## **SIEMENS**

Data sheet 3RB2066-1MC2



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

	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 protective separation in networks with grounded star point			
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		
shock resistance	15g / 11 ms		
according to IEC 60068-2-27	15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 11 ms		
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 according to IEC 81346-2	F		
Substance Prohibitance (Date)	07/01/2006		
SVHC substance name	Blei - 7439-92-1 Bleimonoxid (Bleioxid) - 1317-36-8		
Ambient conditions			
installation altitude at height above sea level maximum	2 000 m		
ambient temperature			
during operation	-25 +60 °C		
during storage	-40 +80 °C		
during transport	-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			
rated value	1 000 V		
at AC-3e rated value maximum	1 000 V		
operating frequency rated value	50 60 Hz		
operational current rated value	630 A		
operational current at AC-3e at 400 V rated value	630 A		

operating power	
<ul> <li>for 3-phase motors at 400 V at 50 Hz</li> </ul>	90 355 kW
<ul> <li>for AC motors at 500 V at 50 Hz</li> </ul>	132 400 kW
for AC motors at 690 V at 50 Hz	160 560 kW
Auxiliary circuit	
design of the auxiliary switch	integrated
number of NC contacts for auxiliary contacts	1
• note	for contactor disconnection
number of NO contacts for auxiliary contacts	1
• note	for message "tripped"
number of CO contacts for auxiliary contacts	0
operational current of auxiliary contacts at AC-15	
• 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
operational current of auxiliary contacts at DC-13	2.4
• 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  Protective and monitoring functions	0.11 A
	CLASS 40F
trip class  design of the overload release	CLASS 10E electronic
UL/CSA ratings	electionic
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	630 A
at 600 V rated value     at 600 V rated value	630 A
contact rating of auxiliary contacts according to UL	B600 / R300
Short-circuit protection	500071000
design of the fuse link	
_	
IOI SHORT-CITCUIT DETOTECTION OF THE MAIN CIFCUIT	
<ul> <li>for short-circuit protection of the main circuit</li> <li>— with type of coordination 1 required</li> </ul>	qG: 800 A, Class L: 1600 A
— with type of coordination 1 required	gG: 800 A, Class L: 1600 A gG: 630 A
<ul><li>— with type of coordination 1 required</li><li>— with type of assignment 2 required</li></ul>	gG: 800 A, Class L: 1600 A gG: 630 A fuse qG: 6 A
— with type of coordination 1 required	gG: 630 A
— with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions	gG: 630 A fuse gG: 6 A
<ul> <li>— with type of coordination 1 required</li> <li>— with type of assignment 2 required</li> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 630 A
— with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method	gG: 630 A fuse gG: 6 A any
— with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position	gG: 630 A fuse gG: 6 A  any Contactor mounting/stand-alone installation
— with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height	gG: 630 A fuse gG: 6 A  any Contactor mounting/stand-alone installation 119 mm
— with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width	gG: 630 A fuse gG: 6 A  any Contactor mounting/stand-alone installation 119 mm 120 mm
— with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position fastening method height width depth	gG: 630 A fuse gG: 6 A  any Contactor mounting/stand-alone installation 119 mm 120 mm
— with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position fastening method height width depth  Connections/ Terminals product component removable terminal for auxiliary and	gG: 630 A fuse gG: 6 A  any  Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm
— with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width  depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit	gG: 630 A fuse gG: 6 A  any  Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm
— with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width  depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection	gG: 630 A fuse gG: 6 A  any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm
— with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width  depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • for main current circuit	gG: 630 A fuse gG: 6 A  any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm  Yes
— with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position fastening method height width depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • for main current circuit • for auxiliary and control circuit  arrangement of electrical connectors for main current	gG: 630 A fuse gG: 6 A  any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm  Yes  busbar connection screw-type terminals
— with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position fastening method height width depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit type of electrical connection  • for main current circuit • for auxiliary and control circuit  arrangement of electrical connectors for main current circuit	gG: 630 A fuse gG: 6 A  any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm  Yes  busbar connection screw-type terminals
— with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width  depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • for main current circuit  • for auxiliary and control circuit  arrangement of electrical connectors for main current circuit  type of connectable conductor cross-sections	gG: 630 A fuse gG: 6 A  any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm  Yes  busbar connection screw-type terminals Top and bottom  1x (0.5 4 mm²), 2x (0.5 2.5 mm²)
— with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width  depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • for main current circuit  • for auxiliary and control circuit  arrangement of electrical connectors for main current circuit  type of connectable conductor cross-sections  • for auxiliary contacts	gG: 630 A fuse gG: 6 A  any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm  Yes  busbar connection screw-type terminals Top and bottom
— with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width  depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • for main current circuit  • for auxiliary and control circuit  arrangement of electrical connectors for main current circuit  type of connectable conductor cross-sections  • for auxiliary contacts  — solid	gG: 630 A fuse gG: 6 A  any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm  Yes  busbar connection screw-type terminals Top and bottom  1x (0.5 4 mm²), 2x (0.5 2.5 mm²)
- with type of coordination 1 required - with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width  depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • for main current circuit  • for auxiliary and control circuit  arrangement of electrical connectors for main current circuit  type of connectable conductor cross-sections  • for auxiliary contacts  - solid - solid or stranded	gG: 630 A fuse gG: 6 A  any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm  Yes  busbar connection screw-type terminals Top and bottom  1x (0.5 4 mm²), 2x (0.5 2.5 mm²) 1x (0,5 4 mm²), 2x (0,5 2,5 mm²)
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<ul> <li>with type of coordination 1 required</li> <li>with type of assignment 2 required</li> <li>for short-circuit protection of the auxiliary switch required</li> <li>Installation/ mounting/ dimensions</li> <li>mounting position</li> <li>fastening method</li> <li>height</li> <li>width</li> <li>depth</li> <li>Connections/ Terminals</li> <li>product component removable terminal for auxiliary and control circuit</li> <li>type of electrical connection</li> <li>for main current circuit</li> <li>for auxiliary and control circuit</li> <li>arrangement of electrical connectors for main current circuit</li> <li>type of connectable conductor cross-sections</li> <li>for auxiliary contacts</li> <li>solid</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>for AWG cables for auxiliary contacts</li> <li>tightening torque</li> <li>for main contacts with screw-type terminals</li> </ul>	gG: 630 A fuse gG: 6 A  any  Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm  Yes  busbar connection screw-type terminals  Top and bottom  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)
<ul> <li>with type of coordination 1 required</li> <li>with type of assignment 2 required</li> <li>for short-circuit protection of the auxiliary switch required</li> <li>Installation/ mounting/ dimensions</li> <li>mounting position</li> <li>fastening method</li> <li>height</li> <li>width</li> <li>depth</li> <li>Connections/ Terminals</li> <li>product component removable terminal for auxiliary and control circuit</li> <li>type of electrical connection</li> <li>for main current circuit</li> <li>for auxiliary and control circuit</li> <li>arrangement of electrical connectors for main current circuit</li> <li>type of connectable conductor cross-sections</li> <li>for auxiliary contacts</li> <li>solid</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>for AWG cables for auxiliary contacts</li> <li>tightening torque</li> </ul>	gG: 630 A fuse gG: 6 A  any Contactor mounting/stand-alone installation 119 mm 120 mm 155 mm  Yes  busbar connection screw-type terminals Top and bottom  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)

