



OVERLOAD RELAY 20...80 A FOR MOTOR PROTECTION
 SIZE S2,
 CLASS 5E...30E FOR MOUNTING ONTO CONTACTORS
 MAIN CIRCUIT: SCREW TERMINAL AUX. CIRCUIT:
 SPRING-TYPE TERM. MANUAL-AUTOMATIC-RESET INT.
 GROUND FAULT DETECTION

General technical data:

product brand name		SIRIUS
Product designation		solid-state overload relay
Size of overload relay		S2
Number of poles / for main current circuit		3
Product function / removable terminal for auxiliary and control circuit		Yes
Product function		
• overload protection		Yes
• Phase failure detection		Yes
• Ground fault detection		Yes
Product component		
• Auxiliary switch		Yes
• Trip indicator		Yes
Insulation voltage / with degree of pollution 3 / Rated value	V	690
Surge voltage resistance / Rated value	kV	6
Protection class IP		
• of the terminal		IP00
• on the front		IP20
Installation altitude / at height above sea level / maximum	m	2,000

Vibration resistance		1-6 Hz, 15 mm; 6-500 Hz, 20 m/s ² ; 10 cycles
Ambient temperature		
• during transport	°C	-40 ... +80
• during storage	°C	-40 ... +80
• during operation	°C	-25 ... +60
Relative humidity		
• during operation	%	0 ... 95
EMI immunity / acc. to IEC 60947-1		corresponds to degree of severity 3
EMC emitted interference / acc. to IEC 60947-1		CISPR 11, environment B (residential area)
Electrostatic discharge / acc. to IEC 61000-4-2		6 kV contact discharge / 8 kV air discharge
Field-bound parasitic coupling / acc. to IEC 61000-4-3		10 V/m
Conducted interference BURST / acc. to IEC 61000-4-4		2 kV (power ports), 1 kV (signal ports)
Conducted interference conductor-earth SURGE		2 kV (line to ground)
Conducted interference conductor-conductor SURGE		1 kV (line to line)
Conducted interference as 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
Type of protection		II (2) G [Ex e] [Ex d] [Ex px] II (2) D [Ex t] [Ex p]
Active power loss / total / typical	W	4.6
Size of contactor / can be combined / company-specific		S2

Main circuit:		
Operating voltage / Rated value	V	690
Type of voltage / for main current circuit		AC
Operating current		
• at AC-3 / at 400 V / Rated value	A	80
• 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
• 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
Type of assignment		2

Control circuit/ Control:

Type of voltage supply / via input/output link master		No
Type of voltage / for auxiliary and control current circuit		AC/DC
Auxiliary circuit:		
Design of the auxiliary switch		integrated
Number of NC contacts / for auxiliary contacts		1
Number of NO contacts / for auxiliary contacts		1
Number of CO contacts / for auxiliary contacts		0
Design of the fuse link / for short-circuit protection of the auxiliary switch / required		fuse gG: 6 A
Protective and monitoring functions:		
Design of the overload circuit breaker		electronic
Trip class		CLASS 5E, 10E, 20E and 30E adjustable
Adjustable response value current		
• of the current-dependent overload release	A	20 ... 80
Safety related data:		
Proportion of dangerous failures		
• with low demand rate / acc. to SN 31920	%	35
Installation/ mounting/ dimensions:		
Mounting type		direct mounting
mounting position		any
Depth	mm	104
Height	mm	99
Width	mm	55
Arrangement of electrical connectors / for main current circuit		Top and bottom
Connections/ terminals:		
Design of the electrical connection		
• for main current circuit		screw-type terminals
• for auxiliary and control current circuit		spring-loaded terminals
Type of connectable conductor cross-section		
• 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)
• for AWG conductors / for main contacts		2x (18 ... 2), 1x (18 ... 1)
• for auxiliary contacts		
• single or multi-stranded		1x (0,25 ... 1,5 mm²), 2x (0,25 ... 1,5 mm²)
• finely stranded		

<ul style="list-style-type: none"> • without core end processing 		1x (0.25 ... 1.5 mm ²), 2x (0.25 ... 1.5 mm ²)
<ul style="list-style-type: none"> • with core end processing 		1x (0.25 ... 1.5 mm ²), 2x (0.25 ... 1.5 mm ²)
<ul style="list-style-type: none"> • for AWG conductors / for auxiliary contacts 		1x (24 ... 16), 2x (24 ... 16)
Full-load current (FLA) / for three-phase AC motor		
<ul style="list-style-type: none"> • at 480 V / Rated value 	A	80
<ul style="list-style-type: none"> • at 600 V / Rated value 	A	80

UL/CSA ratings:

Contact rating / of the auxiliary contacts / acc. to UL

B300 / R300

Certificates/ approvals:

General Product Approval



Test Certificates

[Type Test](#)
[Certificates/Test](#)
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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

