



Overload relay 3.5...5.0 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
• 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	0.158 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	39.9 kg
global warming potential [CO2 eq] during manufacturing	0.921 kg
global warming potential [CO2 eq] during sales	0.039 kg
global warming potential [CO2 eq] during operation	39 kg
global warming potential [CO2 eq] after end of life	-0.015 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 <ul style="list-style-type: none"> rated value at AC-3e rated value maximum 	690 V 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 <ul style="list-style-type: none"> at AC-3 <ul style="list-style-type: none"> at 400 V rated value at 500 V rated value at 690 V rated value at AC-3e <ul style="list-style-type: none"> at 400 V rated value at 500 V rated value at 690 V rated value 	1.5 kW 2.2 kW 4 kW 1.5 kW 2.2 kW 4 kW
Auxiliary circuit	
design of the auxiliary switch	integrated
number of NC contacts for auxiliary contacts <ul style="list-style-type: none"> note 	1 for contactor disconnection
number of NO contacts for auxiliary contacts <ul style="list-style-type: none"> note 	1 for message "Tripped"
number of CO contacts for auxiliary contacts	0
operational current of auxiliary contacts at AC-15 <ul style="list-style-type: none"> at 24 V at 110 V at 120 V at 125 V at 230 V at 400 V at 690 V 	3 A 3 A 3 A 3 A 2 A 1 A 0.75 A
operational current of auxiliary contacts at DC-13 <ul style="list-style-type: none"> at 24 V at 60 V at 110 V at 125 V at 220 V 	2 A 0.3 A 0.22 A 0.22 A 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 <ul style="list-style-type: none"> at 480 V rated value at 600 V rated value 	5 A 5 A
Short-circuit protection	
design of the fuse link <ul style="list-style-type: none"> for short-circuit protection of the auxiliary switch required 	fuse gG: 6 A, quick: 10 A
Installation/ mounting/ dimensions	
mounting position	for mounting on contactors: with a vertical mounting plane +/-135° rotatable & +/- 22.5° tiltable, stand-alone installation: with a vertical mounting plane +/-135° rotatable and +/-45° tiltable; for more details see manual
fastening method	Contactors 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 <ul style="list-style-type: none"> for main current circuit for auxiliary and control circuit 	screw-type terminals screw-type terminals
arrangement of electrical connectors for main current circuit	Top and bottom
type of connectable conductor cross-sections <ul style="list-style-type: none"> for main contacts <ul style="list-style-type: none"> solid or stranded finely stranded with core end processing for AWG cables for main contacts 	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²), 2x 4 mm ² 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14), 2x 12
type of connectable conductor cross-sections <ul style="list-style-type: none"> for auxiliary contacts <ul style="list-style-type: none"> solid or stranded finely stranded with core end processing for AWG cables for auxiliary contacts 	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14)
tightening torque <ul style="list-style-type: none"> for main contacts with screw-type terminals for auxiliary contacts with screw-type terminals 	0.8 ... 1.2 N·m 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 <ul style="list-style-type: none"> for main contacts of the auxiliary and control contacts 	M3 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
IEC 61508	
T1 value <ul style="list-style-type: none"> 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
	Miscellaneous Special Test Certificate Type Test Certificates/Test Report	

Maritime application



other Railway Environment

[Miscellaneous](#)



[Confirmation](#)

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[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=3RU2116-1FB0>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1FB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1FB0>

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

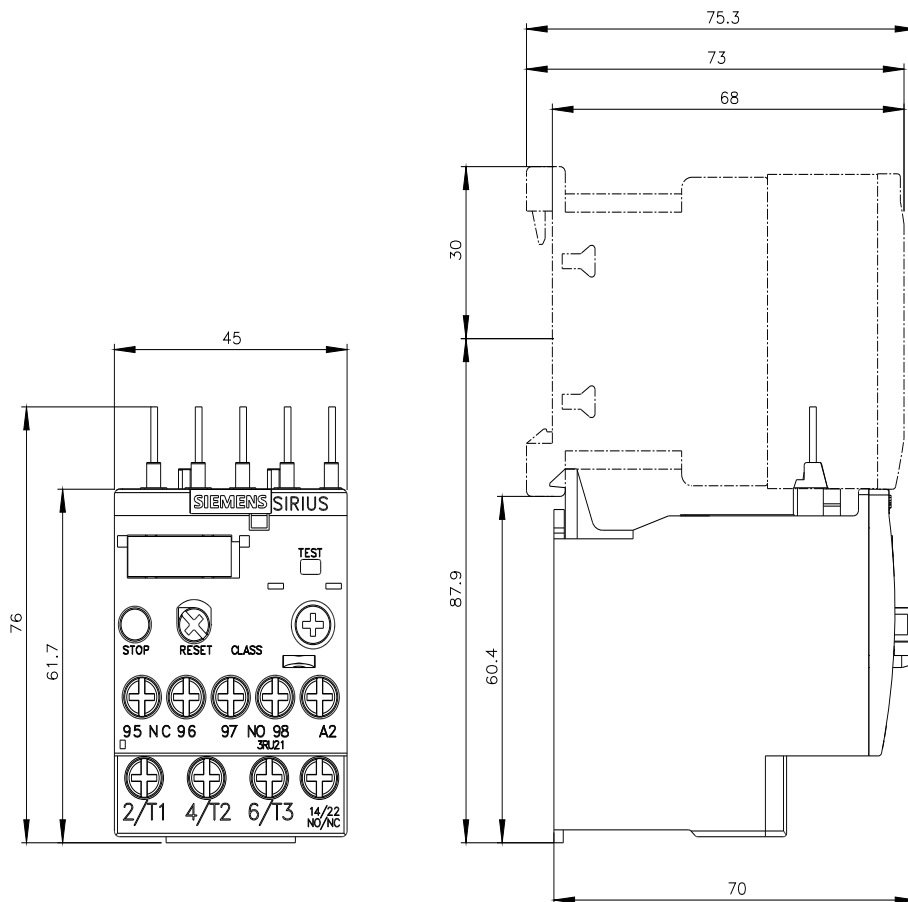
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1FB0&lang=en

