

Overload relay 7.0...10 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

General technical data

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	6.6 W
<ul style="list-style-type: none"> per pole 	2.2 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"> between auxiliary and auxiliary circuit 	440 V
<ul style="list-style-type: none"> between auxiliary and auxiliary circuit 	440 V
<ul style="list-style-type: none"> between main and auxiliary circuit 	440 V
<ul style="list-style-type: none"> between main and auxiliary circuit 	440 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)	10/01/2009

Ambient conditions

installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul style="list-style-type: none"> during operation 	-40 ... +70 °C
<ul style="list-style-type: none"> during storage 	-55 ... +80 °C
<ul style="list-style-type: none"> during transport 	-55 ... +80 °C
temperature compensation	-40 ... +60 °C
relative humidity during operation	10 ... 95 %

Main circuit

number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	7 ... 10 A
operating voltage	
<ul style="list-style-type: none"> rated value 	690 V
<ul style="list-style-type: none"> at AC-3e rated value maximum 	690 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	10 A
operational current at AC-3e at 400 V rated value	10 A
operating power	
<ul style="list-style-type: none"> at AC-3 	
<ul style="list-style-type: none"> — at 400 V rated value 	4 kW
<ul style="list-style-type: none"> — at 500 V rated value 	5.5 kW
<ul style="list-style-type: none"> — at 690 V rated value 	7.5 kW
<ul style="list-style-type: none"> at AC-3e 	
<ul style="list-style-type: none"> — at 400 V rated value 	4 kW
<ul style="list-style-type: none"> — at 500 V rated value 	5.5 kW
<ul style="list-style-type: none"> — at 690 V rated value 	7.5 kW

Auxiliary circuit

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
contact rating of auxiliary contacts according to UL	B600 / R300

Protective and monitoring functions

trip class	CLASS 10
design of the overload release	thermal

UL/CSA ratings

full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	10 A
• at 600 V rated value	10 A

Short-circuit protection

design of the fuse link	
• for short-circuit protection of the auxiliary switch required	fuse gG: 6 A, quick: 10 A

Installation/ mounting/ dimensions

mounting position	any
fastening method	Contactor mounting
height	76 mm
width	45 mm
depth	70 mm

Connections/ Terminals

product component removable terminal for auxiliary and control circuit	No
type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control circuit	screw-type terminals
arrangement of electrical connectors for main current circuit	Top and bottom
type of connectable conductor cross-sections	
• 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)
• at AWG cables for main contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12
type of connectable conductor cross-sections	
• 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 mm²), 2x (0,75 ... 2,5 mm²)
• at AWG cables for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14)
tightening torque	
• 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
design of screwdriver shaft	Diameter 5 ... 6 mm
size of the screwdriver tip	Pozidriv PZ 2
design of the thread of the connection screw	
• for main contacts	M3

- of the auxiliary and control contacts

M3

Safety related data

failure rate [FIT] with low demand rate according to SN 31920	50 FIT
MTTF with high demand rate	2 280 a
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
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Certificates/ approvals

General Product Approval

For use in hazard-
ous locations



[Confirmation](#)



For use in hazard-
ous locations

Declaration of Conformity

Test Certificates

Marine / Shipping



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping



other

Railway

[Confirmation](#)

[Vibration and Shock](#)

Further information

Siemens has decided to exit the Russian market (see here).

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3RU2116-1JB0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1JB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1JB0>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1JB0&lang=en

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1JB0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1JB0&objecttype=14&gridview=view1>

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