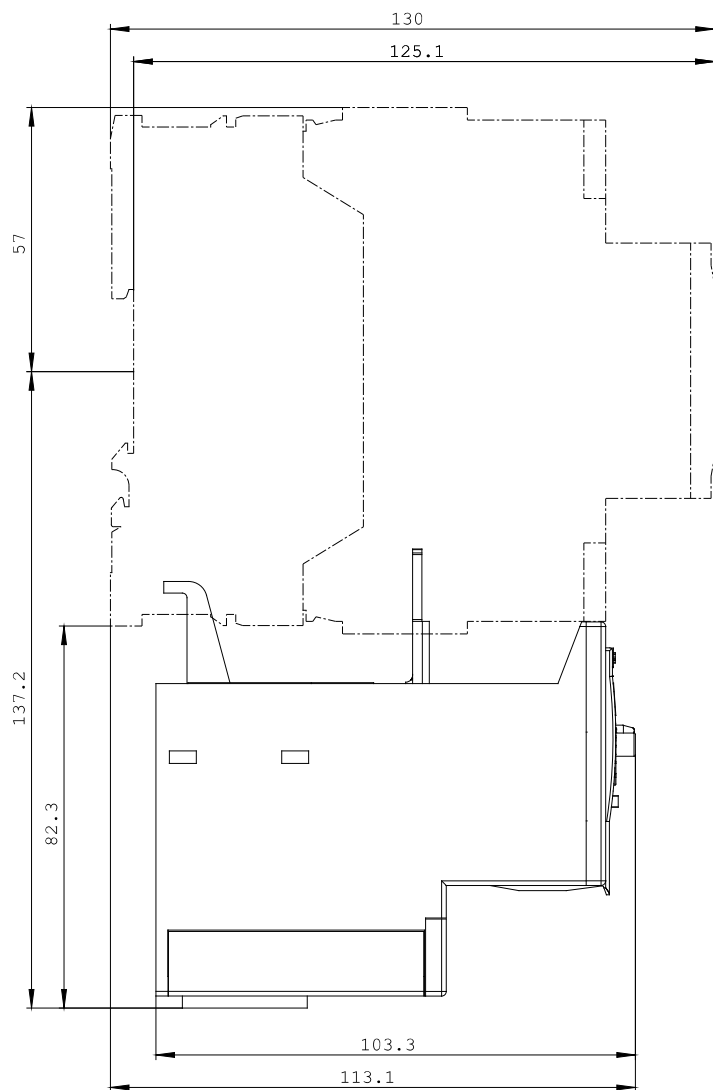
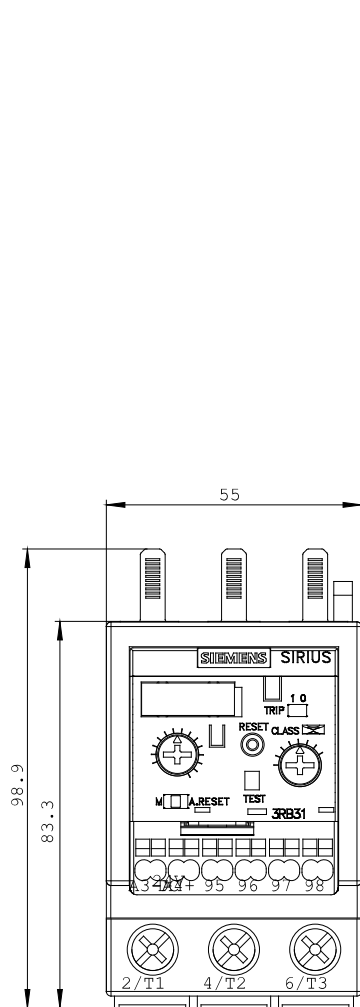
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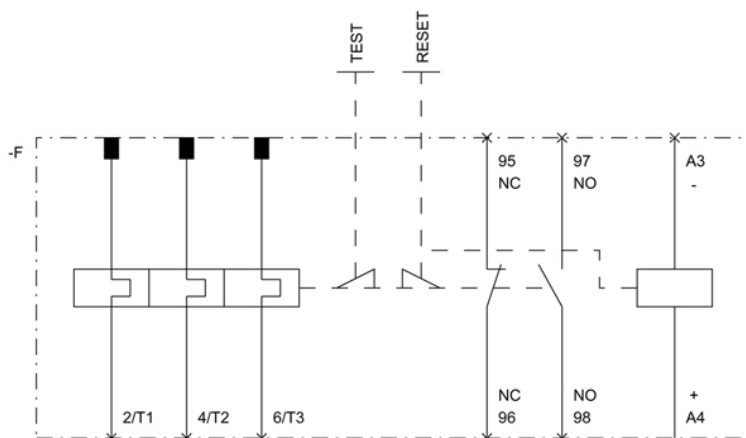
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RB3133-4WD0/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RB3133-4WD0





last change:

Dec 3, 2014