

Overload relay 1.4...2.0 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
<b>General technical data</b>	
Size of overload relay	S00
Size of contactor can be combined company-specific	S00
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

<ul style="list-style-type: none"> <li>• of the terminal</li> </ul>	IP20
<b>Shock resistance</b>	
<ul style="list-style-type: none"> <li>• 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>Protection against electrical shock</b>	finger-safe
<b>Reference code acc. to DIN EN 81346-2</b>	F

#### Ambient conditions

<b>Installation altitude at height above sea level</b>	
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	2 000 m
<b>Ambient temperature</b>	
<ul style="list-style-type: none"> <li>• during operation</li> </ul>	-40 ... +70 °C
<ul style="list-style-type: none"> <li>• during storage</li> </ul>	-55 ... +80 °C
<ul style="list-style-type: none"> <li>• during transport</li> </ul>	-55 ... +80 °C
<b>Temperature compensation</b>	-40 ... +60 °C
Relative humidity during operation	0 ... 90 %

#### 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>	1.4 ... 2 A
<b>Operating voltage</b>	
<ul style="list-style-type: none"> <li>• rated value</li> </ul>	690 V
<ul style="list-style-type: none"> <li>• 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>	2 A
Operating power at AC-3	
<ul style="list-style-type: none"> <li>• at 400 V rated value</li> </ul>	0.75 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
<b>Number of NC contacts for auxiliary contacts</b>	1
<ul style="list-style-type: none"> <li>• Note</li> </ul>	for contactor disconnection
<b>Number of NO contacts for auxiliary contacts</b>	1
<ul style="list-style-type: none"> <li>• Note</li> </ul>	for message "Tripped"
<b>Number of CO contacts</b>	
<ul style="list-style-type: none"> <li>• 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> </ul>	3 A
<ul style="list-style-type: none"> <li>• at 110 V</li> </ul>	3 A

<ul style="list-style-type: none"> <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 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>	2 A 2 A
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#### Short-circuit protection

<b>Design of the fuse link</b> <ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>	fuse gG: 6 A, quick: 10 A
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#### Installation/ mounting/ dimensions

<b>Mounting position</b>	any
<b>Mounting type</b>	stand-alone installation
<b>Height</b>	89 mm
<b>Width</b>	45 mm
<b>Depth</b>	80 mm
<b>Required spacing</b> <ul style="list-style-type: none"> <li>• with side-by-side mounting               <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <li>• for grounded parts               <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> </ul>	0 mm 0 mm 6 mm 6 mm 6 mm  0 mm 0 mm 6 mm 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

## Connections/ Terminals

<b>Product function</b>	
• removable terminal for auxiliary and control circuit	No
<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>Type of connectable conductor cross-sections</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> )
• at AWG conductors for main contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12
<b>Type of connectable conductor cross-sections</b>	
• 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> )
• at AWG conductors for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14)
<b>Tightening torque</b>	
• for main contacts with screw-type terminals	0.8 ... 1.2 N·m
• for auxiliary contacts with screw-type terminals	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>	
• for main contacts	M3
• of the auxiliary and control contacts	M3

## Safety related data

<b>Failure rate [FIT]</b>	
• with low demand rate acc. to SN 31920	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

## Display version

- for switching status

Slide switch

## Certificates/ approvals

### General Product Approval



CCC



CSA



UL



ATEX



IECEX

### Declaration of Conformity



EG-Konf.

