SIEMENS

Data sheet

3RB3016-1NB0



Overload relay 0.32...1.25 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	0.1 W
• per pole	0.03 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 ungrounded 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 ungrounded star point between main and auxiliary circuit 	600 V
 in networks with grounded star point 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	1.25 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
Weight	0.212 kg
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	0.32 1.25 A
operating voltage	
rated value	690 V

operating frequency rated value	50 60 Hz
operational current rated value	1.25 A
operational current at AC-3e at 400 V rated value	1.25 A
operating power	
• for 3-phase motors at 400 V at 50 Hz	0.12 0.37 kW
• for AC motors at 500 V at 50 Hz	0.12 0.55 kW
• for AC motors at 690 V at 50 Hz	0.18 0.75 kW
Auxiliary circuit	0.10 0.10 KW
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	1.25 A
at 600 V rated value	1.25 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: 35 A, RK5: 6 A
— with type of assignment 2 required	qG: 6 A
 for short-circuit protection of the auxiliary switch required 	fuse gG: 6 A
Installation/ mounting/ dimensions	
mounting position	any
fastening method	Contactor mounting
height	79 mm
width	45 mm
depth	73 mm
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	
for main current circuit	screw-type terminals
 for auxiliary and control 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 mm²), 2x (0.5 1.5 mm²), 2x (0.75 4 mm²)
 solid or stranded 	1x (0,5 4 mm²), 2x (0,5 1,5 mm²), 2x (0,75 4 mm²)
 finely stranded with core end processing 	1x (0.5 2.5 mm ²), 2x (0.5 2.5 mm ²)
type of connectable conductor cross-sections	
for auxiliary contacts	
— solid	1x (0.5 4 mm²), 2x (0.5 2.5 mm²)

	 — solid or stranded — finely stranded with core end processing 		1x (0,5 4 mm²), 2x (0,5 2,5 mm²) 1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)			
for AWG cables for auxiliary contacts		1x (0.5 2.5 mm ²), 2x (0.5 1.5 mm ²) 1x (20 14), 2x (20 14)				
	auxiliary contacts		1X (20	0 14), 2X (20 14)		
tightening torque		_	0.0 4.0 N m			
	 for main contacts with screw-type terminals for auxiliary contacts with screw-type terminals 		0.8 1.2 N·m			
			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			
Electrical Safety						
protection class IP on the front according to IEC 60529						
touch protection on the front according to IEC 60529				-safe, for vertical contact	t from the front	
Communication/ Protocol						
type of voltage supply v	ia input/output link ma	aster	No			
Electromagnetic compatit	pility					
conducted interference						
 due to burst accord 	ing to IEC 61000-4-4		2 kV ((power ports), 1 kV (sign	al ports) corresponds to de	egree of severity 3
 due to conductor-ea 	arth surge according to	IEC 61000-4-5	2 kV ((line to earth) correspond	Is to degree of severity 3	
	onductor surge accordir	ng to IEC	1 kV ((line to line) corresponds	to degree of severity 3	
61000-4-5						
 due to high-frequen 4-6 	cy radiation according	to IEC 61000-	10 V i	in frequency range 0.15	to 80 MHz, modulation 80	% AM with 1 kHz
field-based interference	according to IEC 610	00-4-3	10 V/	m		
electrostatic discharge a	according to IEC 6100	0-4-2	6 kV (contact discharge / 8 kV	air discharge	
Display						
display version for switching	ng status		Slide	switch		
Approvals Certificates						
General Product Approv	/al					
UK CA	CE EG-Konf.			<u>Confirmation</u>		EHC
UK CA	CE EG-Konf.	For use in haza	ard-	Confirmation Test Certificates		ERF Marine / Shipping
CA	СС КС		ard-		UL Special Test Certific- ate	ERC Marine / Shipping
CA	С КС		ard-	Test Certificates		Marine / Shipping Warine / Shipping Warine / Shipping
CA EMV EMV	KC KC		ard-	Test Certificates		ABS
CA EMV EMV Marine / Shipping	<u>Ĵå</u> dnv	ous locations	ard-	Test Certificates		ABS Other
EMV EMV Marine / Shipping Marine Line	<u>Ĵå</u> dnv	ous locations	ard-	Test Certificates		ABS
EMV EMV Marine / Shipping Marine / Shipping Environment Environment	<u>Ĵå</u> dnv	ous locations	ard-	Test Certificates		ABS Other
EMV EMV Marine / Shipping Marine / Shipping Environmental Con- firmations	aging	ous locations	ard-	Test Certificates		ABS Other

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=3RB3016-1NB0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3016-1NB0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-1NB0

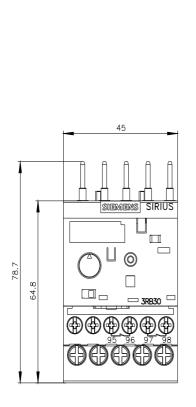
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

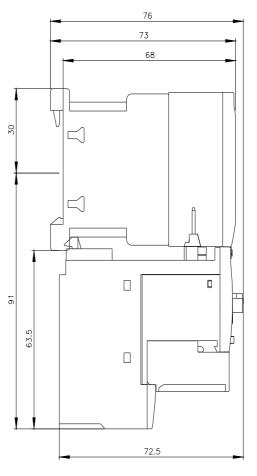
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3016-1NB0&lang=en

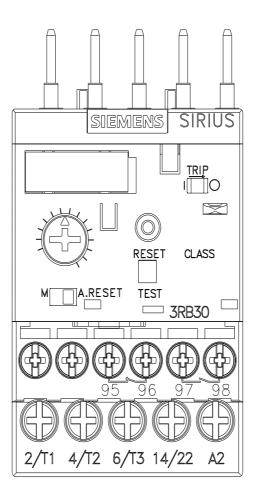
Characteristic: Tripping characteristics, I²t, Let-through current

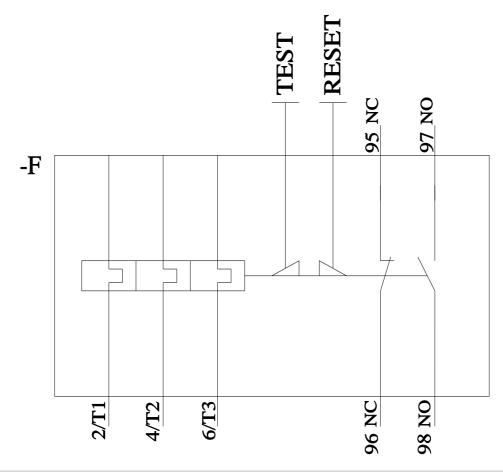
https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-1NB0/char

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3016-1NB0&objecttype=14&gridview=view1









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