

Overload relay 1.1...1.6 A Thermal For motor protection Size S00,  
Class 10 Stand-alone installation Main circuit: Screw Auxiliary circuit:  
Screw Manual-Automatic-Reset



product brand name	SIRIUS
product designation	thermal overload relay
product type designation	3RU2

General technical data	
Size of overload relay	S00
size of contactor can be combined company-specific	S00
<ul style="list-style-type: none"> <li>power loss [W] for rated value of the current at AC in hot operating state</li> </ul>	5.7 W
<ul style="list-style-type: none"> <li>power loss [W] for rated value of the current at AC in hot operating state per pole</li> </ul>	1.9 W
insulation voltage with degree of pollution 3 at AC 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
<b>protection class IP</b>	
<ul style="list-style-type: none"> <li>on the front</li> </ul>	IP20
<ul style="list-style-type: none"> <li>of the terminal</li> </ul>	IP20
<ul style="list-style-type: none"> <li>shock resistance acc. to IEC 60068-2-27</li> </ul>	8g / 11 ms
<b>type of protection according to ATEX directive 2014/34/EU</b>	Ex II (2) GD
certificate of suitability according to ATEX directive 2014/34/EU	DMT 98 ATEX G 001
<b>reference code acc. to DIN EN 81346-2</b>	F

#### Ambient conditions

<ul style="list-style-type: none"> <li>installation altitude at height above sea level maximum</li> </ul>	2 000 m
<ul style="list-style-type: none"> <li>ambient temperature during operation</li> </ul>	-40 ... +70 °C
<ul style="list-style-type: none"> <li>ambient temperature during storage</li> </ul>	-55 ... +80 °C
<ul style="list-style-type: none"> <li>ambient temperature during transport</li> </ul>	-55 ... +80 °C
<b>temperature compensation</b>	-40 ... +60 °C
relative humidity during operation	10 ... 95 %

#### 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>	1.1 ... 1.6 A
<ul style="list-style-type: none"> <li>operating voltage rated value</li> </ul>	690 V
<ul style="list-style-type: none"> <li>operating voltage at AC-3 rated value maximum</li> </ul>	690 V
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>operating current rated value</b>	1.6 A
operating power at AC-3	
<ul style="list-style-type: none"> <li>at 400 V rated value</li> </ul>	0.55 kW
<ul style="list-style-type: none"> <li>at 500 V rated value</li> </ul>	0.75 kW
<ul style="list-style-type: none"> <li>at 690 V rated value</li> </ul>	1.1 kW

#### Auxiliary circuit

<b>design of the auxiliary switch</b>	integrated
<ul style="list-style-type: none"> <li><b>number of NC contacts for auxiliary contacts</b></li> </ul>	1
<ul style="list-style-type: none"> <li>number of NC contacts for auxiliary contacts note</li> </ul>	for contactor disconnection
<ul style="list-style-type: none"> <li><b>number of NO contacts for auxiliary contacts</b></li> </ul>	1
<ul style="list-style-type: none"> <li>number of NO contacts for auxiliary contacts note</li> </ul>	for message "Tripped"
<ul style="list-style-type: none"> <li>number of CO contacts for auxiliary contacts</li> </ul>	0
<b>operating current of auxiliary contacts at AC-15</b>	

<ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 110 V</li> <li>• at 120 V</li> <li>• at 125 V</li> <li>• at 230 V</li> <li>• at 400 V</li> </ul>	3 A 3 A 3 A 3 A 2 A 1 A
<b>operating current of auxiliary contacts at DC-13</b>	
<ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 60 V</li> <li>• at 110 V</li> <li>• at 125 V</li> <li>• at 220 V</li> </ul>	2 A 0.3 A 0.22 A 0.22 A 0.11 A
<b>contact rating of auxiliary contacts according to UL</b>	B600 / R300

Protective and monitoring functions	
<b>trip class</b>	CLASS 10
<b>design of the overload release</b>	thermal

UL/CSA ratings	
<b>full-load current (FLA) for three-phase AC motor</b>	
<ul style="list-style-type: none"> <li>• at 480 V rated value</li> <li>• at 600 V rated value</li> </ul>	1.6 A 1.6 A

Short-circuit protection	
<ul style="list-style-type: none"> <li>• design of the fuse link for short-circuit protection of the auxiliary switch required</li> </ul>	fuse gG: 6 A, quick: 10 A

Installation/ mounting/ dimensions	
<ul style="list-style-type: none"> <li>• <b>mounting position</b></li> <li>• <b>mounting type</b></li> </ul>	any stand-alone installation
<b>height</b>	89 mm
<b>width</b>	45 mm
<b>depth</b>	80 mm

