# **SIEMENS**

Data sheet 3RU2116-0KB0



Overload relay 0.90...1.25 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	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	
Weight	0.15 kg	
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	0.9 1.25 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	1.25 A	

operational current at AC-3e at 400 V rated value	1.25 A
operating power	
• at AC-3	
— at 400 V rated value	0.37 kW
— at 500 V rated value	0.55 kW
— at 690 V rated value	0.75 kW
• at AC-3e	0.70 KW
	0.07 144
— at 400 V rated value	0.37 kW
— at 500 V rated value	0.55 kW
— at 690 V rated value	0.75 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
<ul><li>at 125 V</li><li>at 220 V</li></ul>	0.22 A 0.11 A
• at 220 V	
at 220 V  contact rating of auxiliary contacts according to UL	0.11 A
• at 220 V  contact rating of auxiliary contacts according to UL  Protective and monitoring functions	0.11 A B600 / R300
at 220 V contact rating of auxiliary contacts according to UL Protective and monitoring functions trip class	0.11 A B600 / R300 CLASS 10
at 220 V  contact rating of auxiliary contacts according to UL  Protective and monitoring functions  trip class  design of the overload release	0.11 A B600 / R300
at 220 V contact rating of auxiliary contacts according to UL Protective and monitoring functions trip class design of the overload release UL/CSA ratings	0.11 A B600 / R300 CLASS 10
at 220 V contact rating of auxiliary contacts according to UL  Protective and monitoring functions  trip class design of the overload release  UL/CSA ratings full-load current (FLA) for 3-phase AC motor	0.11 A B600 / R300  CLASS 10 thermal
at 220 V  contact rating of auxiliary contacts according to UL  Protective and monitoring functions  trip class  design of the overload release  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor      at 480 V rated value	0.11 A B600 / R300  CLASS 10 thermal
at 220 V  contact rating of auxiliary contacts according to UL  Protective and monitoring functions  trip class  design of the overload release  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor      at 480 V rated value      at 600 V rated value	0.11 A B600 / R300  CLASS 10 thermal
at 220 V contact rating of auxiliary contacts according to UL Protective and monitoring functions trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor     at 480 V rated value     at 600 V rated value Short-circuit protection	0.11 A B600 / R300  CLASS 10 thermal
at 220 V contact rating of auxiliary contacts according to UL  Protective and monitoring functions  trip class design of the overload release  UL/CSA ratings 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	0.11 A B600 / R300  CLASS 10 thermal  1.3 A 1.3 A
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at 220 V contact rating of auxiliary contacts according to UL  Protective and monitoring functions  trip class  design of the overload release  UL/CSA ratings  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	0.11 A B600 / R300  CLASS 10 thermal  1.3 A 1.3 A 1.3 A any
at 220 V contact rating of auxiliary contacts according to UL  Protective and monitoring functions  trip class design of the overload release  UL/CSA ratings 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	0.11 A B600 / R300  CLASS 10 thermal  1.3 A 1.3 A 1.3 A  fuse gG: 6 A, quick: 10 A  any Contactor mounting
● at 220 V contact rating of auxiliary contacts according to UL  Protective and monitoring functions  trip class design of the overload release  UL/CSA ratings  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	0.11 A B600 / R300  CLASS 10 thermal  1.3 A 1.3 A  fuse gG: 6 A, quick: 10 A  any Contactor mounting 76 mm 45 mm
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● at 220 V contact rating of auxiliary contacts according to UL  Protective and monitoring functions  trip class  design of the overload release  UL/CSA ratings  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	0.11 A B600 / R300  CLASS 10 thermal  1.3 A 1.3 A 1.3 A  fuse gG: 6 A, quick: 10 A  any Contactor mounting 76 mm 45 mm 70 mm
at 220 V contact rating of auxiliary contacts according to UL Protective and monitoring functions trip class design of the overload release UL/CSA ratings 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	0.11 A B600 / R300  CLASS 10 thermal  1.3 A 1.3 A 1.3 A  fuse gG: 6 A, quick: 10 A  any Contactor mounting 76 mm 45 mm
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	0.11 A B600 / R300  CLASS 10 thermal  1.3 A 1.3 A  fuse gG: 6 A, quick: 10 A  any Contactor mounting 76 mm 45 mm 70 mm  No
● at 220 V  contact rating of auxiliary contacts according to UL  Protective and monitoring functions  trip class  design of the overload release  UL/CSA ratings  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	0.11 A B600 / R300  CLASS 10 thermal  1.3 A 1.3 A 1.3 A  fuse gG: 6 A, quick: 10 A  any Contactor mounting 76 mm 45 mm 70 mm  No  screw-type terminals screw-type terminals
	0.11 A B600 / R300  CLASS 10 thermal  1.3 A 1.3 A  fuse gG: 6 A, quick: 10 A  any Contactor mounting 76 mm 45 mm 70 mm  No
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● at 220 V contact rating of auxiliary contacts according to UL  Protective and monitoring functions  trip class design of the overload release  UL/CSA ratings  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	0.11 A B600 / R300  CLASS 10 thermal  1.3 A 1.3 A 1.3 A  fuse gG: 6 A, quick: 10 A  any Contactor mounting 76 mm 45 mm 70 mm  No  screw-type terminals screw-type terminals
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at 220 V     contact rating of auxiliary contacts according to UL     Protective and monitoring functions     trip class     design of the overload release     UL/CSA ratings     full-load current (FLA) for 3-phase AC motor	0.11 A B600 / R300  CLASS 10 thermal  1.3 A 1.3 A 1.3 A  any Contactor mounting 76 mm 45 mm 70 mm  No  screw-type terminals screw-type terminals Top and bottom

