



OVERLOAD RELAY 9.0...12.5 A FOR MOTOR PROTECTION BGR S00, CLASS 10 STAND-ALONE INSTALLATION MAIN CIRCUIT: SCREW TERMINAL AUXILIARY CIRCUIT: SCREW TERMINAL MANUAL-AUTOMATIC-RESET

product brand name	SIRIUS
Product designation	3RU2 thermal overload relay

**General technical data:**

<b>Active power loss total typical</b>	W	5.1
<b>Insulation voltage</b>	V	690
• with degree of pollution 3 Rated value		
<b>Shock resistance</b>		8g / 11 ms
• acc. to IEC 60068-2-27		
<b>Surge voltage resistance Rated value</b>	kV	6
<b>Temperature compensation</b>	°C	-40 ... +60
<b>Size of contactor can be combined company-specific</b>		S00
<b>Type of assignment</b>		2
<b>Protection class IP</b>		IP20
• on the front		
• of the terminal		IP20
<b>Equipment marking</b>		F
• acc. to DIN EN 81346-2		

**Main circuit:**

<b>Number of poles for main current circuit</b>		3
<b>Adjustable response value current of the current-dependent overload release</b>	A	9 ... 12.5
<b>Operating voltage</b>	V	690
• Rated value		
• at AC-3 Rated value maximum	V	690
<b>Operating frequency Rated value</b>	Hz	50 ... 60

<b>Operating current Rated value</b>	A	12.5
<b>Operating current</b>		
• at AC-3		
— at 400 V Rated value	A	12.5

#### Auxiliary circuit:

<b>Number of NC contacts</b>		
• for auxiliary contacts		1
— Note		for contactor disconnection
<b>Number of NO contacts</b>		
• for auxiliary contacts		1
— Note		for message "Tripped"
<b>Number of CO contacts</b>		
• for auxiliary contacts		0
<b>Design of the auxiliary switch</b>		integrated
<b>Operating current of the auxiliary contacts at AC-15</b>		
• at 24 V	A	3
• at 110 V	A	3
• at 120 V	A	3
• at 125 V	A	3
• at 230 V	A	2
• at 400 V	A	1
<b>Operating current of the auxiliary contacts at DC-13</b>		
• at 24 V	A	2
• at 110 V	A	0.22
• at 125 V	A	0.22
• at 220 V	A	0.11

#### Protective and monitoring functions:

<b>Trip class</b>		CLASS 10
<b>Design of the overload circuit breaker</b>		thermal

#### UL/CSA ratings:

<b>Full-load current (FLA) for three-phase AC motor</b>		
• at 480 V Rated value	A	12.5
• at 600 V Rated value	A	12.5
<b>Contact rating of the auxiliary contacts acc. to UL</b>		B600 / R300

#### Installation/ mounting/ dimensions:

<b>mounting position</b>		any
<b>Mounting type</b>		stand-alone installation
<b>Height</b>	mm	89
<b>Width</b>	mm	45
<b>Depth</b>	mm	80
<b>Required spacing</b>		

• with side-by-side mounting		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	6
— downwards	mm	6
— at the side	mm	6
• for grounded parts		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	6
— at the side	mm	6
— downwards	mm	6
• for live parts		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	6
— downwards	mm	6
— at the side	mm	6

#### Connections/ Terminals:

<b>Type of electrical connection</b>		
• for main current circuit		screw-type terminals
• for auxiliary and control current circuit		screw-type terminals
<b>Arrangement of electrical connectors for main current circuit</b>		Top and bottom
<b>Product function</b>		
• removable terminal for auxiliary and control circuit		No
<b>Type of connectable conductor cross-section</b>		
• for main contacts		
— single or multi-stranded		2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup>
— finely stranded with core end processing		2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
• for AWG conductors for main contacts		2x (20 ... 16), 2x (20 ... 18), 2x 12
• for auxiliary contacts		
— single or multi-stranded		2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> )
— finely stranded with core end processing		2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
• for AWG conductors for auxiliary contacts		2x (20 ... 16), 2x (18 ... 14)
<b>Tightening torque</b>		
• for main contacts with screw-type terminals	N·m	0.8 ... 1.2
<b>Design of screwdriver shaft</b>		5 to 6 mm diameter
<b>Design of the thread of the connection screw</b>		
• for main contacts		M3

