SIEMENS

Data sheet 3RB3016-1SE0



Overload relay 3...12 A Electronic For motor protection Size S00, Class 10E Contactor mounting Main circuit: Spring-type terminal 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	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
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 Prohibitance (Date)	10/01/2009
SVHC substance name	Bleimonoxid (Bleioxid) - 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 at AC-3e at 400 V rated value operating power • for 3-phase motors at 400 V at 50 Hz • for AC motors at 500 V at 50 Hz • for AC motors at 500 V at 50 Hz • for AC motors at 500 V at 50 Hz • for AC motors at 500 V at 50 Hz • for AC motors at 500 V at 50 Hz • for AC motors at 500 V at 50 Hz • for AC motors at 500 V at 50 Hz • for AC motors at 500 V at 50 Hz • for AC motors at 500 V at 50 Hz • for AC motors at 500 V at		40.4
Speak Spea	operational current rated value	12 A
• for 3-phase motors at 400 V at 50 Hz • for AC motors at 600 V at 50 Hz • for AC motors at 600 V at 50 Hz • for AC motors at 600 V at 50 Hz • for AC motors at 600 V at 50 Hz • for AC motors at 600 V at 50 Hz • for AC motors at 600 V at 50 Hz • note unumber of NC contacts for auxiliary contacts 1 for contacts or auxiliary contacts 1 note number of NC contacts for auxiliary contacts 1 for message "fripped" at 22 W • at 12 W • at 12 W • at 12 EV • at 12 EV • at 22 W • at 100 V • at 12 EV • at 20 W • at 12 EV • at 40 W • at 12 EV • at 12 EV • at	<u>.</u>	12 A
for AC motors at 500 V at 50 Hz 2.2 7.5 kW		15 551/1/
## CAC motors at 690 val 50 Hz ## Auxiliary circuit ## Auxiliary contacts ## Auxiliary #	•	
Abdillary piceuit design of the auxillary switch number of NC contacts for auxillary contacts • note		
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number of NC contacts for auxiliary contacts 1	-	integrated
note for contactor disconnection for member of NO contacts for auxiliary contacts for message "tripped" for message		
number of NO contacts for auxillary contacts		
• note number of CO contacts for auxiliary contacts o operational current of auxiliary contacts at AC-15 • at 24 V • at 120 V • at 125 V • at 25 V • at 260 V • at 125 V • at 60 V		
operational current of auxiliary contacts at AC-15 * at 24 V * at 110 V * at 125 V * a		
e il 24 V 4 A		
* all 24 V		
all 10 V	•	Δ Δ
• al 120 V		
• al 125 ∨ • al 230 ∨ • al 230 ∨ • al 24 ∨ • al 60 ∨ • al 60 ∨ • al 60 ∨ • al 110 ∨ • al 125 ∨ • al 220 ∨ Protective and monitoring functions trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • al 460 ∨ rated value • al 600 ∨ rated value • al		
• at 230 V operational current of auxiliary contacts at DC-13 • a12 4 V • at 80 V • at 160 V • at 175 V • at 175 V • at 175 V • at 175 V • at 125 V • at 1		
a 24 V 2 A		
• al 24 V • at 60 V • at 110 V • at 1125 V • at 125 V		
at 160 V at 110 V at 1125 V at 125 V at 120 V but 125 V at 122 V at 122 V at 122 V but 125 V at 122 V at 125 V at 122 V but 125 V at 122 V but 125 V at 125 V at 125 V but 125 V at 125 V but 125 V at 125 V but 125 V	•	2 A
at 110 V at 126 V at 126 V but 126 V cat 220 V cat		
at 125 V at 125 V at 126 V contective and monitoring functions trip class CLASS 10E design of the overload release electronic LUCSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value 12 A contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link of or short-circuit protection of the main circuit — with type of coordination 1 required — of short-circuit protection of the auxiliary switch required — of short-circuit protection of the auxiliary switch required — of short-circuit protection of the auxiliary switch required — of short-circuit protection of the auxiliary switch required — of short-circuit protection of the auxiliary switch required — with type of coordination 1 required agg: 50 A, RK5: 45 A gg: 50 A, RK5: 45 A gg: 60 A Installation/ mounting/ dimensions mounting position — any fastening method — Contactor mounting height — 72 mm width — 45 mm depth — 90 mm Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection — for main current circuit — of auxiliary and control circuit spring-loaded terminals arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for min contacts — solid — solid or stranded — finely stranded with core end processing — finely stranded without core end processing — for auxiliary contacts — for		
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trip class design of the overload release electronic CLASS 10E		
trip class design of the overload release electronic CLASS 10E	Protective and monitoring functions	
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full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value at 600 V rated value tontact rating of auxillary contacts according to UL B600 / R300 Short-circuit protection design of the fuse link of or short-circuit protection of the main circuit - with type of coordination 1 required of or short-circuit protection of the auxiliary switch required of or short-circuit protection of the auxiliary switch required of or short-circuit protection of the auxiliary switch required of or short-circuit protection of the auxiliary switch required of or short-circuit protection of the auxiliary switch required of or short-circuit protection of the auxiliary switch required of or short-circuit protection of the auxiliary switch required of or short-circuit protection of the auxiliary and contactor mounting fastening method Contactor mounting height 72 mm width 45 mm depth 90 mm Connections/Terminals product component removable terminal for auxiliary and control circuit type of electrical connection of or auxiliary and control circuit spring-loaded terminals arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts osolid included	design of the overload release	electronic
