SIEMENS

Data sheet

3RB3046-1XB0



Overload relay 32...115 A Electronic For motor protection Size S3, Class 10E Contactor mounting Main circuit: Screw Auxiliary circuit: Screw Manual-Automatic-Reset

product brand name SIRUS product designation solid-state overload relay size of overload relay size of overload relay size of overload relay S3 size of overload relay Sa size of		
product type designation 3RB3 Ceneral technical data S3 size of contactor can be combined company-specific power loss [W] for rated value of the current at AC in hot operating state S3 • per pole 1.53 W insulation voltage with degree of pollution 3 at AC rated 1000 V value 8 kV surge voltage resistance rated value 8 kV maximum permissible voltage for safe isolation in networks with grounded star point 300 V • between auxiliary and auxiliary circuit 300 V • between main and auxiliary circuit 300 V • between main and auxiliary circuit 600 V • between ding to EC 60068-2-27 15g /11 ms; Signaling contact 97 / 98 in position "Tripped"; 8g / 11 ms vibration resistance FXII (2) G [Ex a] [Ex d] [Ex px]; Ex II (2) D [Ex t] [Ex p] 2014/34/EU PTB 09 ATEX 3001 certificate of suitability according to EC 81346-2 F Substance Prohibitance (Date) 0301/2017 Anbient conditions	product brand name	SIRIUS
General technical data size of overload relay \$3 size of contactor can be combined company-specific power loss [W] for rated value of the current at AC in hot operating state \$4.6 W • per pole 1.53 W insulation voltage with degree of pollution 3 at AC rated value 8 kV surge voltage resistance rated value maximum permissible voltage for safe isolation in networks with grounded star point 8 kV • between auxiliary and auxiliary circuit 300 V • between main and auxiliary circuit 600 V • between of pole EC 60068-2-27 15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 11 ms vortection according to ATEX directive 2014/34/EU conflicts of suitability according to ATEX directive 2016 C [Ex d] [Ex d] [Ex p] 2014/34/EU 200 m </th <th>product designation</th> <th>solid-state overload relay</th>	product designation	solid-state overload relay
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 4.6 W • per pole 1.53 W insultation voltage with degree of pollution 3 at AC rated value 1000 V surge voltage resistance rated value 8 kV • between auxiliary and auxiliary circuit 300 V • between main and auxiliary circuit 690 V • between according to ATEX directive 10 + 16 K and (2 K pz) = 10 km (2 K pz) = 10 km (2 K pz) • Cut	product type designation	3RB3
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value 8 kV surge voltage resistance rated value 8 kV maximum permissible voltage for safe isolation in 8 kV • between auxiliary and auxiliary circuit 300 V • between main and auxiliary circuit 300 V • between main and auxiliary circuit 600 V • between auxiliary and auxiliary circuit 600 V • between auxiliary and auxiliary circuit 600 V • between auxiliary circuit 600 V <	• per pole	1.53 W
maximum permissible voltage for safe isolation in networks with grounded star point 300 V between auxiliary and auxiliary circuit between main and auxiliary circuit 600 V shock resistance the fact start start between resistance the fact start start the fact start the fact start the fact start start the fact start start the fact start start the fact start the fact s	0 0 1	1 000 V
networks with grounded star point 300 V • between auxiliary and auxiliary circuit 300 V • between main and auxiliary circuit 600 V • between main and auxiliary circuit 600 V shock resistance 8g / 11 ms • according to IEC 60068-2-27 15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 11 ms • according to IEC 60068-2-27 15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 11 ms • according to IEC 60068-2-27 15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 11 ms • according to IEC 60068-2-27 15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 11 ms • according to IEC 60068-2-27 15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 11 ms • according to IEC 60068-2-27 15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 11 ms • according to IEC 60068-2-27 Ex II (2) G [Ex t] [Ex pl] cortificate of suitability according to ATEX directive 2014/3/4/EU Cording to IEC 81346-2 certificate of suitability according to IEC 81346-2 F installation altitude at height above sea level maximum 20 00 m installation alti	surge voltage resistance rated value	8 kV
 between auxiliary and auxiliary circuit between main and auxiliary circuit 600 V between the field auxiliary circuit a coording to IEC 60068-2-27 between the field above sea level maximum a conditions a conditions a condition autitude at height above sea level maximum a condition autitude at height above sea level maximum certificate of suitability according to IEC 81346-2 between auxiliary circuit certificate of autitude at height above sea level maximum a during operation -25 +60 °C during transport -40 +80 °C -40 +80 °		
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• between main and auxiliary circuit 690 V shock resistance 8g / 11 ms • 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 115 A type of protection according to ATEX directive 214/34/EU certificate of suitability according to ATEX directive PTB 09 ATEX 3001 2014/34/EU PTB 09 ATEX 3001 reference code according to IEC 81346-2 F Substance Prohibitance (Date) 03/01/2017 Ambient conditions 2 000 m installation altitude at height above sea level maximum 2 000 m ambient temperature - • during operation -25 +60 °C • during transport -40 +80 °C • during transport -40 +80 °C • during transport -30 °C relative humidity during operation -25 +60 °C mumber of poles for main current circuit 3 adjustable current response value current of the current-dependent overload release 3 operating voltage -1000 V	 between auxiliary and auxiliary circuit 	300 V
shock resistance8g / 11 ms• according to IEC 60068-2-2715g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 11 msvibration resistance1-6 Hz, 15 mm; 6-500 Hz, 20 m/s²; 10 cyclesthermal current115 Atype of protection according to ATEX directiveZu I (2) G [Ex e] [Ex d] [Ex px]; Ex II (2) D [Ex t] [Ex p]certificate of suitability according to ATEX directivePTB 09 ATEX 30012014/34/EUreference code according to IEC 81346-2Fsubstance Prohibitance (Date)03/01/2017Ambient conditions2 000 minstallation altitude at height above sea level maximum2 000 madjurg storage-40 + 80 °C• during storage-40 + 80 °C• during transport-40 + 80 °C• during transport-40 + 80 °C• during transport-25 + 60 °C• target value-25 + 60 °C• target value-25 + 60 °C• target value-25 + 60 °C• target	 between main and auxiliary circuit 	600 V
