

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



product brand name	SIRIUS
Product designation	3RU2 thermal overload relay
<b>General technical data:</b>	
Size of overload relay	S00
Size of contactor can be combined company-specific	S00
Power loss [W] total typical	5.1 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	
<ul style="list-style-type: none"> <li>in networks with grounded star point between auxiliary and auxiliary circuit</li> </ul>	440 V
<ul style="list-style-type: none"> <li>in networks with grounded star point between auxiliary and auxiliary circuit</li> </ul>	440 V
<ul style="list-style-type: none"> <li>in networks with grounded star point between main and auxiliary circuit</li> </ul>	440 V
<ul style="list-style-type: none"> <li>in networks with grounded star point between main and auxiliary circuit</li> </ul>	440 V
Protection class IP	
<ul style="list-style-type: none"> <li>on the front</li> </ul>	IP20

• of the terminal	IP20
<b>Shock resistance</b>	
• acc. to IEC 60068-2-27	8g / 11 ms
<b>Type of protection</b>	Ex e
<b>Certificate of suitability relating to ATEX</b>	DMT 98 ATEX G 001
<b>Protection against electrical shock</b>	finger-safe
Equipment marking acc. to DIN EN 81346-2	F

#### Ambient conditions:

<b>Installation altitude at height above sea level maximum</b>	2 000 m
<b>Ambient temperature</b>	
• during operation	-40 ... +70 °C
• during storage	-55 ... +80 °C
• during transport	-55 ... +80 °C
<b>Temperature compensation</b>	-40 ... +60 °C

#### Main circuit:

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

#### Auxiliary circuit:

<b>Design of the auxiliary switch</b>	integrated
<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>Operating current of auxiliary contacts at AC-15</b>	
• at 24 V	3 A
• at 110 V	3 A
• at 120 V	3 A
• at 125 V	3 A
• at 230 V	2 A
• at 400 V	1 A

<b>Operating current of auxiliary contacts at DC-13</b>	
• at 24 V	2 A
• at 110 V	0.22 A
• at 125 V	0.22 A
• at 220 V	0.11 A

<b>Protective and monitoring functions:</b>	
<b>Trip class</b>	CLASS 10
<b>Design of the overload release</b>	thermal

<b>UL/CSA ratings:</b>	
<b>Full-load current (FLA) for three-phase AC motor</b>	
• at 480 V rated value	12.5 A
• at 600 V rated value	12.5 A
<b>Contact rating of auxiliary contacts according to UL</b>	B600 / R300

<b>Installation/ mounting/ dimensions:</b>	
<b>Mounting position</b>	any
<b>Mounting type</b>	direct mounting
<b>Height</b>	76 mm
<b>Width</b>	45 mm
<b>Depth</b>	70 mm
<b>Required spacing</b>	
• with side-by-side mounting	
— forwards	0 mm
— Backwards	0 mm
— upwards	6 mm
— downwards	6 mm
— at the side	6 mm
• for grounded parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	6 mm
— at the side	6 mm
— downwards	6 mm
• for live parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	6 mm
— downwards	6 mm
— at the side	6 mm

<b>Connections/ Terminals:</b>	
<b>Product function</b>	

<ul style="list-style-type: none"> <li>removable terminal for auxiliary and control circuit</li> </ul>	No
<b>Type of electrical connection</b> <ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control current circuit</li> </ul>	screw-type terminals screw-type terminals
<b>Arrangement of electrical connectors for main current circuit</b>	Top and bottom
<b>Type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>for main contacts <ul style="list-style-type: none"> <li>single or multi-stranded</li> <li>finely stranded with core end processing</li> </ul> </li> <li>at AWG conductors for main contacts</li> </ul>	2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup> 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) 2x (20 ... 16), 2x (18 ... 14), 2x 12
<b>Type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>for auxiliary contacts <ul style="list-style-type: none"> <li>single or multi-stranded</li> <li>finely stranded with core end processing</li> </ul> </li> <li>at AWG conductors for auxiliary contacts</li> </ul>	2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ) 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) 2x (20 ... 16), 2x (18 ... 14)
<b>Tightening torque</b> <ul style="list-style-type: none"> <li>for main contacts with screw-type terminals</li> <li>for auxiliary contacts with screw-type terminals</li> </ul>	0.8 ... 1.2 N·m 0.8 ... 1.2 N·m
<b>Design of screwdriver shaft</b>	5 to 6 mm diameter
<b>Design of the thread of the connection screw</b> <ul style="list-style-type: none"> <li>for main contacts</li> <li>of the auxiliary and control contacts</li> </ul>	M3 M3

