



Overload relay 32...115 A Electronic For motor protection Size S3, Class 5E...30E  
 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
<b>General technical data</b>	
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
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 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	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 <sup>2</sup> ; 10 cycles
thermal current	115 A
recovery time after overload trip	
• with automatic reset typical	3 min
• with remote-reset	0 min
• with manual reset	0 min
reference code according to IEC 81346-2	F
Substance Prohibitance (Date)	03/01/2017
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol - 79-94-7 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1
Net Weight	560 g
<b>Ambient conditions</b>	
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 %
<b>Main circuit</b>	
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
• for remote-reset function at DC	24 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
<b>Auxiliary circuit</b>	
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
<b>Protective and monitoring functions</b>	
trip class	CLASS 5E, 10E, 20E and 30E adjustable
design of the overload release	electronic
response value current of the grounding protection minimum	0.75 x IMotor
response time of the grounding protection in settled state	1 000 ms
operating range of the grounding protection relating to current set value	
• minimum	IMotor > lower current setting value
• maximum	IMotor < upper current setting value x 3.5
<b>UL/CSA ratings</b>	
full-load current (FLA) for 3-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
<b>Short-circuit protection</b>	
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 coordination 2 required	gG: 315 A
• for short-circuit protection of the auxiliary switch required	fuse gG: 6 A
<b>Installation/ mounting/ dimensions</b>	
mounting position	any
fastening method	Contactor mounting

height	106 mm
width	70 mm
depth	124 mm
<b>Connections/ Terminals</b>	
product component removable terminal for auxiliary and control circuit	Yes
<b>type of electrical connection</b>	
• for main current circuit	screw-type terminals
• for auxiliary and control circuit	spring-loaded terminals
<b>arrangement of electrical connectors for main current circuit</b>	Top and bottom
type of connectable conductor cross-sections for main contacts	
• solid	2x (2.5 ... 16 mm <sup>2</sup> )
• stranded	2x 16 mm <sup>2</sup>
• solid or stranded	1x (2,5 ... 70 mm <sup>2</sup> ), 2x (2,5 ... 50 mm <sup>2</sup> )
• finely stranded with core end processing	1x (2,5 ... 50 mm <sup>2</sup> ), 2x (2,5 ... 35 mm <sup>2</sup> )
<b>type of connectable conductor cross-sections</b>	
• for auxiliary contacts	
— solid	2x (0.25 ... 1.5 mm <sup>2</sup> )
— solid or stranded	2x (0,25 ... 1,5 mm <sup>2</sup> )
— finely stranded with core end processing	2x (0.25 ... 1.5 mm <sup>2</sup> )
— finely stranded without core end processing	2x (0.25 ... 1.5 mm <sup>2</sup> )
• for AWG cables for auxiliary contacts	2x (24 ... 16)
<b>tightening torque</b>	
• for main contacts with screw-type terminals	4.5 ... 6 N·m
<b>design of screwdriver shaft</b>	Diameter 5 to 6 mm
<b>size of the screwdriver tip</b>	Pozidriv PZ 2
<b>design of the thread of the connection screw</b>	
• for main contacts	M6
<b>Electrical Safety</b>	
<b>protection class IP on the front according to IEC 60529</b>	IP20
<b>touch protection on the front according to IEC 60529</b>	finger-safe, for vertical contact from the front
<b>Communication/ Protocol</b>	
<b>type of voltage supply via input/output link master</b>	No
<b>Electromagnetic compatibility</b>	
<b>conducted interference</b>	
• 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	10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz
<b>field-based interference according to IEC 61000-4-3</b>	10 V/m
<b>electrostatic discharge according to IEC 61000-4-2</b>	6 kV contact discharge / 8 kV air discharge
<b>Display</b>	
display version for switching status	Slide switch
<b>Approvals Certificates</b>	
<b>General Product Approval</b>	EMV



For use in hazardous locations	Test Certificates	Maritime application
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[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS



DNV



LRS

Maritime application	other	Environment

#### Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RB3143-4XD0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3143-4XD0>

