



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

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		IP20
• on the front		IP20
Installation altitude / at height above sea level / maximum	m	2,000

<b>Vibration resistance</b>		1-6 Hz, 15 mm; 6-500 Hz, 20 m/s <sup>2</sup> ; 10 cycles
<b>Ambient temperature</b>		
• during transport	°C	-40 ... +80
• during storage	°C	-40 ... +80
• during operation	°C	-25 ... +60
<b>Relative humidity</b>		
• during operation	%	0 ... 95
<b>EMI immunity / acc. to IEC 60947-1</b>		corresponds to degree of severity 3
<b>EMC emitted interference / acc. to IEC 60947-1</b>		CISPR 11, environment B (residential area)
<b>Electrostatic discharge / acc. to IEC 61000-4-2</b>		6 kV contact discharge / 8 kV air discharge
<b>Field-bound parasitic coupling / acc. to IEC 61000-4-3</b>		10 V/m
<b>Conducted interference BURST / acc. to IEC 61000-4-4</b>		2 kV (power ports), 1 kV (signal ports)
<b>Conducted interference conductor-earth SURGE</b>		2 kV (line to ground)
<b>Conducted interference conductor-conductor SURGE</b>		1 kV (line to line)
<b>Conducted interference as high-frequency radiation / acc. to IEC 61000-4-6</b>		10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz
<b>Type of protection</b>		II (2) G [Ex e] [Ex d] [Ex px] II (2) D [Ex t] [Ex p]
<b>Active power loss / total / typical</b>	W	0.1
<b>Size of contactor / can be combined / company-specific</b>		S2

<b>Main circuit:</b>		
<b>Operating voltage / Rated value</b>	V	690
<b>Type of voltage / for main current circuit</b>		AC
<b>Operating current</b>		
• at AC-3 / at 400 V / Rated value	A	50
• 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
<b>Type of assignment</b>		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
<b>Auxiliary circuit:</b>		
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
<b>Protective and monitoring functions:</b>		
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	12.5 ... 50
<b>Safety related data:</b>		
Proportion of dangerous failures		
• with low demand rate / acc. to SN 31920	%	35
<b>Installation/ mounting/ dimensions:</b>		
Mounting type		stand-alone installation
mounting position		any
Depth	mm	109
Height	mm	81
Width	mm	55
Arrangement of electrical connectors / for main current circuit		Top and bottom
<b>Connections/ terminals:</b>		
Design of the electrical connection		
• for main current circuit		straight-through transformers
• for auxiliary and control current circuit		screw-type terminals
Type of connectable conductor cross-section		
• for auxiliary contacts		
• single or multi-stranded		1x (0,5 ... 4 mm <sup>2</sup> ), 2x (0,5 ... 2,5 mm <sup>2</sup> )
• finely stranded		
• with core end processing		1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
• for AWG conductors / for auxiliary contacts		1x (20 ... 14), 2x (20 ... 14)
Full-load current (FLA) / for three-phase AC motor		
• at 480 V / Rated value	A	50
• at 600 V / Rated value	A	50

## UL/CSA ratings:

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

B300 / R300

## Certificates/ approvals:

### General Product Approval



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

## 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://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RB3133-4UW1/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RB3133-4UW1](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RB3133-4UW1)



