnection
number of NO contacts for auxiliary contacts	1
<ul style="list-style-type: none"> • note 	for message "tripped"
number of CO contacts for auxiliary contacts	0
operational current of auxiliary contacts at AC-15	
<ul style="list-style-type: none"> • at 24 V • at 110 V • at 120 V • at 125 V • at 230 V 	4 A 4 A 4 A 4 A 3 A
operational current of auxiliary contacts at DC-13	
<ul style="list-style-type: none"> • at 24 V • at 60 V • at 110 V • at 125 V • at 220 V 	2 A 0.55 A 0.3 A 0.3 A 0.11 A
Protective and monitoring functions	
trip class	CLASS 10E
design of the overload release	electronic
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
<ul style="list-style-type: none"> • at 480 V rated value • at 600 V rated value 	630 A 630 A
contact rating of auxiliary contacts according to UL	B600 / R300
Short-circuit protection	
design of the fuse link	
<ul style="list-style-type: none"> • for short-circuit protection of the main circuit <ul style="list-style-type: none"> — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required 	gG: 800 A, Class L: 1600 A gG: 630 A fuse gG: 6 A
Installation/ mounting/ dimensions	
mounting position	any
fastening method	Contacting mounting/stand-alone installation
height	119 mm
width	120 mm
depth	155 mm
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	
<ul style="list-style-type: none"> • for main current circuit • for auxiliary and control circuit 	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"> • for auxiliary contacts <ul style="list-style-type: none"> — solid — solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts 	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²) 1x (0,5 ... 4 mm ²), 2x (0,5 ... 2,5 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²) 2x (20 ... 14)
tightening torque	

<ul style="list-style-type: none"> • for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals 	<p>20 ... 22 N·m</p> <p>0.8 ... 1.2 N·m</p>
design of the thread of the connection screw <ul style="list-style-type: none"> • for main contacts • of the auxiliary and control contacts 	<p>M10</p> <p>M3</p>

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
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Electromagnetic compatibility

conducted interference <ul style="list-style-type: none"> • due to burst acc. to IEC 61000-4-4 • due to conductor-earth surge acc. to IEC 61000-4-5 • due to conductor-conductor surge acc. to IEC 61000-4-5 • due to high-frequency radiation acc. to IEC 61000-4-6 	<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>
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
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Certificates/ approvals

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

[Type Test Certificates/Test Report](#)



Marine / Shipping	other
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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, ...)

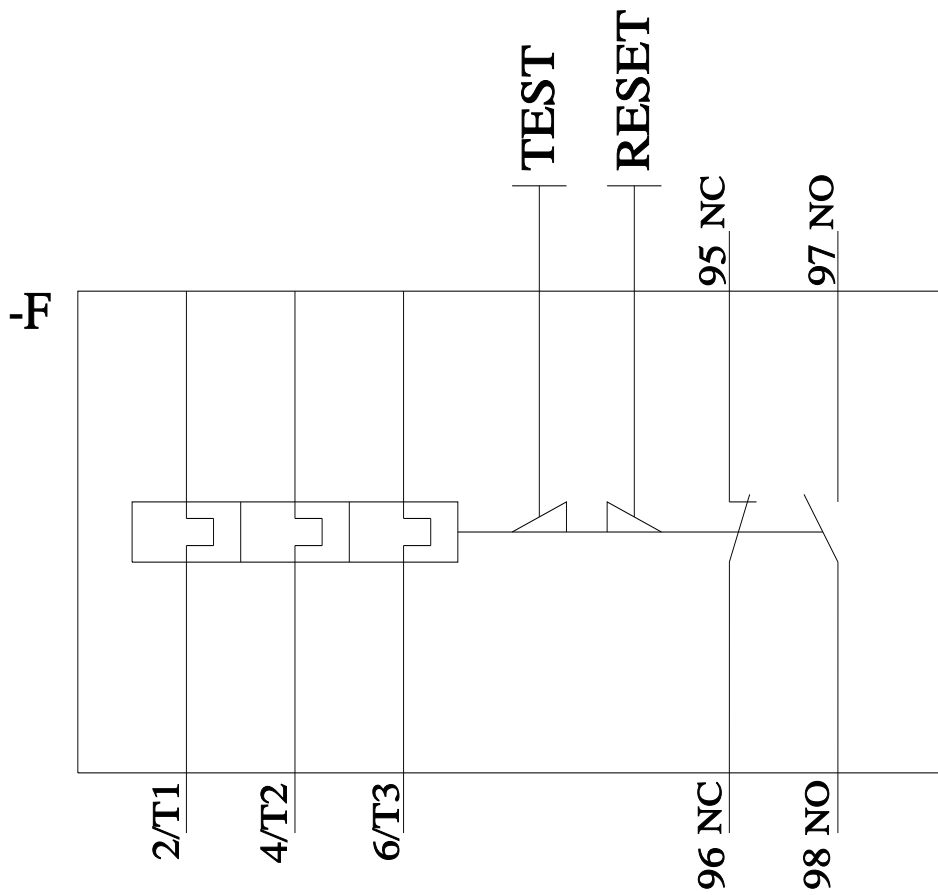
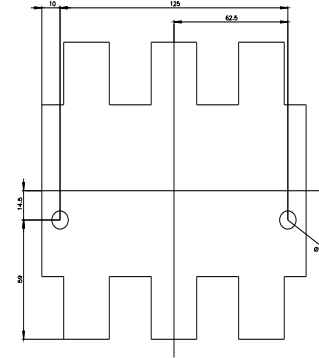
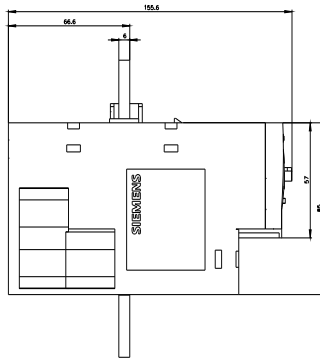
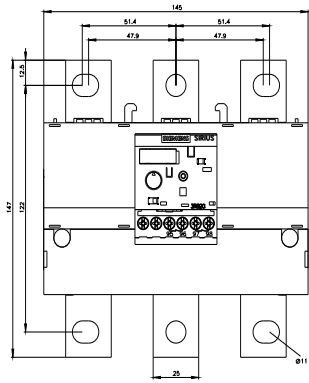
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB2066-1MC2&lang=en

Characteristic: Tripping characteristics, I_t, 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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12/15/2020 