[Miscellaneous](#)

### Test Certificates

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

### Marine / Shipping



ABS



BUREAU VERITAS

### Marine / Shipping



LRS



PRS



RINA



RMRS



DNV-GL  
DNVGL.COM/AF

### other

[Confirmation](#)

## Railway

[Vibration and Shock](#)

## Further information

### Information- and Downloadcenter (Catalogs, Brochures,...)

[www.siemens.com/sirius/catalogs](http://www.siemens.com/sirius/catalogs)

### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RU2116-1BB1>

### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1BB1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1BB1>

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

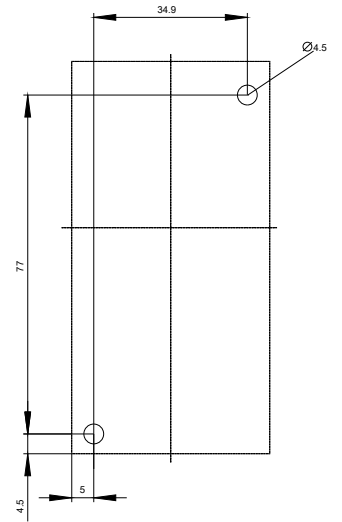
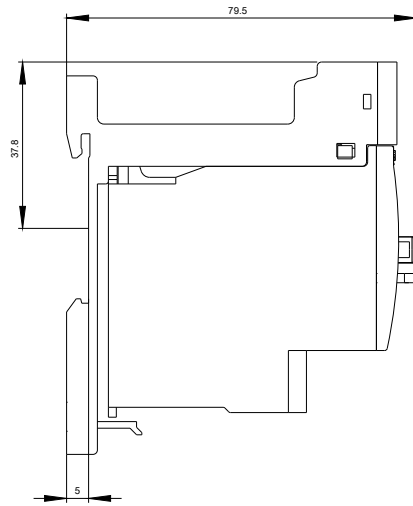
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RU2116-1BB1&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1BB1&lang=en)

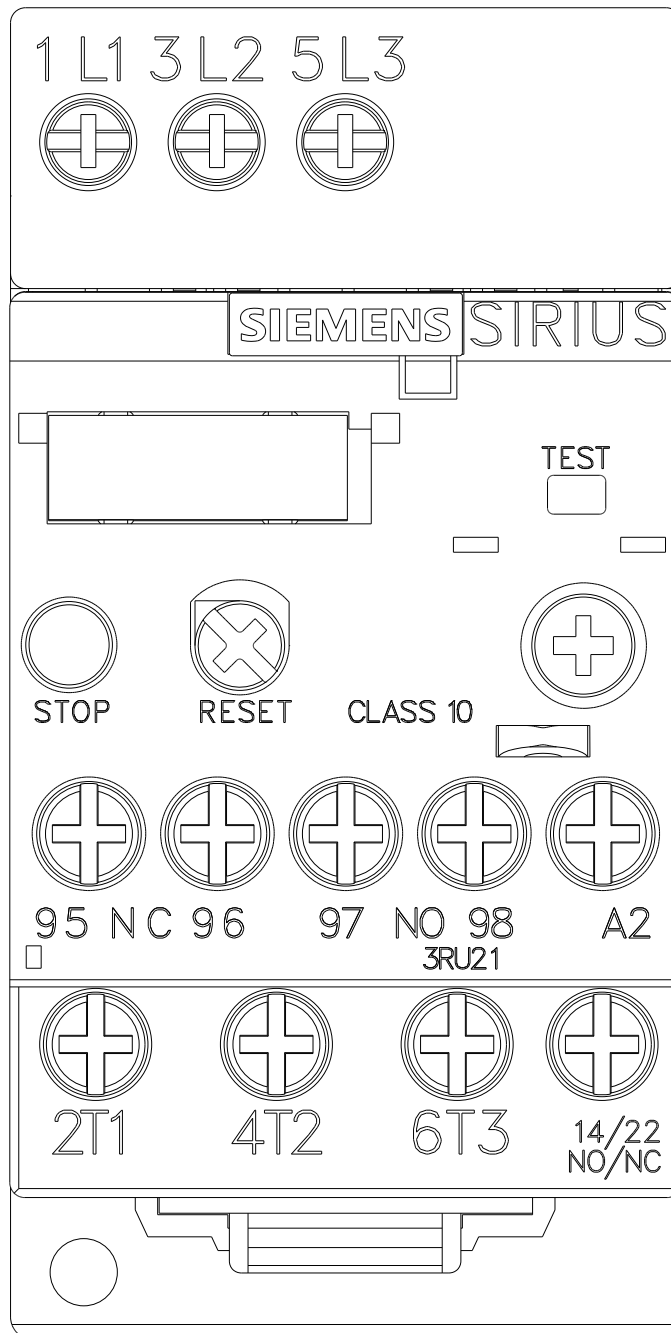
### Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