- of the auxiliary and control contacts

M3

#### Safety related data:

<b>Proportion of dangerous failures</b>		
<ul style="list-style-type: none"> <li>• with low demand rate acc. to SN 31920</li> </ul>	%	50
<ul style="list-style-type: none"> <li>• with high demand rate acc. to SN 31920</li> </ul>	%	50
Failure rate [FIT] with low demand rate acc. to SN 31920	FIT	50
<b>MTTF with high demand rate</b>	y	2 280
<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	y	20
<b>Protection against electrical shock</b>		finger-safe

#### Mechanical data:

<b>Size of overload relay</b>		S00
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#### Ambient conditions:

<b>Installation altitude at height above sea level maximum</b>	m	2 000
<b>Ambient temperature</b>		
<ul style="list-style-type: none"> <li>• during operation</li> </ul>	°C	-40 ... +70
<ul style="list-style-type: none"> <li>• during storage</li> </ul>	°C	-55 ... +80
<ul style="list-style-type: none"> <li>• during transport</li> </ul>	°C	-55 ... +80
<b>Relative humidity during operation</b>	%	0 ... 90

#### Display:

<b>Display version</b>		
<ul style="list-style-type: none"> <li>• for switching status</li> </ul>		Slide switch

#### Certificates/ approvals:

General Product Approval	For use in hazardous locations	Declaration of Conformity
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CCC



CSA



UL



ATEX



EG-Konf.

Test Certificates	Shipping Approval
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[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS



BUREAU VERITAS



DNV



GL

Shipping Approval	other
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LRS



PRS



RINA



RMRS

[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**

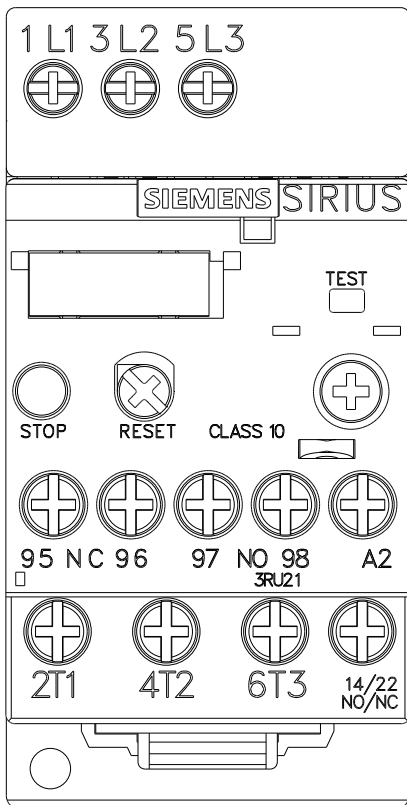
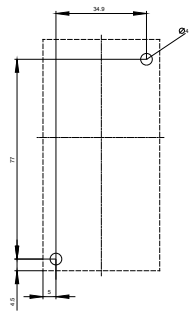
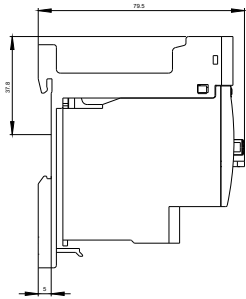
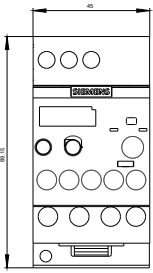
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RU21161KB1>

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

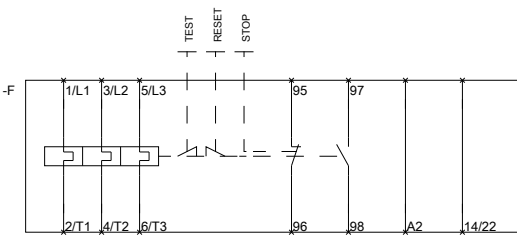
<http://support.automation.siemens.com/WW/view/en/3RU21161KB1/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3RU21161KB1&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RU21161KB1&lang=en)



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