SIEMENS

Data sheet 3RB3133-4UB0

OVERLOAD RELAY 12.5...50 A FOR MOTOR PROTECTION SIZE S2, CLASS 5E...30E FOR MOUNTING ONTO CONTACTORS MAIN CIRCUIT: SCREW TERMINAL AUX. CIRCUIT: SCREW TERMINAL MANUAL-AUTOMATIC-RESET INT. GROUND FAULT DETECTION

product brand name	SIRIUS
Product designation	solid-state overload relay

General technical data:	
Size of overload relay	S2
Size of contactor can be combined company-specific	S2
Power loss [W] total typical	1.8 W
Insulation voltage with degree of pollution 3 rated value	690 V
Surge voltage resistance rated value	6 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
• in networks with grounded star point between main and auxiliary circuit	690 V

Protection class IP	
• on the front	IP20
• of the terminal	IP00
Shock resistance	
• acc. to IEC 60068-2-27	15g / 11 ms
Vibration resistance	1-6 Hz, 15 mm; 6-500 Hz, 20 m/s²; 10 cycles
Thermal current	50 A
Recovery time	
• after overload trip with automatic reset typical	3 min
• after overload trip with remote-reset	0 min
• after overload trip with manual reset	0 min
Type of protection	II (2) G [Ex e] [Ex d] [Ex px] II (2) D [Ex t] [Ex p]
Certificate of suitability relating to ATEX	PTB 09 ATEX 3001
Protection against electrical shock	finger-safe when touched vertically from front acc. to IEC 60529
Equipment marking acc. to DIN EN 81346-2	F

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	60 ... -25 °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	12.5 ... 50 A
Operating voltage	
• rated value	690 V
• for remote-reset function at DC	24 V
• at AC-3 rated value maximum	690 V
Operating frequency rated value	50 ... 60 Hz
Operating current rated value	50 A

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 5E, 10E, 20E and 30E adjustable
Design of the overload release	electronic
Response time of the ground fault protection in settled state	1 000 ms
Operating range of the ground fault protection relating to current setting value	
• minimum	IMotor > lower current setting value
• maximum	IMotor < upper current setting value x 3.5

UL/CSA ratings:

Full-load current (FLA) for three-phase AC motor	
• at 480 V rated value	50 A
• at 600 V rated value	50 A
Contact rating of auxiliary contacts according to UL	B300 / R300

Short-circuit protection

Design of the fuse link	
• for short-circuit protection of the main circuit	
— with type of coordination 1 required	gG: 250 A
— with type of assignment 2 required	gG: 200 A
• for short-circuit protection of the auxiliary switch required	fuse gG: 6 A

Installation/ mounting/ dimensions:

Mounting position	any
Mounting type	direct mounting
Height	99 mm
Width	55 mm
Depth	104 mm

Required spacing	
• with side-by-side mounting	
— forwards	0 m
— Backwards	0 m
— upwards	0 m
— downwards	10 mm
— at the side	0 m
• for grounded parts	
— forwards	10 mm
— Backwards	0 m
— upwards	10 mm
— at the side	10 mm
— downwards	10 mm
• for live parts	
— forwards	10 mm
— Backwards	0 m
— upwards	10 mm
— downwards	10 mm
— at the side	10 mm

Connections/ Terminals:

Product function	
• removable terminal for auxiliary and control circuit	Yes
Type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control current circuit	screw-type terminals
Arrangement of electrical connectors for main current circuit	Top and bottom
Type of connectable conductor cross-sections	
• for main contacts	
— single or multi-stranded	1x (1 ... 50 mm²), 2x (1 ... 35 mm²)
— finely stranded with core end processing	1x (1 ... 35 mm²), 2x (1 ... 25 mm²)
• at AWG conductors for main contacts	2x (18 ... 2), 1x (18 ... 1)
Type of connectable conductor cross-sections	
• for auxiliary contacts	
— single or multi-stranded	1x (0,5 ... 4 mm²), 2x (0,5 ... 2,5 mm²)
— finely stranded with core end processing	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)
• at AWG conductors for auxiliary contacts	1x (20 ... 14), 2x (20 ... 14)
Tightening torque	
• for main contacts with screw-type terminals	3 ... 4.5 N·m
• for auxiliary contacts with screw-type terminals	0.8 ... 1.2 N·m