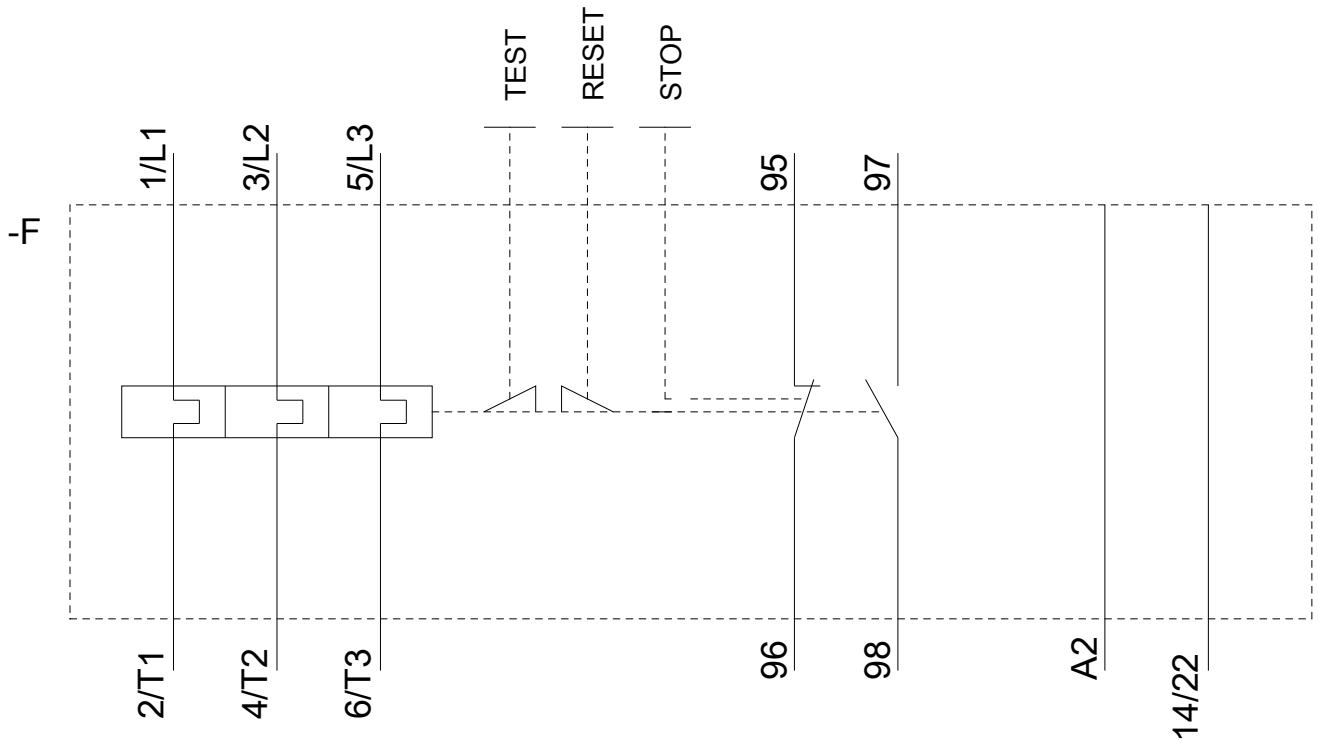
<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1BB1/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1BB1&objecttype=14&gridview=view1>







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