



Overload relay 36...45 A Thermal For motor protection Size S2, Class 10 Stand-alone installation Main circuit: Screw Auxiliary circuit: spring-type terminal 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	S2
size of contactor can be combined company-specific	S2
power loss [W] for rated value of the current at AC in hot operating state	15.6 W
<ul style="list-style-type: none"> <li>per pole</li> </ul>	5.2 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 in networks with grounded star point	
<ul style="list-style-type: none"> <li>between auxiliary and auxiliary circuit</li> </ul>	415 V
<ul style="list-style-type: none"> <li>between auxiliary and auxiliary circuit</li> </ul>	415 V
<ul style="list-style-type: none"> <li>between main and auxiliary circuit</li> </ul>	690 V
<ul style="list-style-type: none"> <li>between main and auxiliary circuit</li> </ul>	690 V
shock resistance according to IEC 60068-2-27	8g / 11 ms
type of protection according to ATEX directive 2014/34/EU	Ex II (2) GD
certificate of suitability according to ATEX directive 2014/34/EU	DMT 98 ATEX G 001
reference code according to IEC 81346-2	F
Substance Prohibitance (Date)	10/15/2014
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<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
temperature compensation	-40 ... +60 °C
relative humidity during operation	10 ... 95 %
<b>Main circuit</b>	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	36 ... 45 A
operating voltage	
<ul style="list-style-type: none"> <li>rated value</li> </ul>	690 V
<ul style="list-style-type: none"> <li>at AC-3e rated value maximum</li> </ul>	690 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	45 A
operational current at AC-3e at 400 V rated value	45 A

<b>operating power</b>	
<ul style="list-style-type: none"> <li>● at AC-3 <ul style="list-style-type: none"> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> <li>● at AC-3e <ul style="list-style-type: none"> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul>	22 kW 30 kW 37 kW  22 kW 30 kW 37 kW
<b>Auxiliary circuit</b>	
<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"
number of CO contacts for auxiliary contacts	0
<b>operational 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> <li>● at 690 V</li> </ul>	3 A 3 A 3 A 3 A 2 A 1 A 0.75 A
<b>operational 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
design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required	6A (SCC less than equal to 0.5 kA; U less than equal to 260V)
<b>contact rating of auxiliary contacts according to UL</b>	B600 / R300
<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 3-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>	45 A 45 A
<b>Short-circuit protection</b>	
<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
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	any
<b>fastening method</b>	stand-alone installation
<b>height</b>	105 mm
<b>width</b>	55 mm
<b>depth</b>	117 mm
<b>Connections/ Terminals</b>	
<b>product component removable terminal for auxiliary and control circuit</b>	No
<b>type of electrical connection</b>	
<ul style="list-style-type: none"> <li>● for main current circuit</li> <li>● for auxiliary and control circuit</li> </ul>	screw-type terminals spring-loaded terminals
<b>arrangement of electrical connectors for main current circuit</b>	Top and bottom
type of connectable conductor cross-sections for main contacts	
<ul style="list-style-type: none"> <li>● solid or stranded</li> <li>● finely stranded with core end processing</li> </ul>	2x (1 ... 35 mm <sup>2</sup> ), 1x (1 ... 50 mm <sup>2</sup> ) 2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> )
<b>type of connectable conductor cross-sections</b>	

- for auxiliary contacts
  - solid or stranded
  - finely stranded with core end processing
  - finely stranded without core end processing
- at AWG cables for auxiliary contacts

2x (0.5 ... 2.5 mm<sup>2</sup>)  
 2x (0.5 ... 1.5 mm<sup>2</sup>)  
 2x (0.5 ... 2.5 mm<sup>2</sup>)  
 2x (20 ... 14)

**tightening torque**

- for main contacts with screw-type terminals

3 ... 4.5 N·m  
 Diameter 5 ... 6 mm  
 Pozidriv PZ 2

**design of screwdriver shaft**

**size of the screwdriver tip**

**design of the thread of the connection screw**

- for main contacts

M6

**Safety related data**

T1 value for proof test interval or service life according to IEC 61508

20 a

protection class IP on the front according to IEC 60529

IP20

touch protection on the front according to IEC 60529

finger-safe, for vertical contact from the front

**Display**

display version for switching status

Slide switch

**Certificates/ approvals**

**General Product Approval**

For use in hazardous locations



[Confirmation](#)



For use in hazardous locations

Declaration of Conformity

Test Certificates

Marine / Shipping



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



**Marine / Shipping**



other

Railway

[Confirmation](#)

[Special Test Certificate](#)

**Further information**

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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=3RU2136-4GD1>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2136-4GD1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2136-4GD1>

