## **SIEMENS**

Data sheet 3RU2116-0CB0



Overload relay 0.18...0.25 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	4.8 W
• per pole	1.6 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 grounded star point	
<ul> <li>between auxiliary and auxiliary circuit</li> </ul>	440 V
<ul> <li>between auxiliary and auxiliary circuit</li> </ul>	440 V
<ul> <li>between main and auxiliary circuit</li> </ul>	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)	10/01/2009
SVHC substance name	Lead - 7439-92-1
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul> <li>during operation</li> </ul>	-40 +70 °C
during storage	-55 +80 °C
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	0.18 0.25 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	0.25 A
operational current at AC-3e at 400 V rated value	0.25 A
operating power  • at AC-3	

— at 400 V rated value	0.06 kW
— at 500 V rated value	0.09 kW
— at 690 V rated value	0.12 kW
• at AC-3e	
— at 400 V rated value	0.06 kW
— at 500 V rated value	0.09 kW
— at 690 V rated value	0.12 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	
UL/CSA ratings full-load current (FLA) for 3-phase AC motor	
full-load current (FLA) for 3-phase AC motor	0.3 A
full-load current (FLA) for 3-phase AC motor • at 480 V rated value	0.3 A 0.3 A
full-load current (FLA) for 3-phase AC motor  • at 480 V rated value  • at 600 V rated value	0.3 A 0.3 A
full-load current (FLA) for 3-phase AC motor  • at 480 V rated value  • at 600 V rated value  Short-circuit protection	
full-load current (FLA) for 3-phase AC motor  • at 480 V rated value  • at 600 V rated value  Short-circuit protection  design of the fuse link	0.3 A
full-load current (FLA) for 3-phase AC motor  • at 480 V rated value  • at 600 V rated value  Short-circuit protection  design of the fuse link  • for short-circuit protection of the auxiliary switch required	
full-load current (FLA) for 3-phase AC motor  • at 480 V rated value  • at 600 V rated value  Short-circuit protection  design of the fuse link  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions	0.3 A fuse gG: 6 A, quick: 10 A
full-load current (FLA) for 3-phase AC motor  • at 480 V rated value  • at 600 V rated value  Short-circuit protection  design of the fuse link  • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions  mounting position	0.3 A fuse gG: 6 A, quick: 10 A any
full-load current (FLA) for 3-phase AC motor  • at 480 V rated value  • at 600 V rated value  Short-circuit protection  design of the fuse link  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method	0.3 A  fuse gG: 6 A, quick: 10 A  any Contactor mounting
full-load current (FLA) for 3-phase AC motor  • at 480 V rated value  • at 600 V rated value  Short-circuit protection  design of the fuse link  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height	0.3 A  fuse gG: 6 A, quick: 10 A  any  Contactor mounting 76 mm
full-load current (FLA) for 3-phase AC motor  • at 480 V rated value  • at 600 V rated value  Short-circuit protection  design of the fuse link  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width	0.3 A  fuse gG: 6 A, quick: 10 A  any  Contactor mounting 76 mm 45 mm
full-load current (FLA) for 3-phase AC motor  • at 480 V rated value  • at 600 V rated value  Short-circuit protection  design of the fuse link  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width  depth	0.3 A  fuse gG: 6 A, quick: 10 A  any  Contactor mounting 76 mm
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full-load current (FLA) for 3-phase AC motor  • at 480 V rated value  • at 600 V rated value  Short-circuit protection  design of the fuse link  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width  depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • for main current circuit  • for auxiliary and control circuit	fuse gG: 6 A, quick: 10 A  any Contactor mounting 76 mm 45 mm 70 mm  No  screw-type terminals screw-type terminals
full-load current (FLA) for 3-phase AC motor  • at 480 V rated value  • at 600 V rated value  Short-circuit protection  design of the fuse link  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width  depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • for main current circuit	fuse gG: 6 A, quick: 10 A  any Contactor mounting 76 mm 45 mm 70 mm  No
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full-load current (FLA) for 3-phase AC motor  • at 480 V rated value  • at 600 V rated value  Short-circuit protection  design of the fuse link  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width  depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • for main current circuit  • for auxiliary and control circuit  arrangement of electrical connectors for main current circuit  type of connectable conductor cross-sections  • for main contacts	fuse gG: 6 A, quick: 10 A  any Contactor mounting 76 mm 45 mm 70 mm  No  screw-type terminals screw-type terminals Top and bottom
full-load current (FLA) for 3-phase AC motor  • at 480 V rated value  • at 600 V rated value  Short-circuit protection  design of the fuse link  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width  depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • for main current circuit  • for auxiliary and control circuit  arrangement of electrical connectors for main current circuit  type of connectable conductor cross-sections  • for main contacts  — solid or stranded	fuse gG: 6 A, quick: 10 A  any Contactor mounting 76 mm 45 mm 70 mm  No  screw-type terminals screw-type terminals Top and bottom  2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm²
full-load current (FLA) for 3-phase AC motor  • at 480 V rated value  • at 600 V rated value  Short-circuit protection  design of the fuse link  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  fastening method  height  width  depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • for main current circuit  • for auxiliary and control circuit  arrangement of electrical connectors for main current circuit  type of connectable conductor cross-sections  • for main contacts  — solid or stranded  — finely stranded with core end processing	0.3 A  fuse gG: 6 A, quick: 10 A  any Contactor mounting 76 mm 45 mm 70 mm  No  screw-type terminals screw-type terminals Top and bottom  2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm² 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
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<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	
<ul> <li>for main contacts</li> </ul>	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	

