## **SIEMENS**

Data sheet 3RB2066-1GF2



Overload relay 55...250 A for motor protection Size S10/S12, Class 10E Contactor mounting/stand-alone installation Main circuit: busbar connection Auxiliary circuit: Spring-type 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 protective separation	
<ul> <li>in networks with ungrounded star point between auxiliary and auxiliary circuit</li> </ul>	300 V
<ul> <li>in networks with grounded star point between auxiliary and auxiliary circuit</li> </ul>	300 V
<ul> <li>in networks with ungrounded star point between main and auxiliary circuit</li> </ul>	600 V
<ul> <li>in networks with grounded star point between main and auxiliary circuit</li> </ul>	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
vibration resistance	1-6 Hz, 15 mm; 6-500 Hz, 20 m/s <sup>2</sup> ; 10 cycles
thermal current	250 A
recovery time after overload trip	
<ul> <li>with automatic reset typical</li> </ul>	3 min
with remote-reset	0 min
with manual reset	0 min
reference code according to IEC 81346-2	F
Substance Prohibitance (Date)	07/01/2006
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
Weight	1.623 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul> <li>during operation</li> </ul>	-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	55 250 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	250 A
operational current at AC-3e at 400 V rated value	250 A
operating power	
<ul> <li>for 3-phase motors at 400 V at 50 Hz</li> </ul>	30 132 kW
<ul> <li>for AC motors at 500 V at 50 Hz</li> </ul>	45 160 kW
<ul> <li>for AC motors at 690 V at 50 Hz</li> </ul>	55 250 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	
● 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	
trip class	CLASS 10E
design of the overload release	electronic
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	250 A
at 600 V rated value	250 A
contact rating of auxiliary contacts according to UL	B600 / R300
Short-circuit protection	
design of the fuse link	
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	
mounting position	any
fastening method	Contactor mounting/stand-alone installation
height	119 mm
width	120 mm
depth	155 mm
Connections/ Terminals	
product component removable terminal for auxiliary and	Yes
control circuit	
type of electrical connection	
for main current circuit	busbar connection
• for auxiliary and control circuit	spring-loaded terminals
arrangement of electrical connectors for main current	Top and bottom
circuit	
type of connectable conductor cross-sections	
<ul> <li>for auxiliary contacts</li> </ul>	
<ul><li>for auxiliary contacts</li><li>— solid</li></ul>	2x (0.25 1.5 mm²)
•	2x (0.25 1.5 mm²) 2x (0,25 1,5 mm²)

— finely stranded with core end processing     — finely stranded without core end processing     • for AWG cables for auxiliary contacts  tightening torque	2x (0.25 1.5 mm²) 2x (0.25 1.5 mm²) 2x (24 16)
for AWG cables for auxiliary contacts	
	2x (24 16)
tightening torque	
<ul> <li>for main contacts with screw-type terminals</li> </ul>	20 22 N·m
design of the thread of the connection screw	
• for main contacts	M10
Electrical Safety	
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 display version for switching status	Slide switch
due to conductor-earth surge according to IEC 61000-4-5     due to conductor-conductor surge according to IEC 61000-4-5     due to high-frequency radiation according to IEC 61000-4-6  field-based interference according to IEC 61000-4-3	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

**General Product Approval** 





Confirmation







EMV For use in hazardous locations Test Certificates Marine / Shipping



<u>KC</u>



Type Test Certificates/Test Report

Special Test Certificate



Marine / Shipping other Environment







Miscellaneous

Confirmation

Environmental Confirmations

## Further information

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)

 $\underline{https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RB2066-1GF2}$ 

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB2066-1GF2

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

https://support.industry.siemens.com/cs/ww/en/ps/3RB2066-1GF2

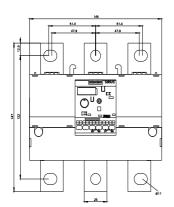
 $Image\ database\ (product\ images,\ 2D\ dimension\ drawings,\ 3D\ models,\ device\ circuit\ diagrams,\ EPLAN\ macros,\ ...)$ 

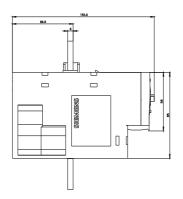
 $\underline{\text{http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RB2066-1GF2\&lang=en}}$ 

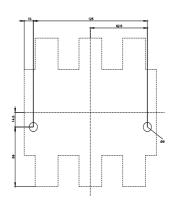
 $\label{lem:characteristics} \textbf{Characteristics}, \textbf{I}^{\textbf{2}}\textbf{t}, \textbf{Let-through current}$ 

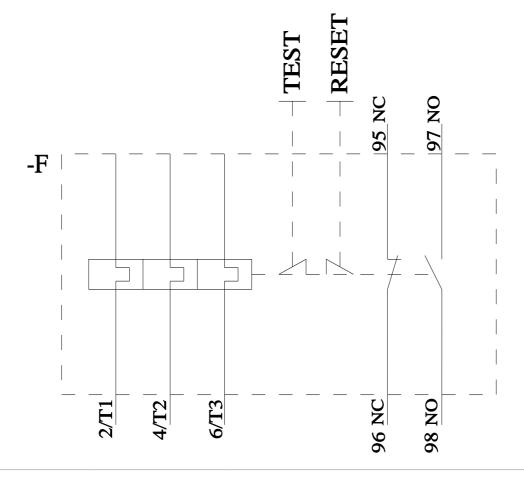
https://support.industry.siemens.com/cs/ww/en/ps/3RB2066-1GF2/char Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB2066-1GF2&objecttype=14&gridview=view1









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