



OVERLOAD RELAY 12.5...50 A FOR MOTOR PROTECTION SIZE S2, CLASS 5E...30E STAND-ALONE INSTALLATION MAIN CIRCUIT: STR.-THR. TRANSF. AUX. CIRCUIT: SCREW TERMINAL MANUAL-AUTOMATIC-RESET INT. GROUND FAULT DETECTION

Figure similar

product brand name		SIRIUS
Product designation		solid-state overload relay

General technical data:

Active power loss total typical	W	0.1
Insulation voltage	V	690
• with degree of pollution 3 Rated value		
Shock resistance		15g / 11 ms
• acc. to IEC 60068-2-27		
Vibration resistance		1-6 Hz, 15 mm; 6-500 Hz, 20 m/s ² ; 10 cycles
Surge voltage resistance Rated value	kV	6
Temperature compensation	°C	60 ... -25
Recovery time		
• after overload trip with automatic reset typical	min	3
• after overload trip with remote-reset	min	0
• after overload trip with manual reset	min	0
Size of contactor can be combined company-specific		S2
Type of assignment		2
Protection class IP		IP20
• on the front		IP20
• of the terminal		IP20
Type of protection		II (2) G [Ex e] [Ex d] [Ex px] II (2) D [Ex t] [Ex p]
Equipment marking		F
• acc. to DIN EN 81346-2		

Main circuit:

Number of poles for main current circuit		3
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Adjustable response value current of the current-dependent overload release	A	12.5 ... 50
Operating voltage		
• Rated value	V	690
• for remote-reset function for DC	V	24
• at AC-3 Rated value maximum	V	690
Operating frequency Rated value	Hz	50 ... 60
Operating current		
• at AC-3		
— at 400 V Rated value	A	50

Auxiliary circuit:

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
Design of the auxiliary switch		integrated
Operating current of the auxiliary contacts at AC-15		
• at 24 V	A	4
• at 110 V	A	4
• at 120 V	A	4
• at 125 V	A	4
• at 230 V	A	3
Operating current of the auxiliary contacts at DC-13		
• at 24 V	A	2
• at 60 V	A	0.55
• at 110 V	A	0.3
• at 125 V	A	0.3
• at 220 V	A	0.11

Protective and monitoring functions:

Trip class		CLASS 5E, 10E, 20E and 30E adjustable
Design of the overload circuit breaker		electronic
Response value current of the ground fault protection minimum		0.75 x IMotor
Response time of the ground fault protection in settled state	ms	1 000
Operating range of the ground fault protection relating to current setting value		
• minimum		IMotor > lower current setting value

- maximum

$I_{\text{Motor}} < \text{upper current setting value} \times 3.5$

UL/CSA ratings:

Full-load current (FLA) for three-phase AC motor		
<ul style="list-style-type: none"> • at 480 V Rated value 	A	50
<ul style="list-style-type: none"> • at 600 V Rated value 	A	50
Contact rating of the auxiliary contacts acc. to UL		B300 / R300

Short-circuit:

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"> — required • for short-circuit protection of the auxiliary switch required 		Fuse gG: 200 A fuse gG: 6 A

Installation/ mounting/ dimensions:

mounting position		any
Mounting type		stand-alone installation
Height	mm	81
Width	mm	55
Depth	mm	109
Required spacing		
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side 	mm	0 0 0 10 0 10 0 10 10 10 10 0 10 10 10

Connections/ Terminals:

Type of electrical connection		
<ul style="list-style-type: none"> • for main current circuit 		straight-through transformers

<ul style="list-style-type: none"> • for auxiliary and control current circuit 		screw-type terminals
Arrangement of electrical connectors for main current circuit		Top and bottom
Product function		Yes
<ul style="list-style-type: none"> • removable terminal for auxiliary and control circuit 		
Type of connectable conductor cross-section		
<ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — single or multi-stranded — finely stranded with core end processing • for AWG conductors for auxiliary contacts 		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)
Design of screwdriver shaft		Diameter 5 to 6 mm
Design of the thread of the connection screw		M3
<ul style="list-style-type: none"> • of the auxiliary and control contacts 		

