SIEMENS

Data sheet

3RB3016-1SB0



Overload relay 3...12 A Electronic 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] for rated value of the current at AC in hot operating state	0.6 W
per pole	0.2 W
insulation voltage with degree of pollution 3 at AC rated value	690 V
surge voltage resistance rated value	6 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": 9g / 11 ms
thermal current	12 A
reference code according to IEC 81346-2	F
Substance Prohibitance (Date)	10/01/2009
SVHC substance name	Lead monoxide (lead oxide) - 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	3 12 A
operating voltage	
rated value	690 V
• at AC-3e rated value maximum	690 V
operating frequency rated value	50 60 Hz
operational current rated value	12 A
operational current at AC-3e at 400 V rated value	12 A

operating power	45 55100
• for 3-phase motors at 400 V at 50 Hz	1.5 5.5 kW
• for AC motors at 500 V at 50 Hz	1.5 5.5 kW
• for AC motors at 690 V at 50 Hz	2.2 7.5 kW
Auxiliary circuit	interested
design of the auxiliary switch	integrated
number of NC contacts for auxiliary contacts	
• 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 • at 125 V	4 A
	4 A 2 A
• at 230 V	3 A
operational current of auxiliary contacts at DC-13	2 A
• at 24 V	
• at 60 V	0.55 A 0.3 A
• at 110 V • at 125 V	0.3 A
at 220 V Protective and monitoring functions	0.11 A
trip class	CLASS 10E
design of the overload release UL/CSA ratings	electronic
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	12 A
at 600 V rated value	12 A
• at 000 v Tated value	12 7
contact rating of auxiliary contacts according to III	R600 / R300
contact rating of auxiliary contacts according to UL Short-circuit protection	B600 / R300
Short-circuit protection	B600 / R300
Short-circuit protection design of the fuse link	B600 / R300
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit	
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
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 required	gG: 50 A, RK5: 45 A gG: 50 A, J: 45 A
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required	gG: 50 A, RK5: 45 A
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — 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: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — 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: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A any
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — 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: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A any Contactor mounting
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — 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: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A any Contactor mounting 79 mm
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — 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: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A any Contactor mounting 79 mm 45 mm
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — 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: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A any Contactor mounting 79 mm
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — 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	gG: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A any Contactor mounting 79 mm 45 mm
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — 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: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A any Contactor mounting 79 mm 45 mm 73 mm
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — 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: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A any Contactor mounting 79 mm 45 mm 73 mm
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — 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: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A any Contactor mounting 79 mm 45 mm 73 mm
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit - 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: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A any Contactor mounting 79 mm 45 mm 73 mm Yes
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — 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: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A any Contactor mounting 79 mm 45 mm 73 mm Yes screw-type terminals
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — 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 • for main current circuit • for auxiliary and control circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts	gG: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A any Contactor mounting 79 mm 45 mm 73 mm Yes Screw-type terminals screw-type terminals Top and bottom
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit - 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 arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts • solid	gG: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A any Contactor mounting 79 mm 45 mm 73 mm Yes Screw-type terminals screw-type terminals Top and bottom 1x (0.5 4 mm ²), 2x (0.5 1.5 mm ²), 2x (0.75 4 mm ²)
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — 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 main contacts	gG: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A any Contactor mounting 79 mm 45 mm 73 mm Yes Screw-type terminals screw-type terminals Top and bottom 1x (0.5 4 mm ²), 2x (0.5 1.5 mm ²), 2x (0.75 4 mm ²) 1x (0,5 4 mm ²), 2x (0,5 1,5 mm ²), 2x (0,75 4 mm ²)
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Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — 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 auxiliary and control circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts • solid • solid or stranded • finely stranded with core end processing type of connectable conductor cross-sections • for auxiliary contacts	gG: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A any Contactor mounting 79 mm 45 mm 73 mm Yes screw-type terminals screw-type terminals Top and bottom $1x (0.5 4 mm^2), 2x (0.5 1.5 mm^2), 2x (0.75 4 mm^2)$ $1x (0.5 4 mm^2), 2x (0.5 1.5 mm^2), 2x (0.75 4 mm^2)$ $1x (0.5 2.5 mm^2), 2x (0.5 2.5 mm^2)$
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — 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 main contacts • solid • solid or stranded • finely stranded with core end processing type of connectable conductor cross-sections • for auxiliary contacts - solid	gG: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A any Contactor mounting 79 mm 45 mm 73 mm Yes Screw-type terminals screw-type terminals Top and bottom 1x (0.5 4 mm²), 2x (0.5 1.5 mm²), 2x (0.75 4 mm²) 1x (0.5 4 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 2.5 mm²)
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — 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 auxiliary and control circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts • solid • solid or stranded • finely stranded with core end processing type of connectable conductor cross-sections • for auxiliary contacts — solid — solid or stranded	gG: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A any Contactor mounting 79 mm 45 mm 73 mm Yes screw-type terminals screw-type terminals Top and bottom $1x (0.5 4 mm^2), 2x (0.5 1.5 mm^2), 2x (0.75 4 mm^2)$ $1x (0.5 4 mm^2), 2x (0.5 2.5 mm^2)$ $1x (0.5 4 mm^2), 2x (0.5 2.5 mm^2)$ $1x (0.5 4 mm^2), 2x (0.5 2.5 mm^2)$
Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — 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 main contacts • solid • solid or stranded • finely stranded with core end processing type of connectable conductor cross-sections • for auxiliary contacts - solid	gG: 50 A, RK5: 45 A gG: 50 A, J: 45 A fuse gG: 6 A any Contactor mounting 79 mm 45 mm 73 mm Yes Screw-type terminals screw-type terminals Top and bottom 1x (0.5 4 mm²), 2x (0.5 1.5 mm²), 2x (0.75 4 mm²) 1x (0.5 4 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 2.5 mm²)