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contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — with type of coordination 1 required • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required • for main current circuit • for auxiliary and control circuit • for auxiliary and control circuit • for auxiliary and control circuit • solid stranded • solid or stranded • finely stranded with core end processing • finely stranded without core end processing • for auxiliary contacts • for auxiliary contacts	• at 480 V rated value	12 A
Short-circuit protection	at 600 V rated value	12 A
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 gG: 50 A, J: 45 A fuse gG: 6 A Installation/ mounting/ dimensions mounting position fastening method height 72 mm width depth 90 mm Connections/ Terminals product component removable terminal for auxiliary and control circuit e for auxiliary and control circuit spring-loaded terminals arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections e for all stranded e finely stranded with core end processing e for auxiliary contacts type of connectable conductor cross-sections e for auxiliary and devices and for auxiliary and control circuit ### 1x (0.5 4 mm²) ### 1x (0.5 2.5 mm²)	contact rating of auxiliary contacts according to UL	B600 / R300
• 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 • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required fuse gG: 50 A, J: 45 A fuse gG: 6 A Installation/ mounting/ dimensions mounting position any fastening method Contactor mounting + 50 mm depth 90 mm Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit spring-loaded terminals • for auxiliary and control circuit type of connectable conductor cross-sections for main contacts • solid • solid or stranded • finely stranded with core end processing • finely stranded without core end processing • for auxiliary contacts	Short-circuit protection	
- with type of coordination 1 required - with type of assignment 2 required of for short-circuit protection of the auxiliary switch required fuse gG: 50 A, J: 45 A of or short-circuit protection of the auxiliary switch required fuse gG: 6 A Installation/ mounting/ dimensions mounting position fastening method Contactor mounting height 72 mm width 45 mm depth 90 mm Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection of or main current circuit of or auxiliary and control circuit type of connectable conductor cross-sections for main contacts of solid of since y stranded with core end processing of or auxiliary contacts for auxiliary contacts of or auxiliary contacts of or auxiliary contacts	design of the fuse link	
- with type of assignment 2 required	 for short-circuit protection of the main circuit 	
• for short-circuit protection of the auxiliary switch required fuse gG: 6 A Installation/ mounting/ dimensions mounting position any fastening method Contactor mounting height 72 mm width 45 mm depth 90 mm 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 or stranded • finely stranded with core end processing • finely stranded without core end processing • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts	 — with type of coordination 1 required 	gG: 50 A, RK5: 45 A
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product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit spring-loaded terminals • for auxiliary and control circuit spring-loaded terminals arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts • solid 1x (0.5 4 mm²) • solid or stranded 1x (0.5 4 mm²) • finely stranded with core end processing 1x (0.5 2.5 mm²) • finely stranded without core end processing 1x (0.5 2.5 mm²) type of connectable conductor cross-sections • for auxiliary contacts	_ ·	90 mm
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 • finely stranded without core end processing • for auxiliary contacts • for auxiliary contacts		
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 • solid or stranded • finely stranded with core end processing • finely stranded without core end processing • for auxiliary contacts • for auxiliary contacts		Yes
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 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 finely stranded without core end processing finely stranded without core end processing for auxiliary contacts 	•	spring-loaded terminals
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 • finely stranded without core end processing • for auxiliary contacts Top and bottom 1x (0.5 4 mm²) 1x (0.5 4 mm²) 1x (0.5 2.5 mm²) 1x (0.5 2.5 mm²)		
type of connectable conductor cross-sections for main contacts • solid • solid 1x (0.5 4 mm²) • solid or stranded • finely stranded with core end processing • finely stranded without core end processing • finely stranded without core end processing • for auxiliary contacts • for auxiliary contacts	·	
 solid solid or stranded finely stranded with core end processing finely stranded without core end processing finely stranded without core end processing tx (0.5 2.5 mm²) type of connectable conductor cross-sections for auxiliary contacts 	circuit	
 solid or stranded finely stranded with core end processing finely stranded without core end processing finely stranded without core end processing type of connectable conductor cross-sections for auxiliary contacts 	type of connectable conductor cross-sections for main contacts	
 finely stranded with core end processing finely stranded without core end processing type of connectable conductor cross-sections for auxiliary contacts 	• solid	1x (0.5 4 mm²)
 ◆ finely stranded without core end processing type of connectable conductor cross-sections ◆ for auxiliary contacts 	solid or stranded	1x (0,5 4 mm²)
type of connectable conductor cross-sections • for auxiliary contacts	 finely stranded with core end processing 	1x (0.5 2.5 mm²)
for auxiliary contacts	finely stranded without core end processing	1x (0.5 2.5 mm²)
	type of connectable conductor cross-sections	
— solid 2x (0.25 1.5 mm²)	for auxiliary contacts	
	— solid	2x (0.25 1.5 mm²)