Safety related data:

Proportion of dangerous failures		
<ul style="list-style-type: none"> • with low demand rate acc. to SN 31920 	%	35
Protection against electrical shock		finger-safe when touched vertically from front acc. to IEC 60529

Mechanical data:

Size of overload relay		S2
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Communication/ Protocol:

Protocol is supported		
<ul style="list-style-type: none"> • IO-Link protocol 		No
Type of voltage supply via input/output link master		No

Ambient conditions:

Installation altitude at height above sea level maximum	m	2 000
Ambient temperature		
<ul style="list-style-type: none"> • during operation 	°C	-25 ... +60
<ul style="list-style-type: none"> • during storage 	°C	-40 ... +80
<ul style="list-style-type: none"> • during transport 	°C	-40 ... +80
Relative humidity during operation	%	0 ... 95

Electromagnetic compatibility:




EMC emitted interference		
<ul style="list-style-type: none"> • acc. to IEC 60947-1 		CISPR 11, environment B (residential area)
EMI immunity acc. to IEC 60947-1		corresponds to degree of severity 3
Conducted interference due to burst acc. to IEC 61000-4-4		2 kV (power ports), 1 kV (signal ports)
Conducted interference due to conductor-earth surge acc. to IEC 61000-4-5		2 kV (line to ground)

Conducted interference due to conductor-conductor surge acc. to IEC 61000-4-5		1 kV (line to line)
Conducted interference due to high-frequency radiation acc. to IEC 61000-4-6		10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz
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 <ul style="list-style-type: none"> • for switching status 	Slide switch
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Certificates/ approvals:

General Product Approval	For use in hazardous locations	Test Certificates	other		
			Type Test Certificates/Test Report	Confirmation	Environmental Confirmations

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<http://www.siemens.com/industrymall>

Cax online generator

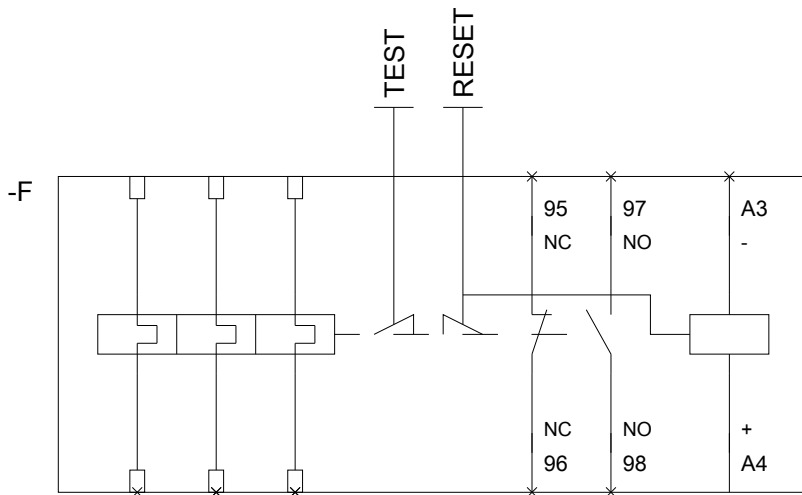
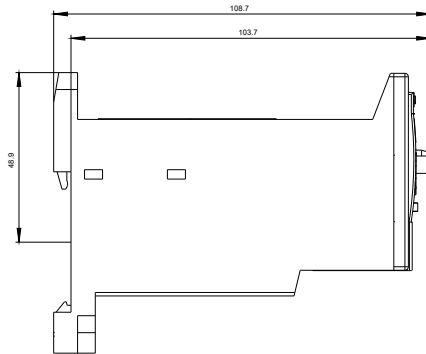
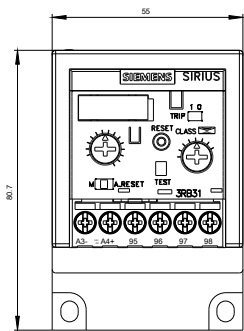
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB31334UW1>

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

<http://support.automation.siemens.com/WW/view/en/3RB31334UW1/all>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB31334UW1&lang=en



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