Connections/ Terminals	
<ul style="list-style-type: none"> <li>• product function 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
<ul style="list-style-type: none"> <li>• type of connectable conductor cross-sections for main contacts single or multi-stranded</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>

<ul style="list-style-type: none"> <li>• type of connectable conductor cross-sections for main contacts finely stranded with core end processing</li> </ul>	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• type of connectable conductor cross-sections at AWG conductors for main contacts</li> </ul>	2x (20 ... 16), 2x (18 ... 14), 2x 12
<ul style="list-style-type: none"> <li>• type of connectable conductor cross-sections for auxiliary contacts single or multi-stranded</li> </ul>	2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• type of connectable conductor cross-sections for auxiliary contacts finely stranded with core end processing</li> </ul>	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• type of connectable conductor cross-sections at AWG conductors for auxiliary contacts</li> </ul>	2x (20 ... 16), 2x (18 ... 14)
<ul style="list-style-type: none"> <li>• tightening torque for main contacts with screw-type terminals</li> </ul>	0.8 ... 1.2 N·m
<ul style="list-style-type: none"> <li>• tightening torque for auxiliary contacts with screw-type terminals</li> </ul>	0.8 ... 1.2 N·m
<b>design of screwdriver shaft</b>	Diameter 5 ... 6 mm
<b>size of the screwdriver tip</b>	Pozidriv PZ 2
<b>design of the thread of the connection screw</b>	
<ul style="list-style-type: none"> <li>• for main contacts</li> </ul>	M3
<ul style="list-style-type: none"> <li>• of the auxiliary and control contacts</li> </ul>	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

#### Certificates/ approvals

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

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping	other
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[Confirmation](#)

Railway
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[Vibration and Shock](#)

Further information
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**Information- and Downloadcenter (Catalogs, Brochures,...)**

<https://www.siemens.com/ic10>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RU2116-1AB1>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1AB1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1AB1>

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

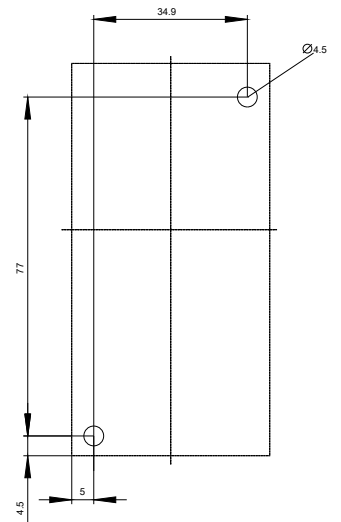
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RU2116-1AB1&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1AB1&lang=en)

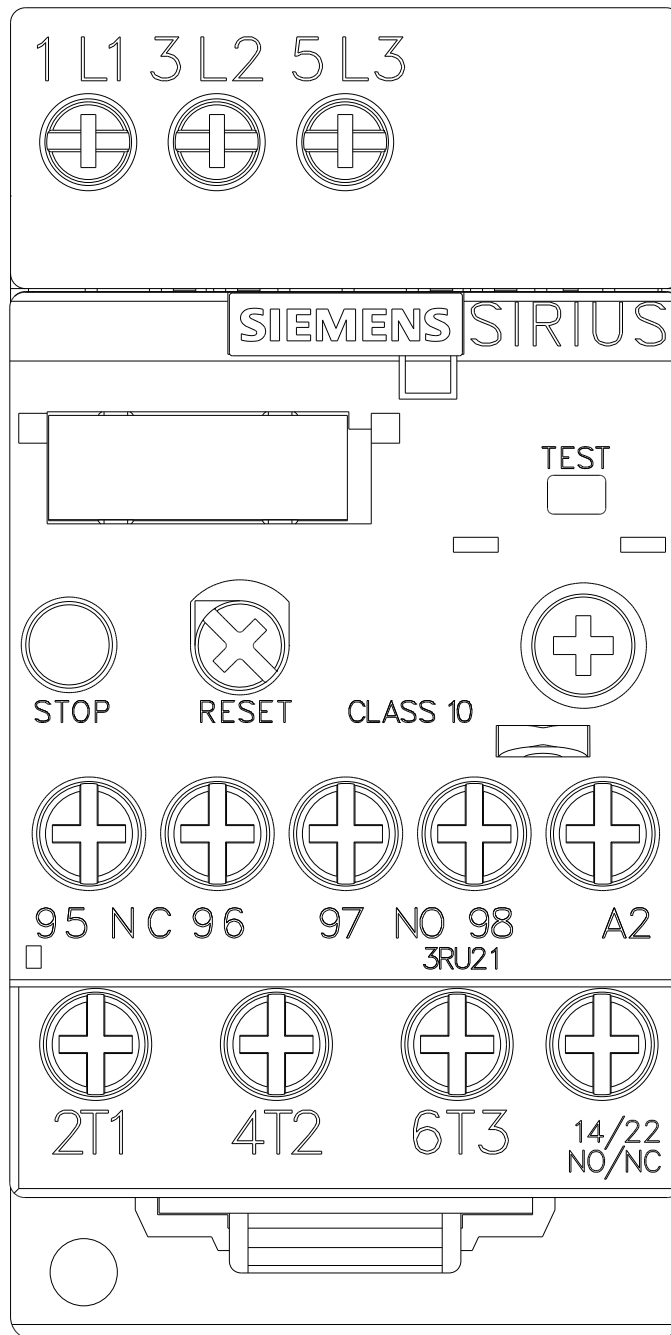
**Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current**