Design of screwdriver shaft	Diameter 5 to 6 mm
Design of the thread of the connection screw	
• for main contacts	M6
• of the auxiliary and control contacts	M3

Communication/ Protocol:

Type of voltage supply via input/output link master	No

Electromagnetic compatibility:

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	For use in hazardous locations	Declaration of Conformity	Test Certificates
CCC, CSA, EAC, ATEX, EG-Konf.	ATEX	EG-Konf.	Typprüfbescheinigung/Werkszeugnis

other

Umweltbestätigung Bestätigungen

Further information

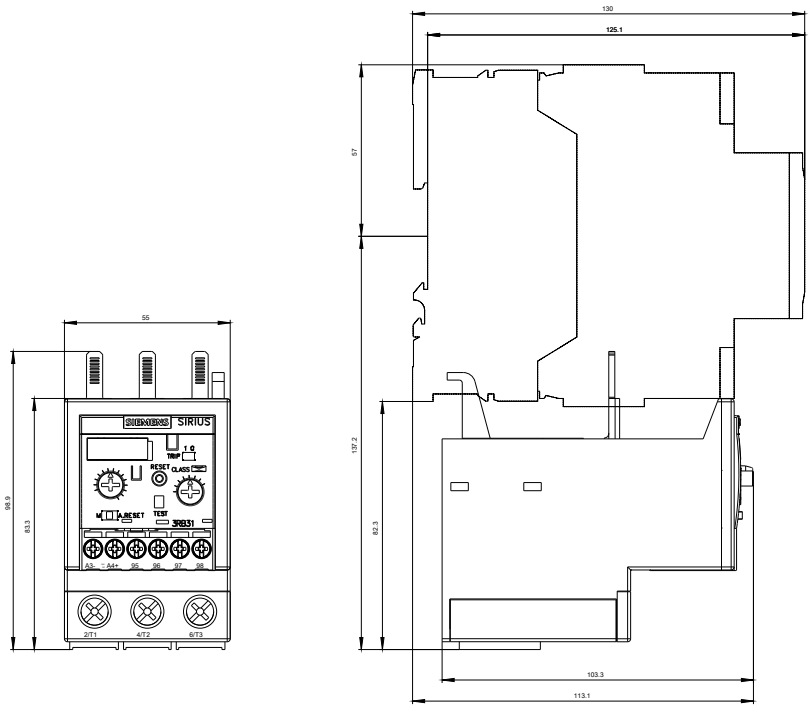
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

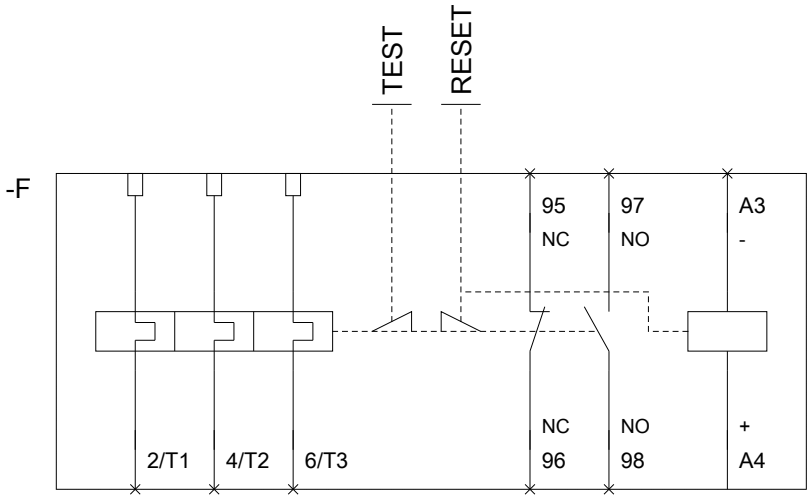
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RB31334UB0

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB31334UB0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RB31334UB0

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB31334UB0&lang=en





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