• according to IEC 60068-2-2715g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 11 msvibration resistance1-6 Hz, 15 mm; 6-500 Hz, 20 m/s²; 10 cyclesthermal current115 Atype of protection according to ATEX directive 2014/34/EUEx 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/EUPTB 09 ATEX 3001certificate of suitability according to IEC 81346-2FSubstance Prohibitance (Date)03/01/2017Ambient conditions2 000 minstallation altitude at height above sea level maximum aduing storage2 000 m• during operation • during transport-25 +60 °C• during transport-40 +80 °C• during operation relative humidity during operation-25 +60 °C• during transport-40 +80 °C• during transport-25 +60 °C• during transpor	 between main and auxiliary circuit 	690 V
vibration resistance1-6 Hz, 15 mm; 6-500 Hz, 20 m/s²; 10 cyclesthermal current115 Atype of protection according to ATEX directiveEx II (2) G [Ex e] [Ex d] [Ex px]; Ex II (2) D [Ex t] [Ex p]2014/34/EUPTB 09 ATEX 3001certificate of suitability according to ATEX directive 2014/34/EUPTB 09 ATEX 3001reference code according to IEC 81346-2FSubstance Prohibitance (Date)03/01/2017Ambient conditions2 000 minstallation altitude at height above sea level maximum a during operation2 000 me during storage • during transport-40 +80 °Ce during transport relative humidity during operation-25 +60 °CMain circuit3 32 115 Anumber of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value1000 V	shock resistance	8g / 11 ms
thermal current115 Atype of protection according to ATEX directive 2014/34/EU115 Acertificate of suitability according to ATEX directive 2014/34/EUEx 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/EUPTB 09 ATEX 3001reference code according to IEC 81346-2FSubstance Prohibitance (Date)03/01/2017Ambient conditions2 000 minstallation altitude at height above sea level maximum a during operation2 000 me during operation • during storage • during transport-25 +60 °C• during transport relative humidity during operation-25 +60 °C• during transport relative humidity during operation-25 +60 °C• during transport relative humidity during operation-25 +60 °C• number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value30 00 V	 according to IEC 60068-2-27 	15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 11 ms
type of protection according to ATEX directive 2014/34/EUEx 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/EUPTB 09 ATEX 3001certificate of suitability according to IEC 81346-2 Substance Prohibitance (Date)FSubstance Prohibitance (Date)03/01/2017Ambient conditions2 000 minstallation altitude at height above sea level maximum ambient temperature2 000 m• during operation • during storage • during transport relative humidity during operation relative humidity during operation relative humidity during operation • 25 +60 °C • C • during transport • 40 +80 °C • 25 +60 °C • 32 +60 °C • 32 +60 °C • 10 95 %Main circuit adjustable current circuit adjustable current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value3 1 000 V	vibration resistance	1-6 Hz, 15 mm; 6-500 Hz, 20 m/s ² ; 10 cycles
2014/34/EU Contraction of the first o	thermal current	115 A
2014/34/EU reference code according to IEC 81346-2 F Substance Prohibitance (Date) 03/01/2017 Ambient conditions 2 000 m installation altitude at height above sea level maximum 2 000 m ambient temperature -25 +60 °C • 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 3 number of poles for main current circuit 3 adjustable current response value current of the current-dependent overload release 32 115 A operating voltage - 1 000 V		Ex II (2) G [Ex e] [Ex d] [Ex px] ; Ex II (2) D [Ex t] [Ex p]
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Ambient conditions installation altitude at height above sea level maximum 2 000 m ambient temperature -25 +60 °C • 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 3 number of poles for main current circuit 3 adjustable current response value current of the current-dependent overload release 32 115 A operating voltage 1 000 V	reference code according to IEC 81346-2	F
installation altitude at height above sea level maximum 2 000 m ambient temperature -25 +60 °C • during operation -25 +60 °C • during storage -40 +80 °C • during transport -40 +80 °C • during transport -25 +60 °C relative humidity during operation -25 +60 °C relative humidity during operation 10 95 % Main circuit 3 number of poles for main current circuit 3 adjustable current response value current of the current-dependent overload release 32 115 A operating voltage 1 000 V	Substance Prohibitance (Date)	03/01/2017
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• during operation-25 +60 °C• during storage-40 +80 °C• during transport-40 +80 °C• during transport-25 +60 °Ctemperature compensation-25 +60 °Crelative humidity during operation10 95 %Main circuit3number of poles for main current circuit3adjustable current response value current of the current-dependent overload release32 115 Aoperating voltage-• rated value1 000 ∨	installation altitude at height above sea level maximum	2 000 m
• during storage -40 +80 °C • during transport -40 +80 °C • during transport -40 +80 °C temperature compensation -25 +60 °C relative humidity during operation 10 95 % Main circuit 3 number of poles for main current circuit 3 adjustable current response value current of the current-dependent overload release 32 115 A operating voltage - • rated value 1 000 V	ambient temperature	
 during transport 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 adjustable current response value current of the current-dependent overload release operating voltage rated value 1000 V 	 during operation 	-25 +60 °C
temperature compensation -25 +60 °C relative humidity during operation 10 95 % Main circuit 3 number of poles for main current circuit 3 adjustable current response value current of the current-dependent overload release 32 115 A operating voltage 1 000 V	 during storage 	-40 +80 °C
relative humidity during operation 10 95 % Main circuit 3 number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage rated value 1000 V 	 during transport 	-40 +80 °C
Main circuit 3 number of poles for main current circuit 3 adjustable current response value current of the current-dependent overload release operating voltage rated value 1 000 V 	temperature compensation	
number of poles for main current circuit 3 adjustable current response value current of the current-dependent overload release 32 115 A operating voltage 1000 V	relative humidity during operation	10 95 %
adjustable current response value current of the current-dependent overload release operating voltage • rated value 1000 V	Main circuit	
current-dependent overload release operating voltage • rated value 1 000 V	number of poles for main current circuit	3
rated value 1 000 V		32 115 A
	operating voltage	
• at AC-3e rated value maximum 1 000 V	 rated value 	1 000 V
	 at AC-3e rated value maximum 	1 000 V

