

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	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	4.6 W
• at AC in hot operating state per pole	1.53 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
• in networks with grounded star point between auxiliary and auxiliary circuit	300 V
• in networks with grounded star point between main and auxiliary circuit	600 V

<ul style="list-style-type: none"> in networks with grounded star point between main and auxiliary circuit 	690 V
protection class IP	
<ul style="list-style-type: none"> on the front of the terminal 	IP20 IP00
shock resistance	8g / 11 ms
<ul style="list-style-type: none"> acc. 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
recovery time	
<ul style="list-style-type: none"> after overload trip with automatic reset typical after overload trip with remote-reset after overload trip with manual reset 	3 min 0 min 0 min
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 acc. to DIN EN 81346-2	F

Ambient conditions

<ul style="list-style-type: none"> installation altitude at height above sea level maximum 	2 000 m
ambient temperature	
<ul style="list-style-type: none"> during operation during storage during transport 	-25 ... +60 °C -40 ... +80 °C -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 pick-up value current of the current-dependent overload release	32 ... 115 A
operating voltage	
<ul style="list-style-type: none"> rated value at AC-3 rated value maximum 	1 000 V 1 000 V
operating frequency rated value	50 ... 60 Hz
operating current rated value	115 A
operating power	
<ul style="list-style-type: none"> for three-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 	18.5 ... 55 kW 22 ... 75 kW 30 ... 90 kW

Auxiliary circuit

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
operating 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
operating 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 three-phase AC motor	
• at 480 V rated value	115 A
• at 600 V rated value	115 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: 315 A
— with type of assignment 2 required	gG: 315 A
• for short-circuit protection of the auxiliary switch required	fuse gG: 6 A

Installation/ mounting/ dimensions

mounting position	any
mounting type	Contacteur mounting
height	106 mm
width	70 mm
depth	124 mm

Connections/ Terminals

product function <ul style="list-style-type: none"> removable terminal for auxiliary and control circuit 	Yes
type of electrical connection <ul style="list-style-type: none"> for main current circuit for auxiliary and control current circuit 	screw-type terminals screw-type terminals
arrangement of electrical connectors for main current circuit	Top and bottom
type of connectable conductor cross-sections <ul style="list-style-type: none"> for main contacts <ul style="list-style-type: none"> solid stranded single or multi-stranded finely stranded with core end processing at AWG conductors for main contacts type of connectable conductor cross-sections for auxiliary contacts <ul style="list-style-type: none"> solid single or multi-stranded finely stranded with core end processing type of connectable conductor cross-sections at AWG conductors for auxiliary contacts 	2x (2.5 ... 16 mm ²) 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) 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 <ul style="list-style-type: none"> for main contacts with screw-type terminals for auxiliary contacts with screw-type terminals 	4.5 ... 6 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 <ul style="list-style-type: none"> for main contacts of the auxiliary and control contacts 	M6 M3

Communication/ Protocol

type of voltage supply via input/output link master	No
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Electromagnetic compatibility

conducted interference <ul style="list-style-type: none"> due to burst acc. to IEC 61000-4-4 due to conductor-earth surge acc. to IEC 61000-4-5 due to conductor-conductor surge acc. to IEC 61000-4-5 	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
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- due to high-frequency radiation acc. to IEC 61000-4-6

10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz

field-bound parasitic coupling acc. to IEC 61000-4-3

10 V/m

electrostatic discharge acc. to IEC 61000-4-2

6 kV contact discharge / 8 kV air discharge

Display

display version

- for switching status

Slide switch

Certificates/ approvals

General Product Approval

EMC

For use in hazardous locations



Declaration of Conformity

Test Certificates

Marine / Shipping



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping

other



[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=3RB3046-1XB0>

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, ...)

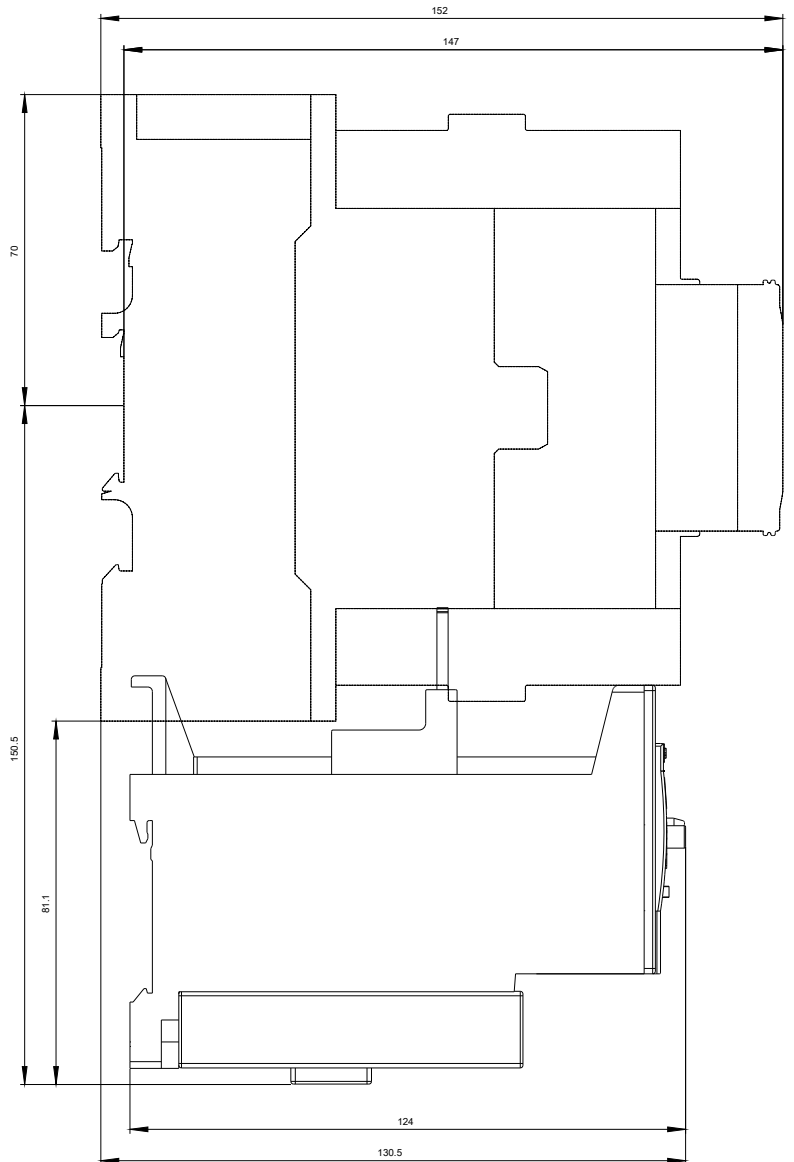
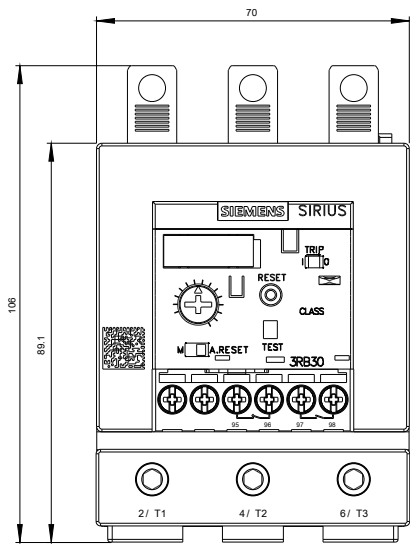
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3046-1XB0&lang=en

