



Overload relay 12.5...50 A Electronic For motor protection Size S3, Class 20E Contactor mounting Main circuit: Screw 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	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	0.9 W
• per pole	0.3 W
insulation voltage with degree of pollution 3 at AC rated value	1 000 V
surge voltage resistance rated value	8 kV
maximum permissible voltage for safe isolation 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	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	50 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)	03/01/2017
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	12.5 ... 50 A
operating voltage	

• 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	50 A
operational current at AC-3e at 400 V rated value	50 A
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 690 V at 50 Hz	7.5 ... 22 kW 11 ... 30 kW 11 ... 45 kW
Auxiliary circuit	
design of the auxiliary switch	integrated
number of NC contacts for auxiliary contacts • note	1 for contactor disconnection
number of NO contacts for auxiliary contacts • note	1 for message "tripped"
number of CO contacts for auxiliary contacts	0
operational current of auxiliary contacts at AC-15 • at 24 V • at 110 V • at 120 V • at 125 V • at 230 V	4 A 4 A 4 A 4 A 3 A
operational current of auxiliary contacts at DC-13 • at 24 V • at 60 V • at 110 V • at 125 V • at 220 V	2 A 0.55 A 0.3 A 0.3 A 0.11 A
Protective and monitoring functions	
trip class	CLASS 20E
design of the overload release	electronic
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value	50 A 50 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 — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required	gG: 200 A gG: 200 A fuse gG: 6 A
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 • for auxiliary and control circuit	screw-type terminals spring-loaded 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 — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts	2x 16 mm ² 1x (2,5 ... 70 mm ²), 2x (2,5 ... 50 mm ²) 1x (2,5 ... 50 mm ²), 2x (2,5 ... 35 mm ²) 1x (10 ... 2/0), 2x (10 ... 1/0)		
type of connectable conductor cross-sections • for auxiliary contacts — solid — solid or stranded — finely stranded with core end processing — finely stranded without core end processing • at AWG cables for auxiliary contacts	2x (0.25 ... 1.5 mm ²) 2x (0,25 ... 1,5 mm ²) 2x (0.25 ... 1.5 mm ²) 2x (0.25 ... 1.5 mm ²) 2x (24 ... 16)		
tightening torque • for main contacts with screw-type terminals	4.5 ... 6 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	M6		
Safety related data			
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 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to high-frequency radiation according to IEC 61000-4-6	2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3 2 kV (line to earth) corresponds to degree of severity 3 1 kV (line to line) corresponds to degree of severity 3 10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz		
field-based interference according to IEC 61000-4-3	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	Slide switch		
Certificates/ approvals			
<table> <tr> <td>General Product Approval</td><td>EMC</td></tr> </table>		General Product Approval	EMC
General Product Approval	EMC		



[Confirmation](#)



For use in hazardous locations	Declaration of Conformity	Test Certificates	Marine / Shipping
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[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping	other
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[Confirmation](#)

Further information

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=3RB3046-2UD0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3046-2UD0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3046-2UD0>