operating frequency rated value	50 60 Hz
operational current rated value	115 A
operational current at AC-3e at 400 V rated value	115 A
 operating power for 3-phase motors at 400 V at 50 Hz 	18.5 55 kW
• for AC motors at 500 V at 50 Hz	22 75 kW
• for AC motors at 690 V at 50 Hz	30 90 kW
Auxiliary circuit	55 55 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 ● at 220 V	0.3 A
	0.11 A
Protective and monitoring functions	01.400.405
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	115 A
at 400 V rated value at 600 V rated value	115 A
contact rating of auxiliary contacts according to UL	B600 / R300
Short-circuit protection	2000 / 1000
design of the fuse link	
for short-circuit protection of the main circuit	
- with type of coordination 1 required	gG: 315 A
— with type of assignment 2 required	gG: 315 A
 for short-circuit protection of the auxiliary switch 	fuse gG: 6 A
required	5
Installation/ mounting/ dimensions	
mounting position	any
fastening method	Contactor mounting
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	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	2x (2.5 16 mm²)
 stranded 	2x 16 mm ²
 solid or stranded 	1x (2,5 70 mm²), 2x (2,5 50 mm²)
 finely stranded with core end processing 	1x (2,5 50 mm²), 2x (2,5 35 mm²)
type of connectable conductor cross-sections	
 for auxiliary contacts 	