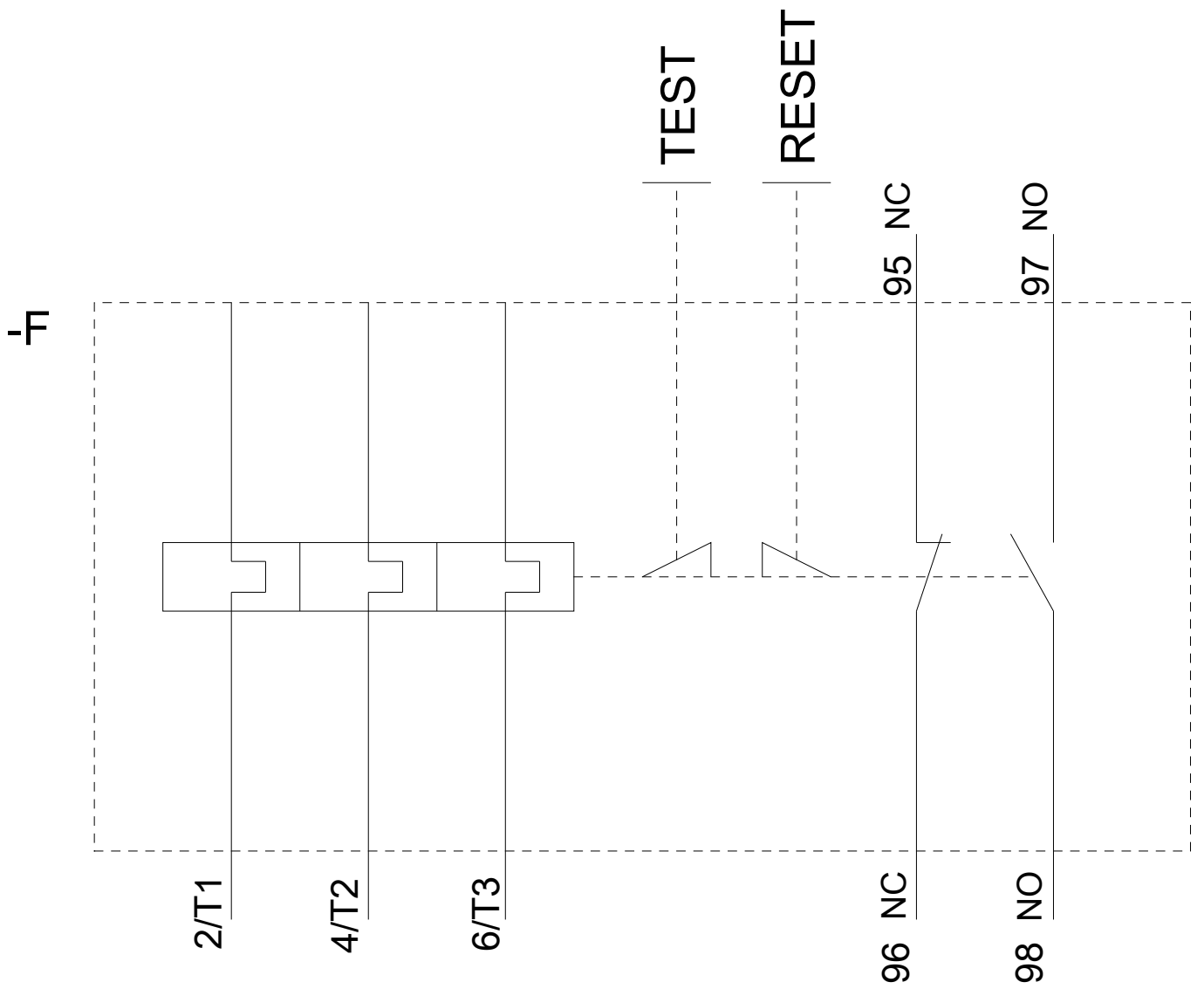
Characteristic: Tripping characteristics, I²t, Let-through current

<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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