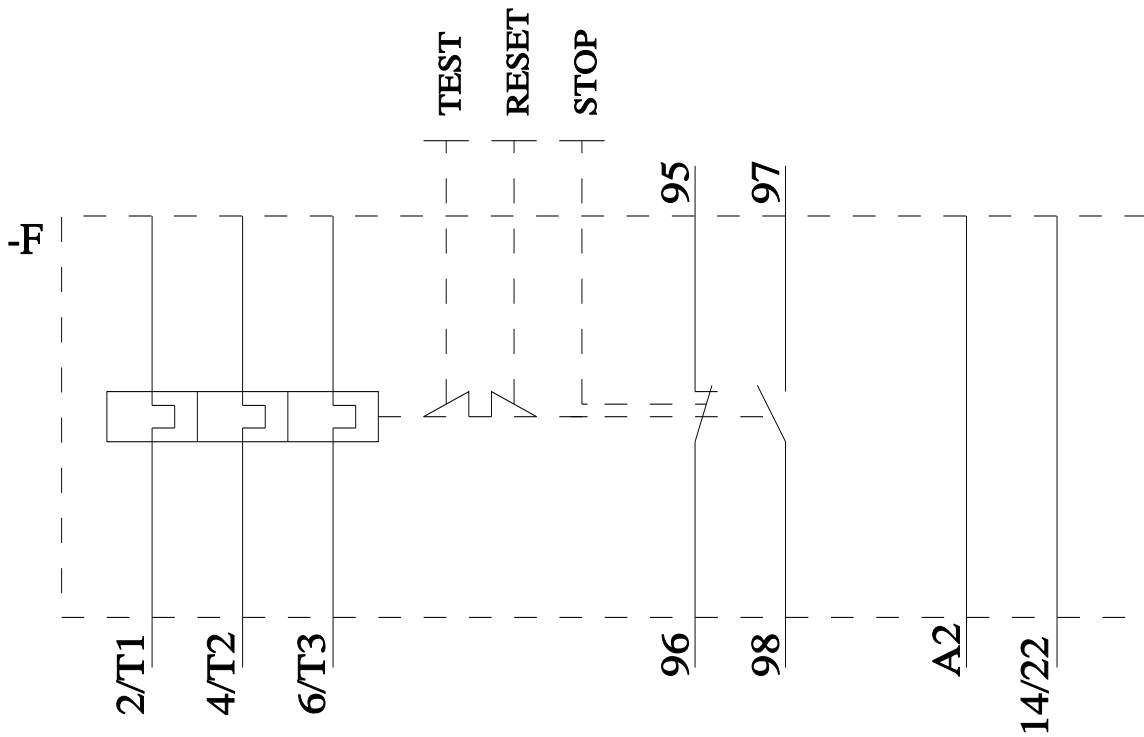
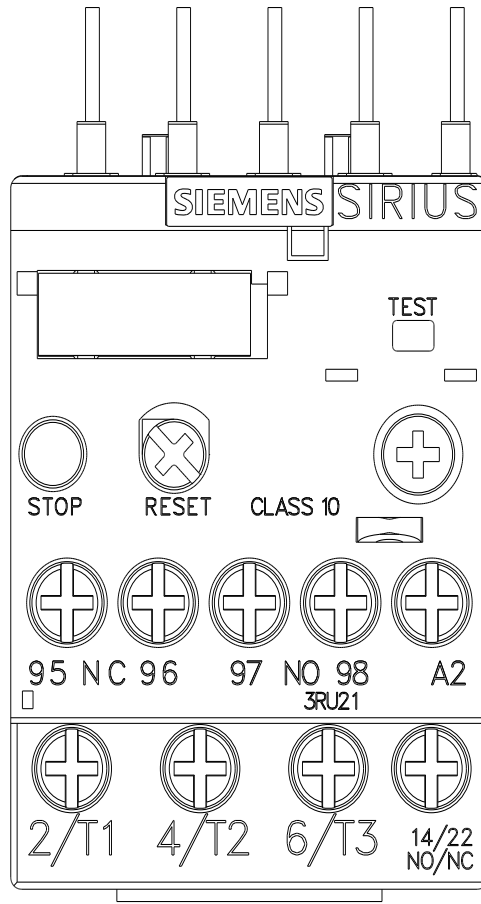
Characteristic: Tripping characteristics, I^t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1FB0/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1FB0&objecttype=14&gridview=view1>





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