tightening torque						
for main contacts with screw-type terminals		0.	0.8 1.2 N·m			
 for auxiliary containing 	acts with screw-type termina	als 0.	0.8 1.2 N·m			
design of screwdriver	shaft	Di	Diameter 5 to 6 mm			
size of the screwdrive	r tip	Po	Pozidriv PZ 2			
design of the thread o	f the connection screw					
 for main contacts 	6	M	M3			
 of the auxiliary and control contacts 		M	M3			
Electrical Safety						
protection class IP on the front according to IEC 60529		C 60529	IP20			
touch protection on the front according to IEC 60529			finger-safe, for vertical contact from the front			
Communication/ Protoc	•		.3,			
type of voltage supply via input/output link master		ter No	0			
Electromagnetic compa			0			
	-	_				
conducted interferenc					6 1 0	
	ording to IEC 61000-4-4		kV (power ports), 1 kV (signa		gree of severity 3	
	-earth surge according to IE		kV (line to earth) correspond	• •		
• due to conductor 61000-4-5	-conductor surge according	to IEC 1	kV (line to line) corresponds	to degree of severity 3		
 due to high-frequ 4-6 	ency radiation according to	IEC 61000- 10	0 V in frequency range 0.15 t	o 80 MHz, modulation 80 %	% AM with 1 kHz	
field-based interference	ce according to IEC 61000	-4-3 10) V/m			
electrostatic discharge	e according to IEC 61000-	4-2 6	kV contact discharge / 8 kV a	air discharge		
Display						
display version for swite	ching status	SI	lide switch			
Approvals Certificates						
General Product Appl	roval					
General Product App	roval					
General Product App	roval	ши	Confirmation		~	
General Product Appr	roval	UK	Confirmation		መ	
General Product Appr	CE	UK	Confirmation		٩	
General Product Appr	roval CE EG-Konf.	UK CA	Confirmation	3	(UL)	
General Product Appr	CE	UK CA	Confirmation	CCC CCC	(UL)	
	C E EG-Konf.	UK CA	Confirmation For use in hazard-	CCC Contification	(UL) UL	
General Product Appr	CE	UK CA		CCC Test Certificates	UL	
General Product Ap-	C E EG-Konf.	en	For use in hazard-	CCC Test Certificates	UL UL	
General Product Ap-	C E EG-Konf.	UK CA	For use in hazard-		Type Test Certific- ates/Test Report	
General Product Ap-	C E EG-Konf.	en	For use in hazard-	Special Test Certific-		
General Product Ap-	C E EG-Konf.	en	For use in hazard-	Special Test Certific-		
General Product Ap-	C E EG-Konf.	en	For use in hazard-	Special Test Certific-		
General Product Approval	C E EG-Konf.	en	For use in hazard-	Special Test Certific-		
General Product Ap-	C E EG-Konf.	en	For use in hazard-	Special Test Certific-		
General Product Approval	C E EG-Konf.	en	For use in hazard-	Special Test Certific-		
General Product Approval	C E EG-Konf.	en	For use in hazard-	Special Test Certific-		
General Product Approval	C E EG-Konf.	en	For use in hazard-	Special Test Certific-		
General Product Approval	EG-Konf. EMV EMV	en	For use in hazard-	Special Test Certific-		
General Product Approval	C E EG-Konf.	KC	For use in hazard- ous locations	Special Test Certific-		
General Product Approval	EMV EMV EMV EMV	KC	For use in hazard- ous locations	Special Test Certific-		
General Product Approval	EMV EMV EMV EMV	KC	For use in hazard- ous locations	Special Test Certific-		
General Product Approval General Product Approval CEREC Marine / Shipping Marine / Shipping	EMV EMV EMV EMV ENTREAD ENVIRONMENT	KC	For use in hazard- ous locations	Special Test Certific-		
General Product Approval	EMV EMV EMV EMV EMV EMV EMV EXAMPLE EX	KC	For use in hazard- ous locations	Special Test Certific-		
General Product Approval General Product Approval CEREC Marine / Shipping Marine / Shipping	EG-Konf. EMV EMV EMV ENV ENV ENV ENV ENV ENV ENV ENV ENV EN	KC	For use in hazard- ous locations	Special Test Certific-		