General Product Approval		EMC	
Approvals Certificates			
display version for switching status	Slide switch		
Display			
electrostatic discharge according to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge		
field-based interference according to IEC 61000-4-3	10 V/m		
 due to high-frequency radiation according to IEC 61000- 4-6 	10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz		
 due to conductor-conductor surge according to IEC 61000-4-5 	1 kV (line to line) corresponds to degree of severity 3		
 due to conductor-earth surge according to IEC 61000-4-5 	2 kV (line to earth) corresponds to degree of severity 3		
 due to burst according to IEC 61000-4-4 	2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3		
conducted interference			
Electromagnetic compatibility			
type of voltage supply via input/output link master	No		
Communication/ Protocol			
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front		
protection class IP on the front according to IEC 60529	IP20		
Safety related data			
size of the screwdriver tip	Pozidriv PZ 2		
design of screwdriver shaft	Diameter 5 to 6 mm		
 for AWG cables for auxiliary contacts 	1x (24 16), 2x (24 16)		
 finely stranded without core end processing 	2x (0.25 1.5 mm²)		
 finely stranded with core end processing 	2x (0.25 1.5 mm²)		
— solid or stranded	2x (0,25 1,5 mm²)		



Confirmation









For use in hazardous locations

Declaration of Conformity

Test Certificates

Marine / Shipping







Type Test Certificates/Test Report

Special Test Certificate



Marine / Shipping





LR:S







Confirmation

other

Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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)

 $\underline{https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RB3016-1SE0.pdf.$

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3016-1SE0

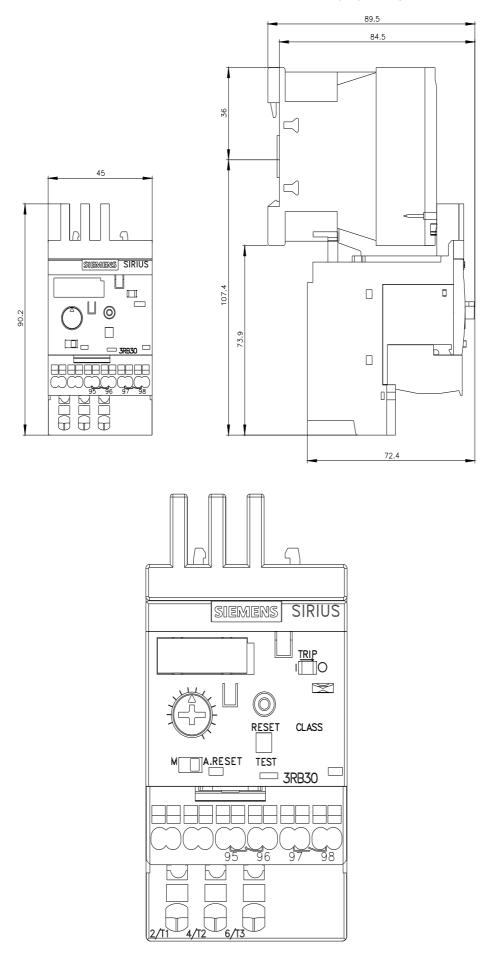
 $Service \& Support \ (Manuals, \ Certificates, \ Characteristics, \ FAQs, ...)$

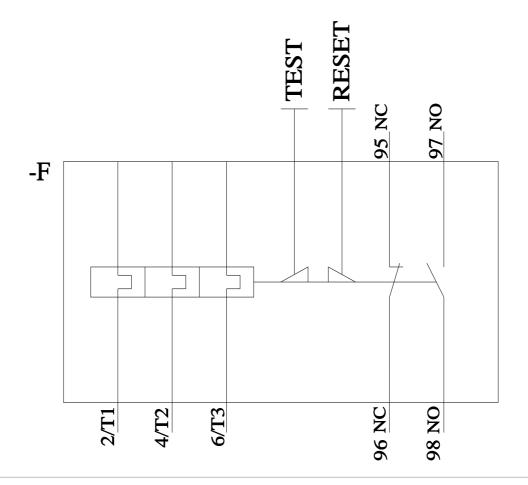
https://support.industry.siemens.com/cs/ww/en/ps/3RB3016-1SE0

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3016-1SE0&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current





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