



Overload relay 1.8...2.5 A Thermal For motor protection Size S00, Class 10  
 Contactor mounting 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
power loss [W] for rated value of the current at AC in hot operating state	5.7 W
• per pole	1.9 W
insulation voltage with degree of pollution 3 at AC rated value	690 V
surge voltage resistance rated value	6 V
maximum permissible voltage for protective separation in networks with grounded star point	
• between auxiliary and auxiliary circuit	440 V
• between auxiliary and auxiliary circuit	440 V
• between main and auxiliary circuit	440 V
• between main and auxiliary circuit	440 V
shock resistance according to IEC 60068-2-27	8g / 11 ms
reference code according to IEC 81346-2	F
Substance Prohibitance (Date)	10/01/2009
SVHC substance name	Lead - 7439-92-1
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
• during operation	-40 ... +70 °C
• during storage	-55 ... +80 °C
• during transport	-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	1.8 ... 2.5 A
operating voltage	
• rated value	690 V
• at AC-3e rated value maximum	690 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	3 A
operational current at AC-3e at 400 V rated value	2.5 A
operating power	
• at AC-3	

— at 400 V rated value	0.75 kW
— at 500 V rated value	1.1 kW
— at 690 V rated value	1.5 kW
● at AC-3e	
— at 400 V rated value	0.75 kW
— at 500 V rated value	1.1 kW
— at 690 V rated value	1.5 kW

#### Auxiliary circuit

<b>design of the auxiliary switch</b>	integrated
<b>number of NC contacts for auxiliary contacts</b>	1
● note	for contactor disconnection
<b>number of NO contacts for auxiliary contacts</b>	1
● note	for message "Tripped"
number of CO contacts for auxiliary contacts	0
<b>operational 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
● at 690 V	0.75 A
<b>operational current of auxiliary contacts at DC-13</b>	
● at 24 V	2 A
● at 60 V	0.3 A
● at 110 V	0.2 A
● at 125 V	0.22 A
● at 220 V	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 3-phase AC motor</b>	
● at 480 V rated value	2.5 A
● at 600 V rated value	2.5 A

#### Short-circuit protection

<b>design of the fuse link</b>	
● for short-circuit protection of the auxiliary switch required	fuse gG: 6 A, quick: 10 A

#### Installation/ mounting/ dimensions

<b>mounting position</b>	any
<b>fastening method</b>	Contactor mounting
<b>height</b>	76 mm
<b>width</b>	45 mm
<b>depth</b>	70 mm

#### Connections/ Terminals

<b>product component removable terminal for auxiliary and control circuit</b>	No
<b>type of electrical connection</b>	
● for main current circuit	screw-type terminals
● for auxiliary and control 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	
— solid or stranded	2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²), 2x 4 mm²
— finely stranded with core end processing	2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²)
● for AWG cables for main contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12
<b>type of connectable conductor cross-sections</b>	
● for auxiliary contacts	
— solid or stranded	2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²)

— 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 cables 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] with low demand rate according to SN 31920</b>	50 FIT
<b>MTTF with high demand rate</b>	2 280 a
IEC 61508	
<b>T1 value</b>	
• for proof test interval or service life according to IEC 61508	20 a

#### Electrical Safety

<b>protection class IP on the front according to IEC 60529</b>	IP20
<b>touch protection on the front according to IEC 60529</b>	finger-safe, for vertical contact from the front

#### Display

display version for switching status	Slide switch
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#### Approvals Certificates

##### General Product Approval



EG-Konf.

[Confirmation](#)



CCC



UL



For use in hazard-ous locations	Test Certificates	Marine / Shipping
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ATEX

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS



BUREAU  
VERITAS



DNV

Marine / Shipping	other
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LRS



PRS



RINA



RMRS

[Miscellaneous](#)

[Confirmation](#)

#### Environment

[Environmental Con-  
firmations](#)

#### 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=3RU2116-1CB0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1CB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1CB0>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RU2116-1CB0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1CB0&lang=en)

Characteristic: Tripping characteristics,  $I^2t$ , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1CB0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1CB0&objecttype=14&gridview=view1>