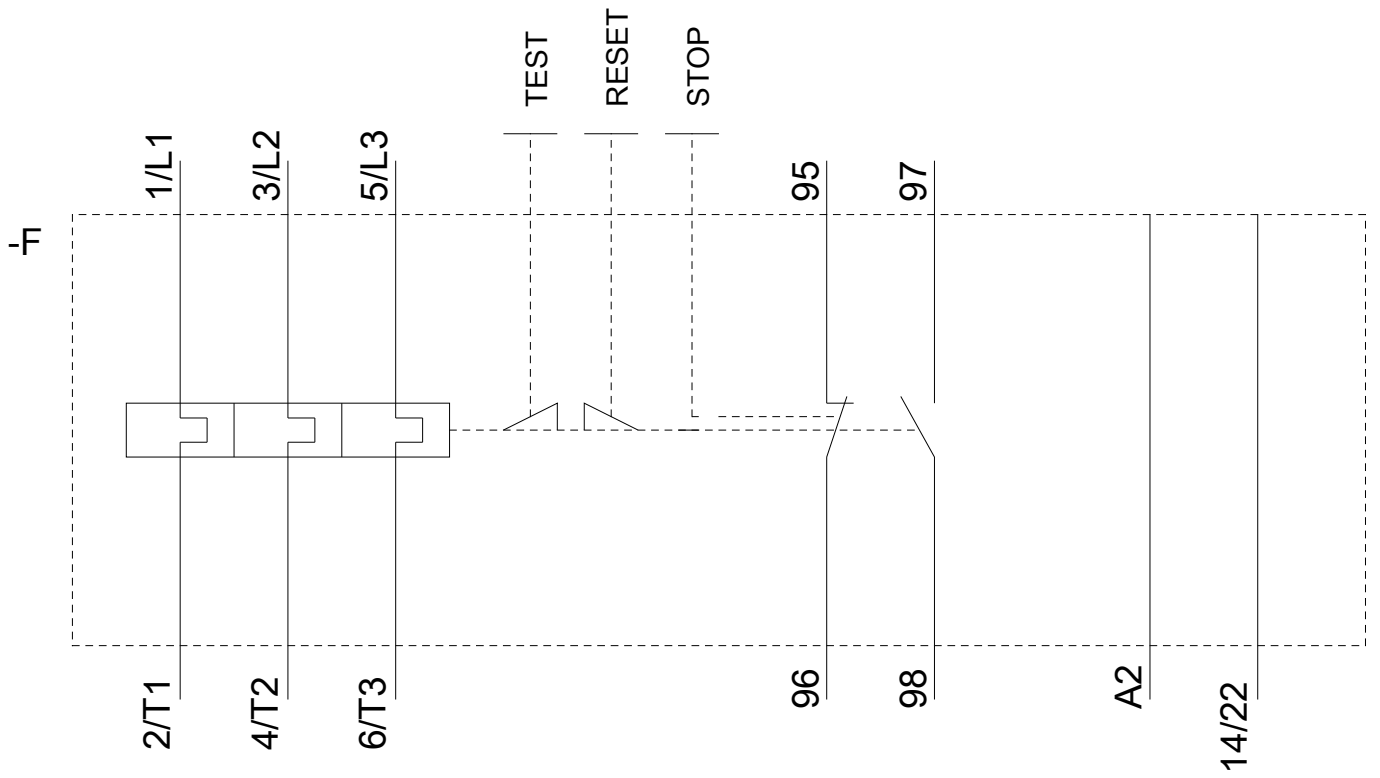
<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1AB1/char>

**Further characteristics (e.g. electrical endurance, switching frequency)**

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1AB1&objecttype=14&gridview=view1>







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08/25/2020