



Overload relay 12.5...50 A Electronic For motor protection Size S3, Class 10E Stand-alone installation Main circuit: Straight-through transformer Auxiliary circuit: Spring-type terminal Manual-Automatic-Reset

product brand name	SIRIUS
product designation	solid-state overload relay
product type designation	3RB3

General technical data

size of overload relay	S3
size of contactor can be combined company-specific	S3
power loss [W] for rated value of the current at AC in hot operating state	0.2 W
<ul style="list-style-type: none"> per pole 	0.07 W
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 	300 V
<ul style="list-style-type: none"> between auxiliary and auxiliary circuit 	300 V
<ul style="list-style-type: none"> between main and auxiliary circuit 	600 V
<ul style="list-style-type: none"> between main and auxiliary circuit 	690 V
shock resistance	8g / 11 ms
<ul style="list-style-type: none"> 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 ² ; 10 cycles
thermal current	50 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 09 ATEX 3001
reference code according to IEC 81346-2	F
Substance Prohibition (Date)	03/01/2017

Ambient conditions

installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul style="list-style-type: none"> during operation 	-25 ... +60 °C
<ul style="list-style-type: none"> during storage 	-40 ... +80 °C
<ul style="list-style-type: none"> 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	12.5 ... 50 A
operating voltage	
<ul style="list-style-type: none"> rated value 	1 000 V
<ul style="list-style-type: none"> at AC-3e rated value maximum 	1 000 V

operating frequency rated value	50 ... 60 Hz
operational current rated value	50 A
operational current at AC-3e at 400 V rated value	50 A
operating power	
• for 3-phase motors at 400 V at 50 Hz	7.5 ... 22 kW
• for AC motors at 500 V at 50 Hz	11 ... 30 kW
• for AC motors at 690 V at 50 Hz	11 ... 45 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	50 A
• at 600 V rated value	50 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: 200 A
— with type of assignment 2 required	gG: 200 A
• for short-circuit protection of the auxiliary switch required	fuse gG: 6 A

Installation/ mounting/ dimensions

mounting position	any
fastening method	stand-alone installation
height	106 mm
width	70 mm
depth	124 mm

Connections/ Terminals





product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	
• for main current circuit	straight-through transformers
• for auxiliary and control circuit	spring-loaded terminals
arrangement of electrical connectors for main current circuit	Top and bottom
type of connectable conductor cross-sections	
• for auxiliary contacts	
— solid	2x (0.25 ... 1.5 mm ²)
— solid or stranded	2x (0.25 ... 1.5 mm ²)
— finely stranded with core end processing	2x (0.25 ... 1.5 mm ²)
— finely stranded without core end processing	2x (0.25 ... 1.5 mm ²)
• at AWG cables for auxiliary contacts	2x (24 ... 16)
design of screwdriver shaft	Diameter 5 to 6 mm

size of the screwdriver tip	Pozidriv PZ 2
Safety related data	
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
Communication/ Protocol	
type of voltage supply via input/output link master	No
Electromagnetic compatibility	
conducted interference <ul style="list-style-type: none"> • due to burst according to IEC 61000-4-4 • 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 electrostatic discharge according to IEC 61000-4-2	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 10 V/m 6 kV contact discharge / 8 kV air discharge
Display	
display version for switching status	Slide switch
Certificates/ approvals	
General Product Approval	EMC



[Confirmation](#)



For use in hazardous locations	Declaration of Conformity	Test Certificates	Marine / Shipping
			Type Test Certificates/Test Report Special Test Certificate 

Marine / Shipping	other
  	Confirmation

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) https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RB3046-1UX1 Cax online generator http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3046-1UX1 Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RB3046-1UX1 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3046-1UX1&lang=en Characteristic: Tripping characteristics, I ² t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RB3046-1UX1/char Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3046-1UX1&objecttype=14&gridview=view1