 — solid — solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts 	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 2.5 mm ²), 2x (0.5 1.5 mm ²) 2x (20 14)
tightening torque for main contacts with screw-type terminals for auxiliary contacts with screw-type terminals design of screwdriver shaft	4.5 6 N⋅m 0.8 1.2 N⋅m Diameter 5 to 6 mm Pozidriv PZ 2
size of the screwdriver tip design of the thread of the connection screw	POZICITV PZ Z
for main contacts	M6
of the auxiliary and control contacts	M3
Safety related data	WIG
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	
 due to burst according to IEC 61000-4-4 	2 kV (power ports), 1 kV (signal ports) 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 conductor-conductor surge according to IEC 61000-4-5 	1 kV (line to line) corresponds to degree of severity 3
 due to high-frequency radiation according to IEC 61000-4-6 field-based interference according to IEC 61000-4-3 	10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz 10 V/m
electrostatic discharge according to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge
Display	
display version for switching status Certificates/ approvals	Slide switch
General Product Approval	EMC
Confirmation Confirmation	
For use in hazard- ous locations Declaration of Conformity	Test Certificates Marine / Shipping
Ex UK CA CE	Special Test Certific- ate Type Test Certific- ates/Test Report Lloyds Register us
Marine / Shipping	other
PRS RINA DISCUSSION	Confirmation
Further information	

Information on the packaging <u>https://support.industry.siemens.com/cs/ww/en/view/109813875</u> Information- and Downloadcenter (Catalogs, Brochures,...) <u>https://www.siemens.com/ic10</u>

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RB3046-1XB0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3046-1XB0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RB3046-1XB0

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <u>http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3046-1XB0&lang=en</u>

Characteristic: Tripping characteristics, I²t, Let-through current

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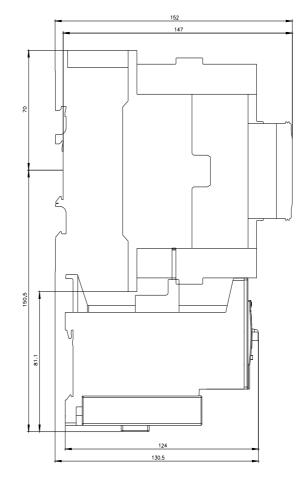
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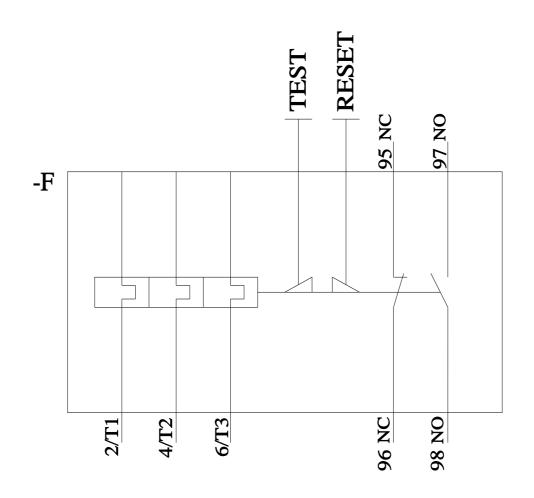
https://support.industry.siemens.com/cs/ww/en/ps/3RB3046-1XB0/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3046-1XB0&objecttype=14&gridview=view1



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