



overload relay 3.5...5.0 A thermal for motor protection frame size S00, Class 10
stand-alone installation main circuit: spring-loaded terminal auxiliary circuit: spring-
loaded terminal 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
• 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 protective separation	
• in networks with ungrounded star point between auxiliary and auxiliary circuit	440 V
• in networks with grounded star point between auxiliary and auxiliary circuit	440 V
• in networks with ungrounded star point between main and auxiliary circuit	440 V
• in networks with grounded star point 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
Net Weight	0.216 kg
Ambient conditions	
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 %
Environmental footprint	
Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] total	40.3 kg
global warming potential [CO2 eq] during manufacturing	1.26 kg
global warming potential [CO2 eq] during sales	0.054 kg
global warming potential [CO2 eq] during operation	39 kg
global warming potential [CO2 eq] after end of life	0.0062 kg

Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	3.5 ... 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	5 A
operational current at AC-3e at 400 V rated value	5 A
operating power	
• at AC-3	
— at 400 V rated value	1.5 kW
— at 500 V rated value	2.2 kW
— at 690 V rated value	4 kW
• at AC-3e	
— at 400 V rated value	1.5 kW
— at 500 V rated value	2.2 kW
— at 690 V rated value	4 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	5 A
• at 600 V rated value	5 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	stand-alone installation: with a vertical mounting plane +/-135° rotatable and +/-45° tiltable; for more details see manual
fastening method	stand-alone installation
height	102 mm
width	45 mm
depth	79 mm
Connections/ Terminals	

product component removable terminal for auxiliary and control circuit	No
type of electrical connection • for main current circuit • for auxiliary and control circuit	spring-loaded terminals spring-loaded terminals
arrangement of electrical connectors for main current circuit	Top and bottom
type of connectable conductor cross-sections • for main contacts — solid or stranded — finely stranded with core end processing — finely stranded without core end processing • for AWG cables for main contacts	1x (0,5 ... 4 mm²) 1x (0,5 ... 2,5 mm²) 1x (0,5 ... 2,5 mm²) 1x (20 ... 12)
type of connectable conductor cross-sections • for auxiliary contacts — solid or stranded — finely stranded with core end processing — finely stranded without core end processing • for AWG cables for auxiliary contacts	2x (0,5 ... 2,5 mm²) 2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²) 2x (0,5 ... 1,5 mm²) 2x (20 ... 14)
design of screwdriver shaft	Diameter 3 mm
size of the screwdriver tip	3,0 x 0,5 mm
Safety related data	
failure rate [FIT] with low demand rate according to SN 31920	50 FIT
MTTF with high demand rate	2 280 a
IEC 61508	
T1 value • for proof test interval or service life according to IEC 61508	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
Display	
display version for switching status	Slide switch
Approvals Certificates	
General Product Approval	



For use in hazardous locations	Test Certificates	Maritime application
 IECEX	 ATEX	Type Test Certificates/Test Report
	Special Test Certificate	 ABS
		 BUREAU VERITAS
Maritime application		other
 DNV	 LRS	 PRS
	 RINA	 RMRS
other	Railway	Environment
		Miscellaneous



[Confirmation](#)

[Special Test Certificate](#)



[Environmental Confirmations](#)

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=3RU2116-1FC1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1FC1>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1FC1&lang=en

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1FC1>

Characteristic curves

https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP='HAUPT'></mmp_prod_no>