• for main contacts	M10		
<ul> <li>of the auxiliary and control contacts</li> </ul>	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		
Electromagnetic compatibility			
conducted interference			
<ul> <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> <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> <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> <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		
field-based interference according to IEC 61000-4-3	10 V/m		
electrostatic discharge according to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge		
Display			
display version for switching status	Slide switch		
Approvals Certificates			
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







Miscellaneous

other

Confirmation

## 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=3RB2066-1MC2

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, ...)

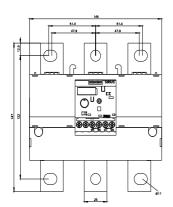
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RB2066-1MC2&lang=er

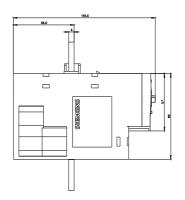
Characteristic: Tripping characteristics, I²t, Let-through current

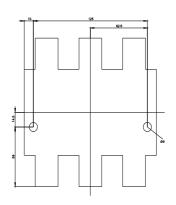
https://support.industry.siemens.com/cs/ww/en/ps/3RB2066-1MC2/char

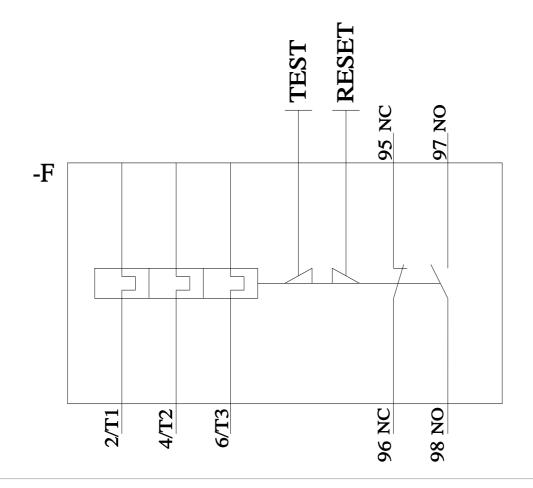
Further characteristics (e.g. electrical endurance, switching frequency)

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









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