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

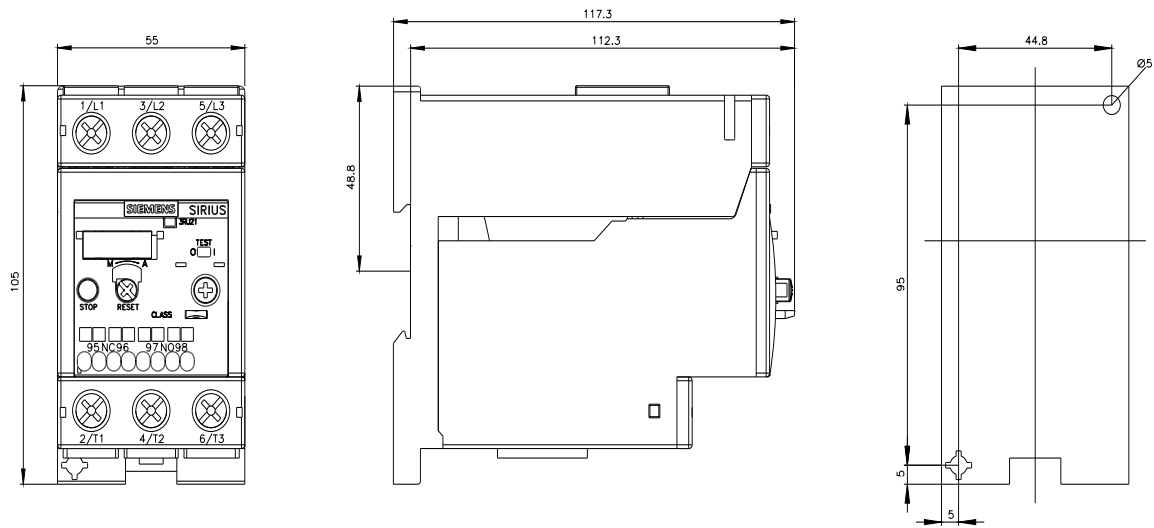
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RU2136-4GD1&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2136-4GD1&lang=en)

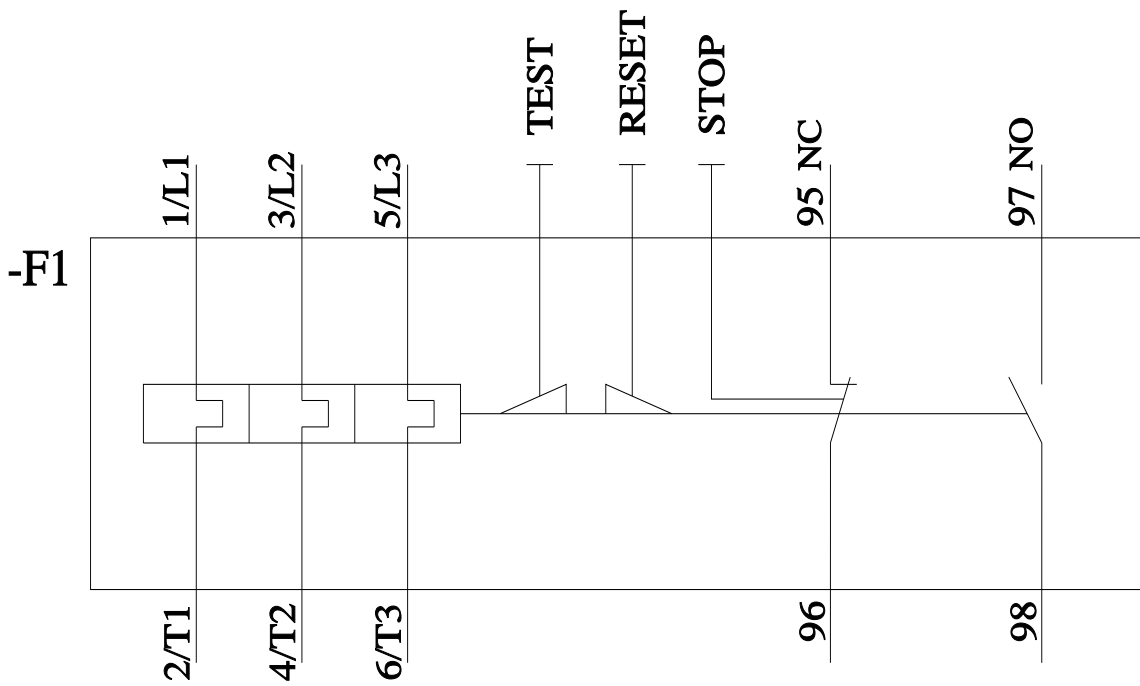
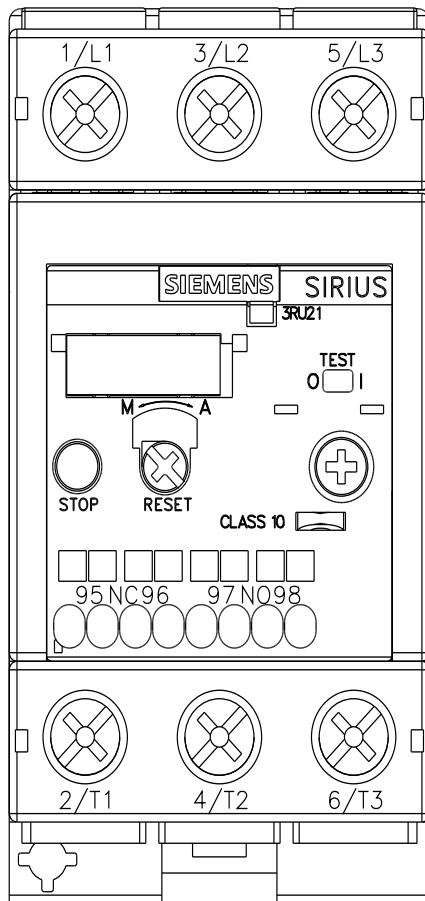
Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2136-4GD1/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2136-4GD1&objecttype=14&gridview=view1>





last modified:

3/8/2022