



Overload relay 12.5...50 A Electronic For motor protection Size S2, Class 5E...30E
 Contactor mounting Main circuit: Screw 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	1.8 W
• per pole	0.6 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
thermal current	50 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
Weight	0.225 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	690 V

<ul style="list-style-type: none"> • for remote-reset function at DC • at AC-3e rated value maximum 	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 <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • note 	1 for contactor disconnection
number of NO contacts for auxiliary contacts <ul style="list-style-type: none"> • note 	1 for message "tripped"
number of CO contacts for auxiliary contacts	0
operational current of auxiliary contacts at AC-15 <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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 I _{Motor}
response time of the grounding protection in settled state	1 000 ms
operating range of the grounding protection relating to current set value <ul style="list-style-type: none"> • minimum • maximum 	I _{Motor} > lower current setting value I _{Motor} < upper current setting value x 3.5
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • for short-circuit protection of the main circuit <ul style="list-style-type: none"> — with type of coordination 1 required — with type of assignment 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	Contactor mounting
height	99 mm
width	55 mm
depth	104 mm
Connections/ Terminals	
product component 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 circuit 	screw-type terminals screw-type terminals
arrangement of electrical connectors for main current	Top and bottom

circuit	
type of connectable conductor cross-sections for main contacts	
<ul style="list-style-type: none"> • solid • stranded • solid or stranded • finely stranded with core end processing 	1x (1 ... 50 mm ²), 2x (1 ... 35 mm ²) 2x (10 ... 35 mm ²), 1x 50 mm ² 1x (1 ... 50 mm ²), 2x (1 ... 35 mm ²) 1x (1 ... 35 mm ²), 2x (1 ... 25 mm ²)
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — solid — solid or stranded — finely stranded with core end processing • for AWG cables for auxiliary contacts 	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) 1x (20 ... 14), 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 	3 ... 4.5 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
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	
<ul style="list-style-type: none"> • 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	
General Product Approval	



[Confirmation](#)



EMV	For use in hazardous locations	Test Certificates	Marine / Shipping
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping	other	Environment
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[Confirmation](#)

[Environmental Confirmations](#)

Further information

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

<https://www.siemens.com/ic10>

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RB3133-4UB0>

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB3133-4UB0>

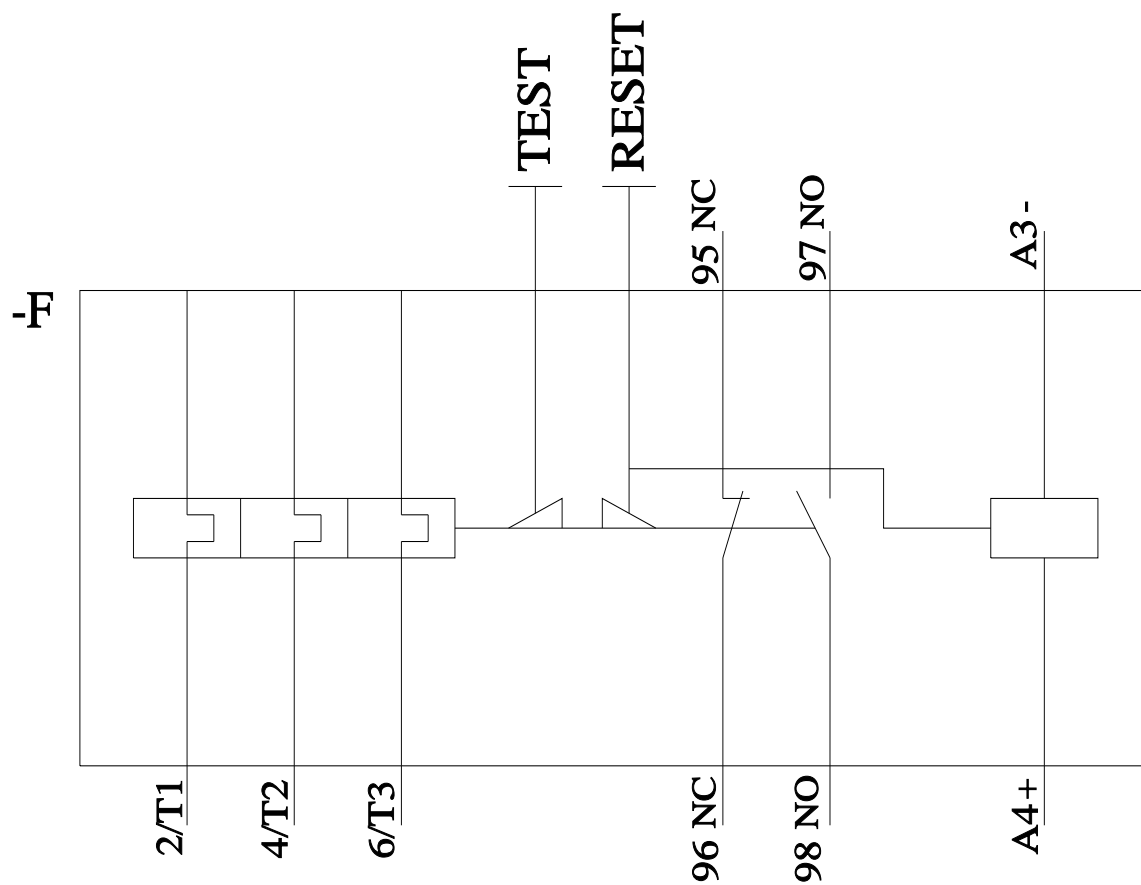
<https://support.industry.siemens.com/cs/ww/en/ps/3RB3133-4UB0>

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB3133-4UB0&lang=en

Characteristic: Tripping characteristics, I_t, Let-through current
<https://support.industry.siemens.com/cs/ww/en/ps/3RB3133-4UB0/char>

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB3133-4UB0&objecttype=14&gridview=view1>





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