# **SIEMENS**

Data sheet 3RU2116-1DB0



Overload relay 2.2...3.2 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	5.7 W	
• per pole	1.9 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		
<ul> <li>in networks with ungrounded star point between auxiliary and auxiliary circuit</li> </ul>	440 V	
<ul> <li>in networks with grounded star point between auxiliary and auxiliary circuit</li> </ul>	440 V	
<ul> <li>in networks with ungrounded star point between main and auxiliary circuit</li> </ul>	440 V	
<ul> <li>in networks with grounded star point between main and auxiliary circuit</li> </ul>	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	0.157 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	2.2 3.2 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	3.2 A
operational current at AC-3e at 400 V rated value	3.2 A
operating power	
• at AC-3	
— at 400 V rated value	1.1 kW
— at 500 V rated value	1.5 kW
— at 690 V rated value	2.2 kW
• at AC-3e	Z.Z NVV
— at 400 V rated value	1.1 kW
— at 500 V rated value  — at 500 V rated value	1.1 kW
	1.5 KW 2.2 KW
— at 690 V rated value  Auxiliary circuit	Z.Z NVV
design of the auxiliary switch	integrated
number of NC contacts for auxiliary contacts	integrated 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	3.2 A
• at 600 V rated value	3.2 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	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	Contactor mounting
	Contactor mounting 76 mm
fastening method height width	

Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	No
type of electrical connection	
for main current circuit	screw-type terminals
<ul> <li>for auxiliary and control circuit</li> </ul>	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
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
<ul> <li>for AWG cables for main contacts</li> </ul>	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)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
<ul> <li>for AWG cables for auxiliary contacts</li> </ul>	2x (20 16), 2x (18 14)
tightening torque	
<ul> <li>for main contacts with screw-type terminals</li> </ul>	0.8 1.2 N·m
<ul> <li>for auxiliary contacts with screw-type terminals</li> </ul>	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
<ul> <li>of the auxiliary and control contacts</li> </ul>	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> <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
Display	
display version for switching status	Slide switch
Approvals Certificates	

## General Product Approval













#### For use in hazardous locations

**Test Certificates** 

Maritime application





Special Test Certificate

Type Test Certificates/Test Report





### Maritime application











Confirmation

other

other

Railway

Environment

**Miscellaneous** 

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=3RU2116-1DB0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1DB0

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

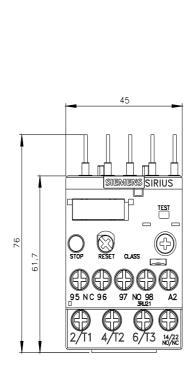
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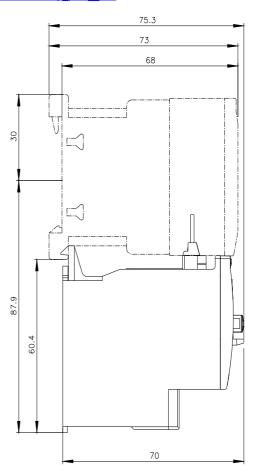
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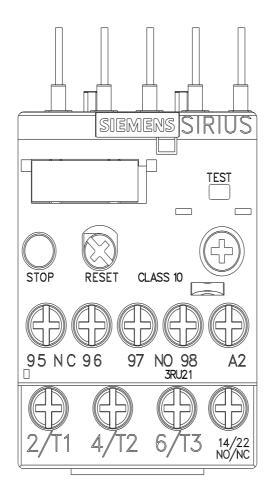
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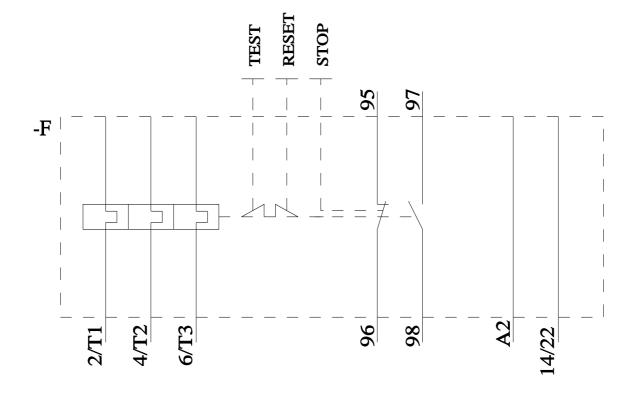
Characteristic curves

https://curves.simaris.siemens.com/curves/<mmp\_prod\_noCOMP="HAUPT"></mmp\_prod\_no>









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