#### Safety related data:

<b>Failure rate [FIT]</b> <ul style="list-style-type: none"> <li>with low demand rate acc. to SN 31920</li> </ul>	50 FIT
<b>MTTF with high demand rate</b>	2 280 y
<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	20 y

#### Display:

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

General Product Approval	For use in hazardous locations
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Declaration of Conformity	Test Certificates	Shipping Approval
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[Typrüfbescheinigung/Werkszeugnis](#)



Shipping Approval	other	Railway
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[Umweltbestätigung](#)

[Schwingen/Schocke](#)  
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Further information

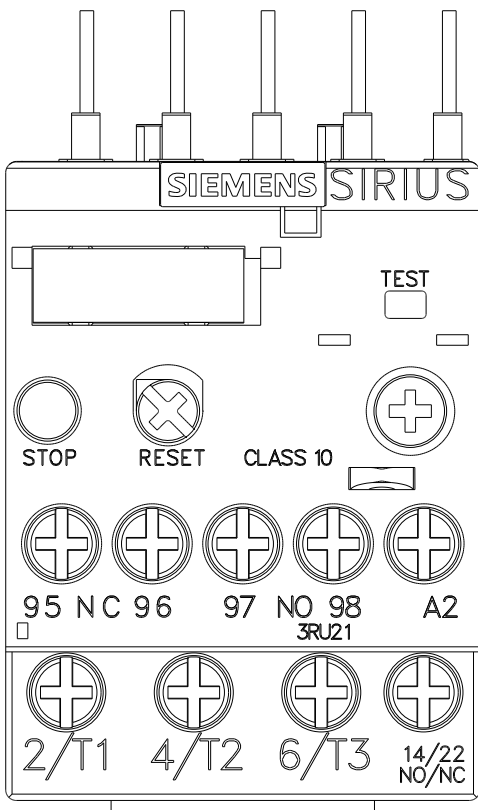
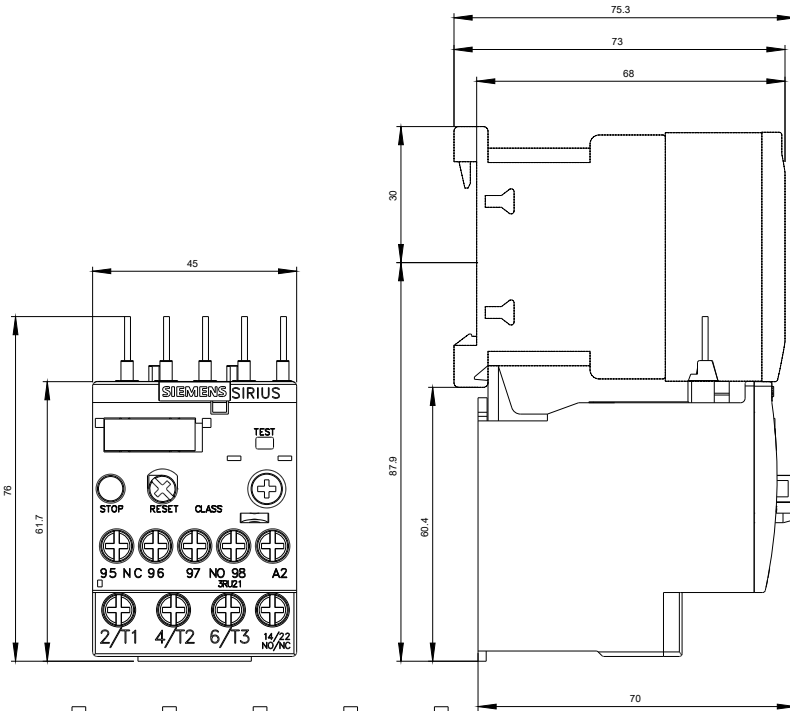
Information- and Downloadcenter (Catalogs, Brochures,...)  
<http://www.siemens.com/industrial-controls/catalogs>

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<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RU21161KB0>

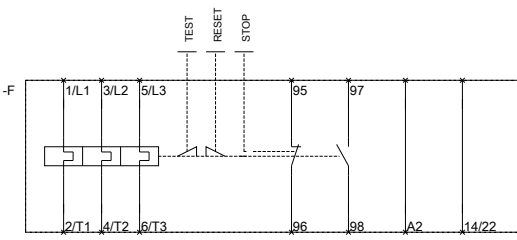
Cax online generator  
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU21161KB0>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)  
<https://support.industry.siemens.com/cs/ww/en/ps/3RU21161KB0>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)  
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RU21161KB0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU21161KB0&lang=en)



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