












overload relay 47...57 A thermal for motor protection frame size S2, Class 10  
stand-alone installation main circuit: screw auxiliary circuit: spring-loaded 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
• per pole	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 protective separation	
• in networks with ungrounded star point between auxiliary and auxiliary circuit	415 V
• in networks with grounded star point between auxiliary and auxiliary circuit	415 V
• in networks with ungrounded star point between main and auxiliary circuit	690 V
• in networks with grounded star point between main and auxiliary circuit	690 V
shock resistance according to IEC 60068-2-27	8g / 11 ms
recovery time after overload trip	
• with automatic reset typical	10 min
• with remote-reset	10 min
• with manual reset	10 min
reference code according to IEC 81346-2	F
Substance Prohibition (Date)	10/15/2014
SVHC substance name	Lead - 7439-92-1
Weight	0.477 kg
<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>Environmental footprint</b>	
Environmental Product Declaration (EPD)	Yes
global warming potential [CO <sub>2</sub> eq] total	67.7 kg
global warming potential [CO <sub>2</sub> eq] during manufacturing	2.02 kg
global warming potential [CO <sub>2</sub> eq] during sales	0.076 kg

global warming potential [CO2 eq] during operation	65.6 kg
global warming potential [CO2 eq] after end of life	-0.07 kg
<b>Main circuit</b>	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	47 ... 57 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	57 A
operational current at AC-3e at 400 V rated value	57 A
operating power	
• at AC-3	
— at 400 V rated value	30 kW
— at 500 V rated value	37 kW
— at 690 V rated value	55 kW
• at AC-3e	
— at 400 V rated value	30 kW
— at 500 V rated value	37 kW
— at 690 V rated value	55 kW
<b>Auxiliary circuit</b>	
design of the auxiliary switch	integrated
number of NC contacts for auxiliary contacts	1
• note	for contactor disconnection
number of NO contacts for auxiliary contacts	1
• note	for message "Tripped"
number of CO contacts for auxiliary contacts	0
operational current of auxiliary contacts at AC-15	
• 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
operational current of auxiliary contacts at DC-13	
• at 24 V	2 A
• at 60 V	0.3 A
• at 110 V	0.22 A
• at 125 V	0.22 A
• at 220 V	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)
contact rating of auxiliary contacts according to UL	B600 / R300
<b>Protective and monitoring functions</b>	
trip class	CLASS 10
design of the overload release	thermal
<b>UL/CSA ratings</b>	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	57 A
• at 600 V rated value	57 A
<b>Short-circuit protection</b>	
design of the fuse link	
• for short-circuit protection of the auxiliary switch required	fuse gG: 6 A, quick: 10 A
<b>Installation/ mounting/ dimensions</b>	
mounting position	stand-alone installation: with a vertical mounting plane +/-135° rotatable and +/-45° tiltable; for more details see manual
fastening method	stand-alone installation
height	105 mm
width	55 mm

depth	117 mm				
<b>Connections/ Terminals</b>					
product component removable terminal for auxiliary and control circuit	No				
type of electrical connection <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				
arrangement of electrical connectors for main current circuit	Top and bottom				
type of connectable conductor cross-sections <ul style="list-style-type: none"> <li>for main contacts <ul style="list-style-type: none"> <li>solid or stranded</li> <li>finely stranded with core end processing</li> </ul> </li> <li>for AWG cables for main contacts</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> ) 2x (18 ... 2), 1x (18 ... 1)				
type of connectable conductor cross-sections <ul style="list-style-type: none"> <li>for auxiliary contacts <ul style="list-style-type: none"> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> </ul> </li> <li>for AWG cables for auxiliary contacts</li> </ul>	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 <ul style="list-style-type: none"> <li>for main contacts with screw-type terminals</li> </ul>	3 ... 4.5 N·m				
design of screwdriver shaft	Diameter 5 ... 6 mm				
size of the screwdriver tip	Pozidriv PZ 2				
design of the thread of the connection screw <ul style="list-style-type: none"> <li>for main contacts</li> </ul>	M6				
IEC 61508					
T1 value <ul style="list-style-type: none"> <li>for proof test interval or service life according to IEC 61508</li> </ul>	20 a				
Electrical Safety					
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				
<b>Display</b>					
display version for switching status	Slide switch				
<b>Approvals Certificates</b>					
General Product Approval	For use in hazardous locations				
					
For use in hazardous locations	Test Certificates	Maritime application			
	<a href="#">Miscellaneous</a>	<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Special Test Certificate</a>		
Maritime application	other				
					
other	Railway	Environment			



## Further information

## Information on the packaging

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

## Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

## 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=3RU2136-4QD1>

## Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2136-4QD1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2136-4QD1>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RU2136-4QD1&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2136-4QD1&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2136-4QD1/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2136-4QD1&objecttype=14&gridview=view1>

