



Overload relay 12.5...50 A Electronic For motor protection Size S2, Class 5E...30E
Stand-alone installation Main circuit: Straight-through transformer Auxiliary circuit:
Screw Manual-Automatic-Reset Internal ground fault detection

product brand name	SIRIUS
product designation	solid-state overload relay
product type designation	3RB3
General technical data	
size of overload relay	S2
size of contactor can be combined company-specific	S2
power loss [W] for rated value of the current at AC in hot operating state	0.1 W
• per pole	0.03 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 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	15g / 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
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)	10/15/2014
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	0.294 kg
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 - for remote-reset function at DC - at AC-3e rated value maximum	690 V 24 V 690 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 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 - maximum	IMotor > lower current setting value IMotor < upper current setting value x 3.5
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 coordination 2 required - for short-circuit protection of the auxiliary switch required	gG: 250 A gG: 200 A fuse gG: 6 A
Installation/ mounting/ dimensions	
mounting position	any
fastening method	stand-alone installation

height	81 mm		
width	55 mm		
depth	109 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	straight-through transformers screw-type terminals		
arrangement of electrical connectors for main current circuit	Top and bottom		
type of connectable conductor cross-sections for main contacts solid or stranded	1x (1 ... 50 mm²), 2x (1 ... 35 mm²)		
type of connectable conductor cross-sections - for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing - for AWG cables for auxiliary contacts	1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²) 1x (0,5 ... 4 mm²), 2x (0,5 ... 2,5 mm²) 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²) 1x (20 ... 14), 2x (20 ... 14)		
tightening torque for auxiliary contacts with screw-type terminals	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 of the auxiliary and control contacts	M3		
Electrical Safety			
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		
Approvals Certificates			
Environment	General Product Approval		
Environmental Conformations  CCC  UKCA  EG-Konf.  UL  EAC			
EMV	For use in hazardous locations	Test Certificates	Maritime application
 RCM	 ATEX	Special Test Certificate	Type Test Certificates/Test Report  ABS  DNV
Maritime application		other	



[Confirmation](#)

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=3RB3133-4UW1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB3133-4UW1>

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

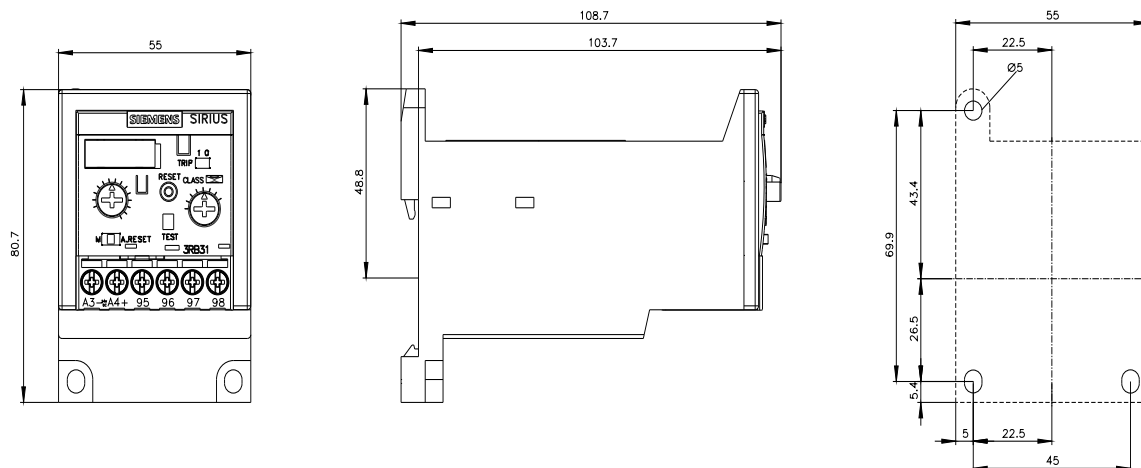
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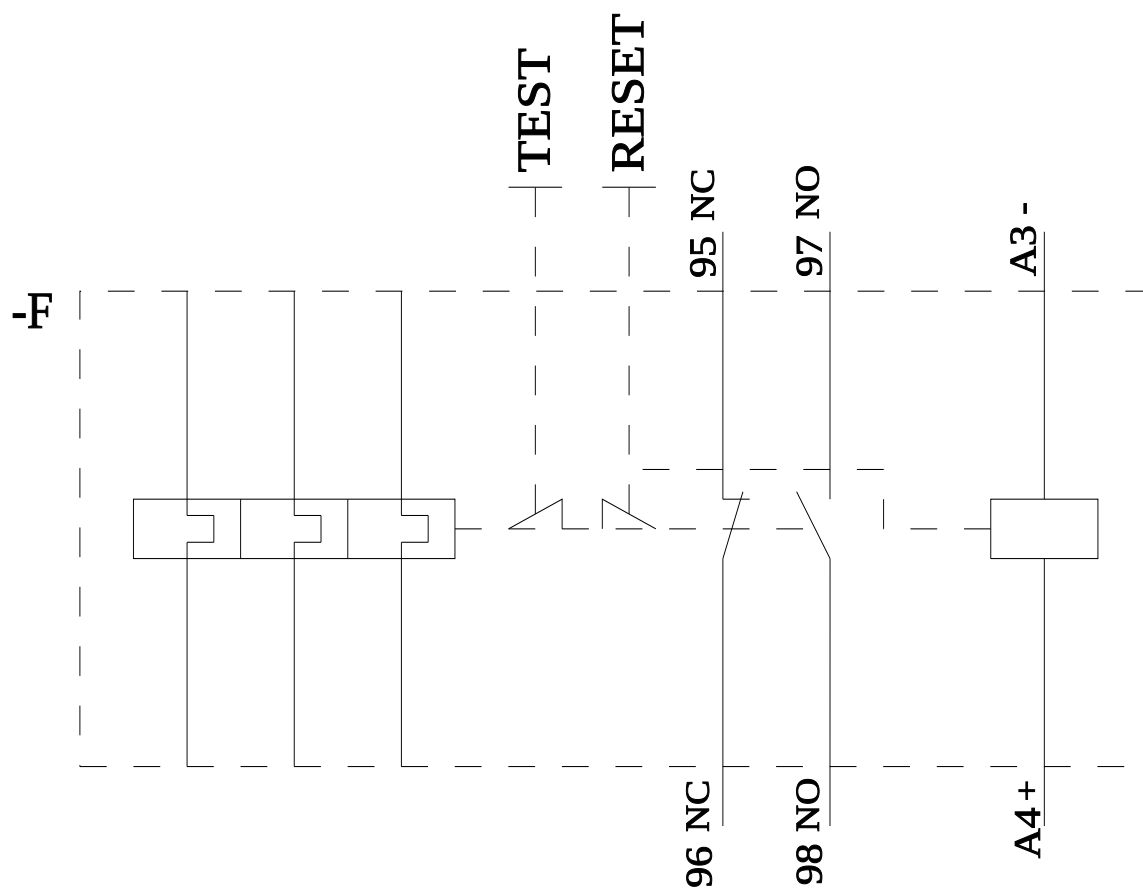
Cax online generator

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Characteristic curves

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