

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

3RB3016-1SB0

SIRIUS S00 SOLID-STATE OVERLOAD RELAY

Used with the applicable SIRIUS 3RB3 configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens official technical documentation for 3RB3016-1SB0

Overload relay 3...12 A for motor protection Size S00, Class 10E
Contactor mounting Main circuit: Screw Auxiliary circuit: Screw
Manual-Automatic-Reset



Product brand name	SIRIUS
Product designation	solid-state overload relay
Product type designation	3RB3
General technical data	
Size of overload relay	S00
Size of contactor can be combined company-specific	S00
Power loss [W] total typical	0.6 W
Insulation voltage with degree of pollution 3 rated value	690 V
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
• in networks with grounded star point between auxiliary and auxiliary circuit	300 V
• in networks with grounded star point between auxiliary and auxiliary circuit	300 V
• in networks with grounded star point between main and auxiliary circuit	600 V
• in networks with grounded star point between main and auxiliary circuit	690 V
Protection class IP	

<ul style="list-style-type: none"> • on the front 	IP20
<ul style="list-style-type: none"> • of the terminal 	IP20
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": 9g / 11 ms
Thermal current	12 A
Recovery time	
<ul style="list-style-type: none"> • after overload trip with automatic reset typical 	3 min
<ul style="list-style-type: none"> • after overload trip with remote-reset 	0 min
<ul style="list-style-type: none"> • after overload trip with manual reset 	0 min
Type of protection	II (2) G [Ex e] [Ex d] [Ex px] II (2) D [Ex t] [Ex p]
Certificate of suitability relating to ATEX	PTB 09 ATEX 3001
Protection against electrical shock	finger-safe
Reference code acc. to DIN EN 81346-2	F
Ambient conditions	
Installation altitude at height above sea level	
<ul style="list-style-type: none"> • 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 pick-up value current of the current-dependent overload release	3 ... 12 A
Operating voltage	
<ul style="list-style-type: none"> • rated value 	690 V
<ul style="list-style-type: none"> • at AC-3 rated value maximum 	690 V
Operating frequency rated value	50 ... 60 Hz
Operating current rated value	12 A
Operating power	
<ul style="list-style-type: none"> • for three-phase motors at 400 V at 50 Hz 	1.5 ... 5.5 kW
<ul style="list-style-type: none"> • for AC motors at 500 V at 50 Hz 	1.5 ... 5.5 kW
<ul style="list-style-type: none"> • for AC motors at 690 V at 50 Hz 	2.2 ... 7.5 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
Operating 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
Operating 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 three-phase AC motor	
• at 480 V rated value	12 A
• at 600 V rated value	12 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: 50 A, RK5: 45 A
— with type of assignment 2 required	gG: 50 A, J: 45 A
• for short-circuit protection of the auxiliary switch required	fuse gG: 6 A
Installation/ mounting/ dimensions	
Mounting position	any
Mounting type	Mounting contactor
Height	79 mm
Width	45 mm
Depth	73 mm
Required spacing	
• with side-by-side mounting	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— downwards	0 mm

— at the side	0 mm
• for grounded parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— at the side	6 mm
— downwards	0 mm
• for live parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	6 mm

Connections/Terminals

Product function	
• removable terminal for auxiliary and control circuit	Yes
Type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control current circuit	screw-type terminals
Arrangement of electrical connectors for main current circuit	Top and bottom
Type of connectable conductor cross-sections	
• for main contacts	
— solid	1x (0.5 ... 4 mm ²), 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 4 mm ²)
— single or multi-stranded	1x (0,5 ... 4 mm ²), 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 4 mm ²)
— finely stranded with core end processing	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 2.5 mm ²)
• at AWG conductors for main contacts	1x (20 ... 12), 2x (20 ... 12)
Type of connectable conductor cross-sections	
• for auxiliary contacts	
— solid	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)
— single or multi-stranded	1x (0,5 ... 4 mm ²), 2x (0,5 ... 2,5 mm ²)
— finely stranded with core end processing	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
• at AWG conductors for auxiliary contacts	1x (20 ... 14), 2x (20 ... 14)
Tightening torque	
• for main contacts with screw-type terminals	0.8 ... 1.2 N·m
• for auxiliary contacts with screw-type terminals	0.8 ... 1.2 N·m
Design of screwdriver shaft	Diameter 5 to 6 mm
Size of the screwdriver tip	Pozidriv PZ 2
Design of the thread of the connection screw	
• for main contacts	M3
• of the auxiliary and control contacts	M3