



Overload relay 45...63 A Thermal For motor protection Size S3, Class 10 Contactor mounting 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	S3
size of contactor can be combined company-specific	S3
power loss [W] for rated value of the current at AC in hot operating state	17.1 W
• per pole	5.7 W
insulation voltage with degree of pollution 3 at AC rated value	1 000 V
surge voltage resistance rated value	8 kV
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)	03/01/2017
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	45 ... 63 A
operating voltage	
• rated value	1 000 V
• at AC-3e rated value maximum	1 000 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	63 A
operational current at AC-3e at 400 V rated value	63 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>	
<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	0.22 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)
<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>	
• at 480 V rated value	52 A
• at 600 V rated value	62 A
<b>Short-circuit protection</b>	
<b>design of the fuse link</b>	
• for short-circuit protection of the main circuit	
— with type of coordination 1 required	690 V: gG: 160 A; 1000 V: a.M. / g.B.: 125 A
— with type of assignment 2 required	690 V: gG: 125 A; 1000 V: a.M. / g.B.: 125 A
• for short-circuit protection of the auxiliary switch required	fuse gG: 6 A, quick: 10 A
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	any
<b>fastening method</b>	Contactor mounting
<b>height</b>	105 mm
<b>width</b>	70 mm
<b>depth</b>	125 mm
<b>Connections/ Terminals</b>	
<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	spring-loaded 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	2x (2.5 ... 16 mm <sup>2</sup> )

— stranded	2x (6 ... 16 mm²), 2x (10 ... 50 mm²), 1x (10 ... 70 mm²)
— solid or stranded	2x (2,5 ... 50 mm²), 1x (10 ... 70 mm²)
— finely stranded with core end processing	2x (2,5 ... 35 mm²), 1x (2,5 ... 50 mm²)
• for AWG cables for main contacts	2x (10 ... 1/0), 1x (10 ... 2/0)
<b>type of connectable conductor cross-sections</b>	
• for auxiliary contacts	
— solid or stranded	2x (0,5 ... 2,5 mm²)
— finely stranded with core end processing	2x (0,5 ... 1,5 mm²)
— finely stranded without core end processing	2x (0,5 ... 2,5 mm²)
• for AWG cables for auxiliary contacts	2x (20 ... 14)
<b>tightening torque</b>	
• for main contacts for ring cable lug	4,5 ... 6 N·m
<b>outer diameter of the usable ring cable lug maximum</b>	19 mm
<b>tightening torque</b>	
• for main contacts with screw-type terminals	4,5 ... 6 N·m
<b>design of screwdriver shaft</b>	Hexagonal socket
<b>size of the screwdriver tip</b>	4 mm hexagon socket
<b>design of the thread of the connection screw</b>	
• for main contacts	M8
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
<b>Display</b>	
display version for switching status	Slide switch
<b>Approvals Certificates</b>	
General Product Approval	



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Railway	Environment
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#### Further information

Information on the packaging

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

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2146-4JD0&objecttype=14&gridview=view1>





last modified:

6/3/2024