SIEMENS

Data sheet

3RB3133-4WW1



Overload relay 20...80 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	0.2 W
• per pole	0.07 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 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	15g / 11 ms
 according to IEC 60068-2-27 	15g / 11 ms; Signaling contact 97 / 98 in position "Tripped": 8g / 11 ms
thermal current	80 A
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
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	20 80 A
operating voltage	
rated value	690 V
 for remote-reset function at DC 	24 V
• at AC-3e rated value maximum	690 V
operating frequency rated value	50 60 Hz

operational current rated value	80 A
operational current at AC-3e at 400 V rated value	80 A
operating power	
 for 3-phase motors at 400 V at 50 Hz 	11 37 kW
• for AC motors at 500 V at 50 Hz	15 55 kW
 for AC motors at 690 V at 50 Hz 	18.5 75 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
operational current of auxiliary contacts at AC-15	
• at 24 V	4 A
• at 24 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
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	
	IMotor > lower current setting value
• minimum	involor > lower current setting value
• minimum • maximum	IMotor < upper current setting value x 3.5
	-
• maximum	-
maximum UL/CSA ratings	-
maximum UL/CSA ratings full-load current (FLA) for 3-phase AC motor	IMotor < upper current setting value x 3.5
maximum UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value	IMotor < upper current setting value x 3.5
maximum UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value	IMotor < upper current setting value x 3.5 80 A 80 A
maximum UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value contact rating of auxiliary contacts according to UL	IMotor < upper current setting value x 3.5 80 A 80 A
maximum UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value contact rating of auxiliary contacts according to UL Short-circuit protection	IMotor < upper current setting value x 3.5 80 A 80 A
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maximum UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link for short-circuit protection of the main circuit 	IMotor < upper current setting value x 3.5 80 A 80 A B600 / R300
maximum UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link for short-circuit protection of the main circuit 	IMotor < upper current setting value x 3.5 80 A 80 A 8600 / R300 gG: 250 A, RK5: 300 A gG: 250 A
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maximum UL/CSA ratings full-load current (FLA) for 3-phase AC motor e at 480 V rated value e at 600 V rated value contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link e for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 required e for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method	IMotor < upper current setting value x 3.5 80 A 80 A 80 A 8600 / R300 gG: 250 A, RK5: 300 A gG: 250 A fuse gG: 6 A any stand-alone installation
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type of connectable conductor cross-sections	
for auxiliary contacts	
— solid	1x (0.5 4 mm²), 2x (0.5 2.5 mm²)
— solid or stranded	$1x (0.5 \dots 4 \text{ mm}^2), 2x (0.5 \dots 2.5 \text{ mm}^2)$
 — finely stranded with core end processing 	$1x (0.5 2.5 \text{ mm}^2), 2x (0.5 2.5 \text{ mm}^2)$
for AWG cables for auxiliary contacts	1x (20 14), 2x (20 14)
tightening torque	0.0 4.0 N m
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 	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
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
alopialy version for switching status	
Approvals Certificates General Product Approval	
Approvals Certificates	
Approvals Certificates General Product Approval	Confirmation UL
Approvals Certificates General Product Approval General Product Ap- EMV EmV EmV EmV EmV EmV EmV EmV Em	Confirmation UL
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 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

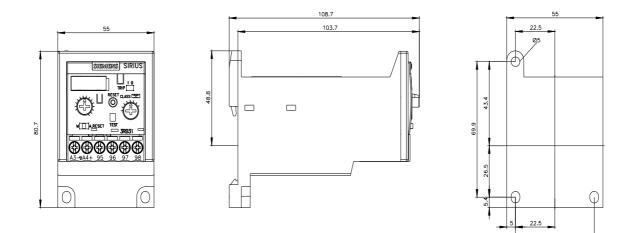
 http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3133-4WW1&lang=en

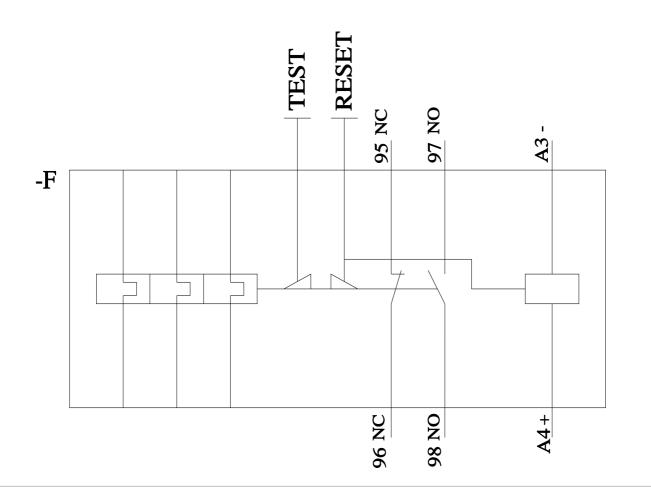
 Characteristic: Tripping characteristics, I²t, Let-through current

 https://support.industry.siemens.com/cs/ww/en/ps/3RB3133-4WW1/char

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

 http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3133-4WW1&objecttype=14&gridview=view1





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