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

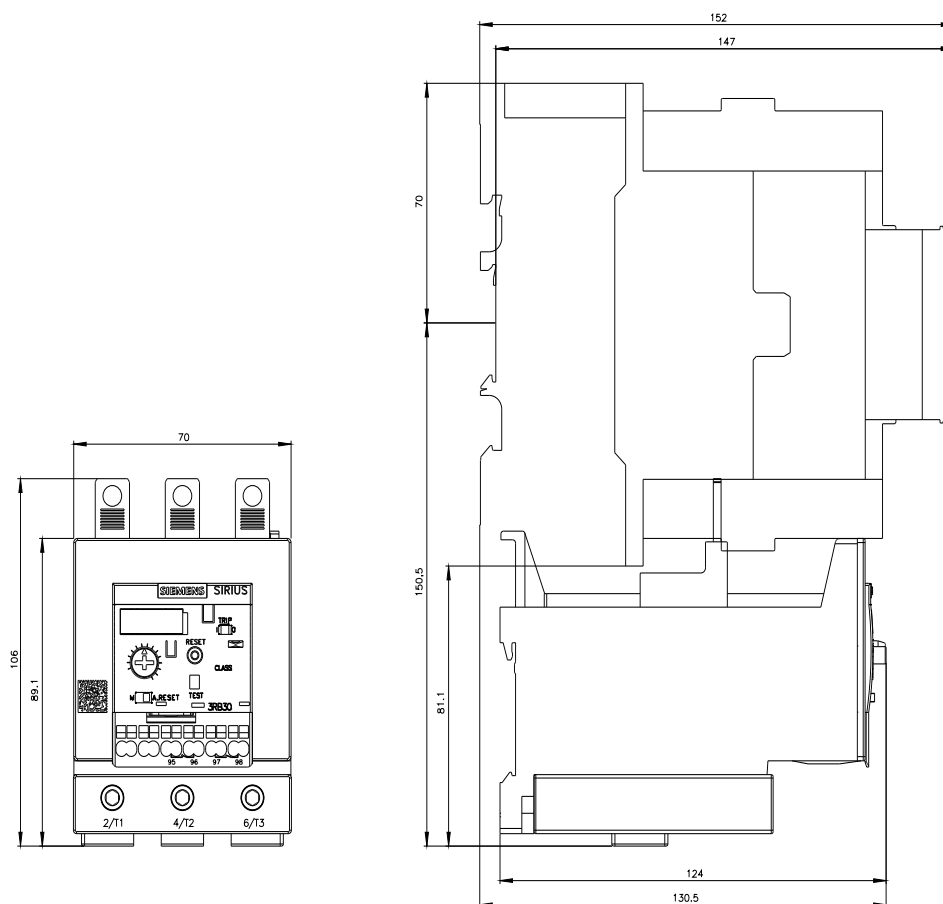
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3046-2UD0&lang=en

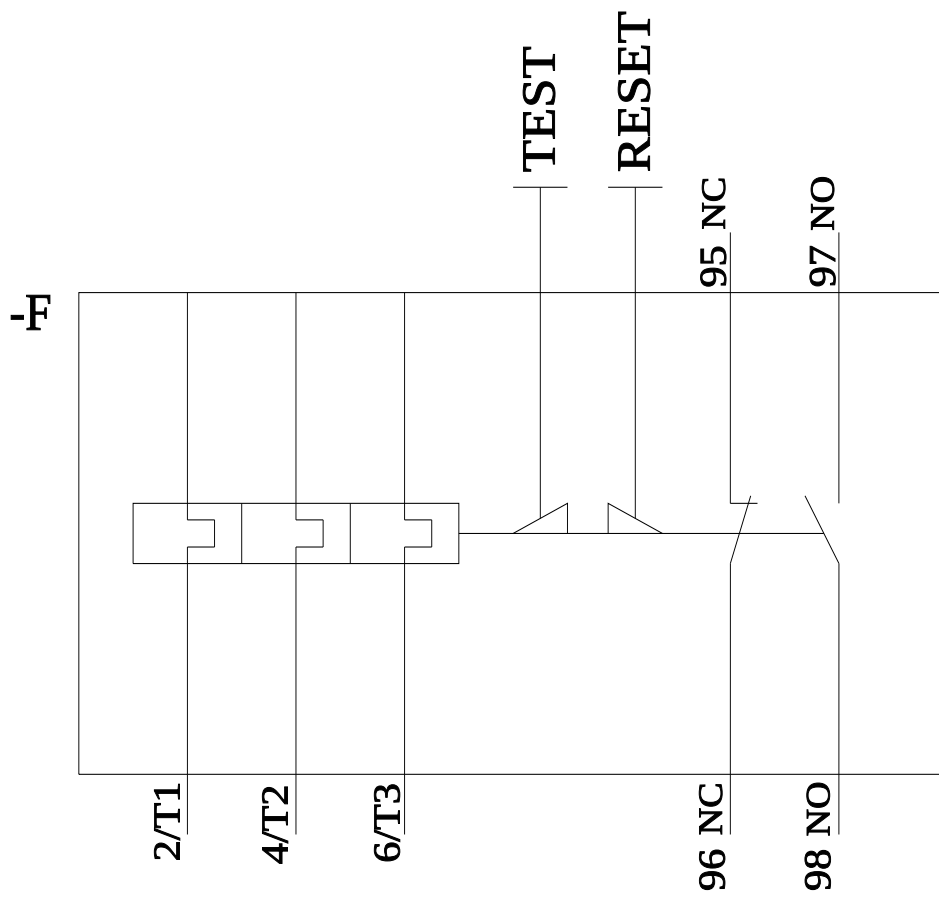
Characteristic: Tripping characteristics, I^2t , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3046-2UD0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3046-2UD0&objecttype=14&gridview=view1>





last modified:

2/9/2022 