 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=3RB3016-1SB0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3016-1SB0

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

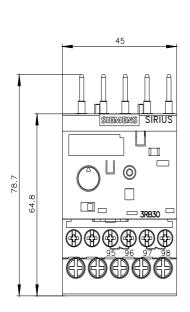
https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-1SB0

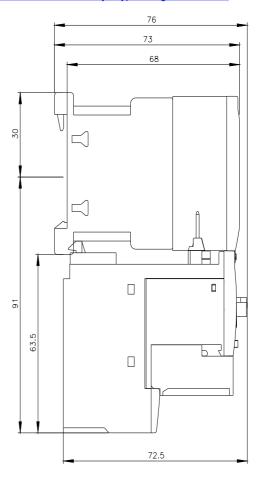
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3016-1SB0&lang=en

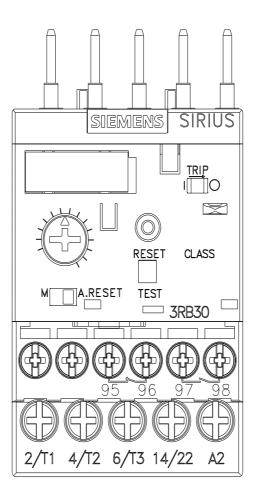
Characteristic: Tripping characteristics, I2t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-1SB0/char

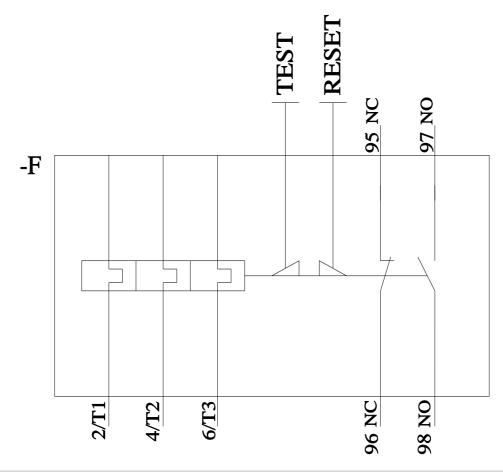
Further characteristics (e.g. electrical endurance, switching frequency)

arch&mlfb=3RB3016-1SB0&objecttype=14&gridview=view1 http://www.automation.siemens.com/bilddb/index.aspx?view=S









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