type of connectable conductor cross-sections	
<ul> <li>for auxiliary contacts</li> </ul>	
<ul><li>— solid or stranded</li></ul>	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









Confirmation





### For use in hazardous locations

**Test Certificates** 

Marine / Shipping





**Miscellaneous** 

Special Test Certificate

Type Test Certificates/Test Report



## Marine / Shipping













other Railway Environment

<u>Miscellaneous</u> <u>Confirmation</u>

Special Test Certificate



Environmental Confirmations

#### 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=3RU2116-0KB0

#### Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-0KB0

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

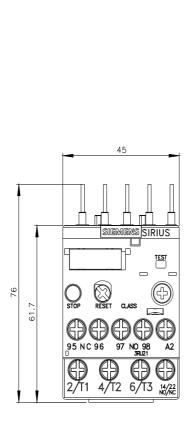
https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-0KB0

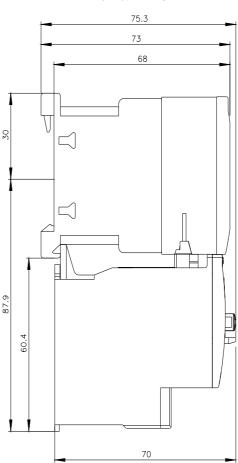
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <a href="http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RU2116-0KB0&lang=en">http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RU2116-0KB0&lang=en</a>

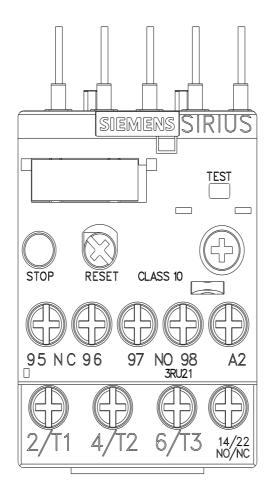
Characteristic: Tripping characteristics, I²t, Let-through current <a href="https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-0KB0/char">https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-0KB0/char</a>

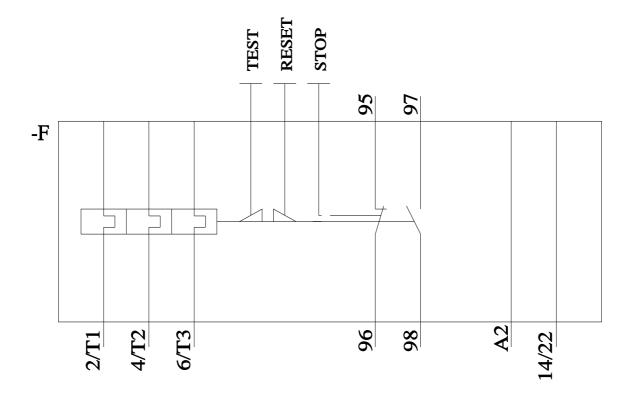
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-0KB0&objecttype=14&gridview=view1









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