CA



Confirmation







For use in hazardous locations

**Test Certificates** 

Marine / Shipping





IECEx

Type Test Certificates/Test Report

Special Test Certificate





Marine / Shipping





LRS







Miscellaneous

other

other Railway Environment

<u>Confirmation</u> <u>Special Test Certificate</u> <u>Environmental Confirmations</u>

## Further information

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=3RU2116-0CB0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-0CB0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-0CB0

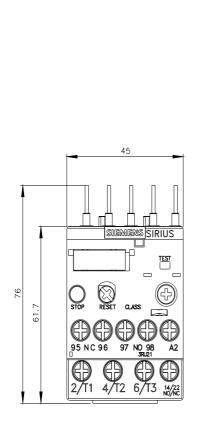
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <a href="http://www.automation.siemens.com/bilddb/cax">http://www.automation.siemens.com/bilddb/cax</a> de.aspx?mlfb=3RU2116-0CB0&lang=en

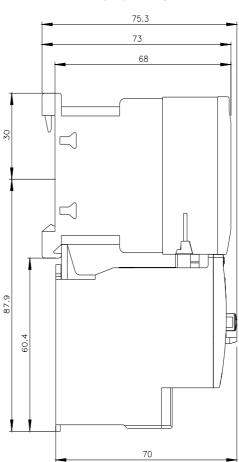
Characteristic: Tripping characteristics, I2t, Let-through current

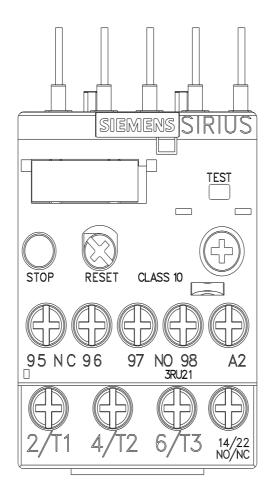
https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-0CB0/char

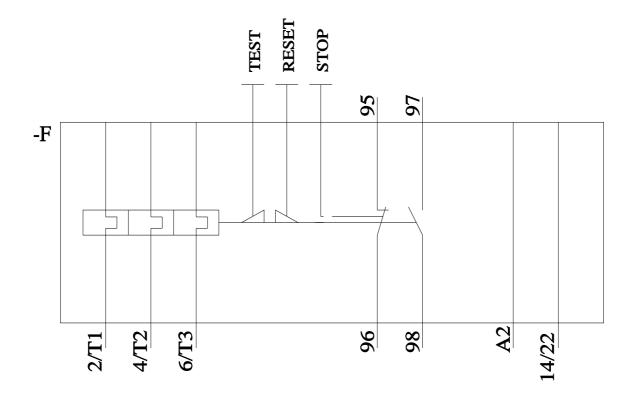
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-0CB0&objecttype=14&gridview=view1









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