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

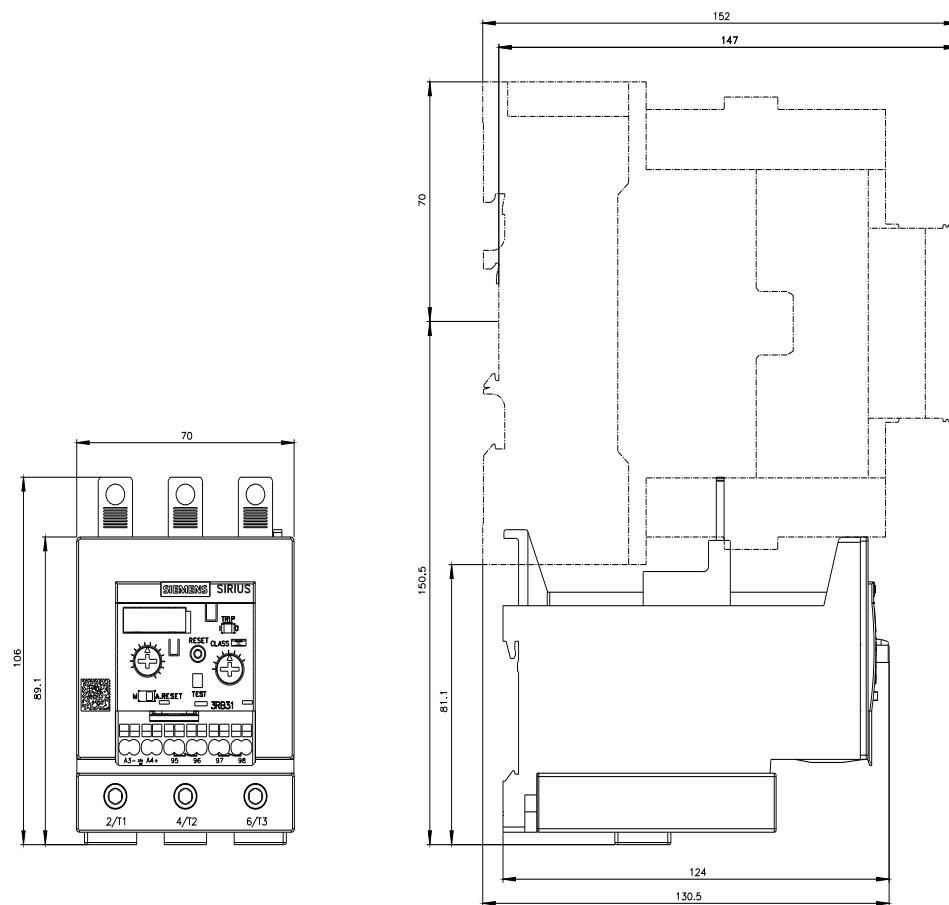
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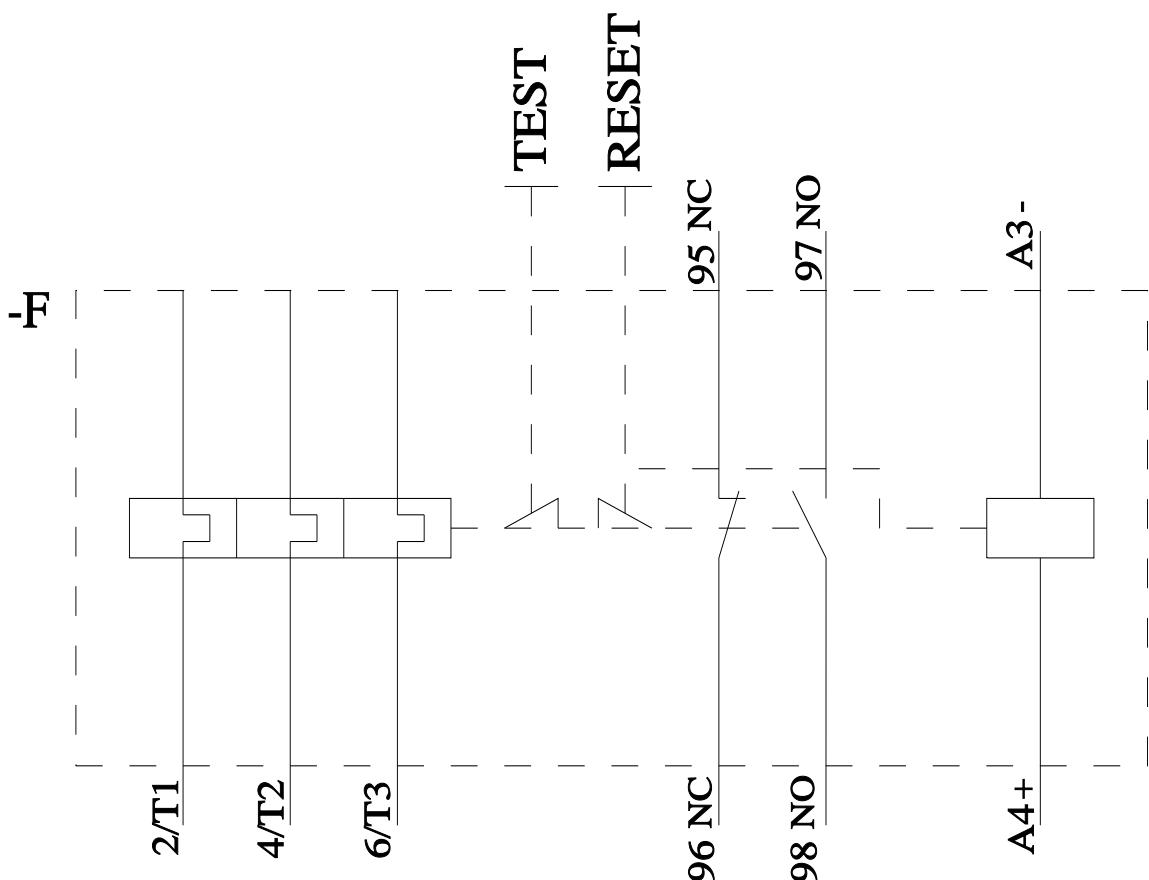
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Characteristic curves

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