## **SIEMENS**

Data sheet 3RU2116-0AC1



Overload relay 0.11...0.16 A Thermal For motor protection Size S00, Class 10 Stand-alone installation Main circuit: Spring-type terminal Auxiliary circuit: spring-type 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	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
<ul> <li>between main and auxiliary circuit</li> </ul>	440 V
shock resistance according to IEC 60068-2-27	8g / 11 ms
type of protection according to ATEX directive 2014/34/EU	Ex II (2) GD
certificate of suitability according to ATEX directive 2014/34/EU	DMT 98 ATEX G 001
reference code according to IEC 81346-2	F
Substance Prohibitance (Date)	10/01/2009
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	0.11 0.16 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	0.16 A
operational current rated value operational current at AC-3e at 400 V rated value	0.16 A 0.16 A

• at AC-3	
at AC-3  — at 400 V rated value	0.04 kW
— at 500 V rated value	0.04 kW
	0.06 kW
— at 690 V rated value ● at AC-3e	0.06 KVV
	0.04 MM
— at 400 V rated value	0.04 kW
— at 500 V rated value — at 690 V rated value	0.06 kW 0.06 kW
Auxiliary circuit	0.06 KW
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	CLASS 10 thermal
design of the overload release UL/CSA ratings	
design of the overload release  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor	thermal
design of the overload release  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor  • at 480 V rated value	thermal  0.16 A
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	thermal
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	thermal  0.16 A
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	0.16 A 0.16 A
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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	thermal  0.16 A  0.16 A  fuse gG: 6 A, quick: 10 A
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	thermal  0.16 A  0.16 A  fuse gG: 6 A, quick: 10 A  any
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	thermal  0.16 A  0.16 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation
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	thermal  0.16 A  0.16 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 102 mm
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	thermal  0.16 A  0.16 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation
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	thermal  0.16 A  0.16 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 102 mm 45 mm
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	thermal  0.16 A  0.16 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 102 mm 45 mm
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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	thermal  0.16 A  0.16 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 102 mm 45 mm 79 mm
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	thermal  0.16 A  0.16 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 102 mm 45 mm 79 mm  No
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	thermal  0.16 A 0.16 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 102 mm 45 mm 79 mm  No  spring-loaded terminals
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	thermal  0.16 A 0.16 A 0.16 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 102 mm 45 mm 79 mm  No  spring-loaded terminals spring-loaded terminals
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	thermal  0.16 A 0.16 A  0.16 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 102 mm 45 mm 79 mm  No  spring-loaded terminals spring-loaded terminals
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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  • for main contacts	thermal  0.16 A 0.16 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 102 mm 45 mm 79 mm  No  spring-loaded terminals spring-loaded terminals Top and bottom
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 • for main contacts — solid or stranded	thermal  0.16 A 0.16 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 102 mm 45 mm 79 mm  No  spring-loaded terminals spring-loaded terminals Top and bottom  1x (0,5 4 mm²)
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 • for main contacts  — solid or stranded  — finely stranded with core end processing	thermal  0.16 A 0.16 A 0.16 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 102 mm 45 mm 79 mm  No  spring-loaded terminals spring-loaded terminals Top and bottom  1x (0,5 4 mm²) 1x (0.5 2.5 mm²)
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 • for main contacts — solid or stranded — finely stranded with core end processing — finely stranded without core end processing	thermal  0.16 A 0.16 A 0.16 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 102 mm 45 mm 79 mm  No  spring-loaded terminals spring-loaded terminals Top and bottom  1x (0,5 4 mm²) 1x (0.5 2.5 mm²) 1x (0.5 2.5 mm²)

• for auxiliary contacts - solid or stranded 2x (0.5 ... 2.5 mm<sup>2</sup>) - finely stranded with core end processing 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) - finely stranded without core end processing 2x (0.5 ... 1.5 mm<sup>2</sup>) • for AWG cables for auxiliary contacts 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 T1 value for proof test interval or service life according to IEC 20 a 61508 IP20 protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front display version for switching status Slide switch

Certificates/ approvals

**General Product Approval** 

For use in hazardous locations

Confirmation











**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping





Special Test Certificate Type Test Certificates/Test Report





Marine / Shipping

other













Confirmation

other

Railway



Vibration and Shock

## Further information

Siemens has decided to exit the Russian market (see here).

 $\underline{\text{https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business}}$ 

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3RU2116-0AC1

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-0AC1

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

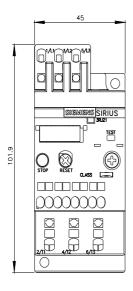
https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-0AC1

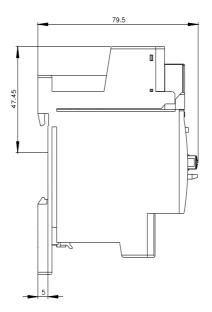
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

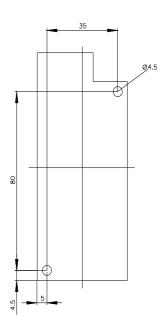
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RU2116-0AC1&lang=en

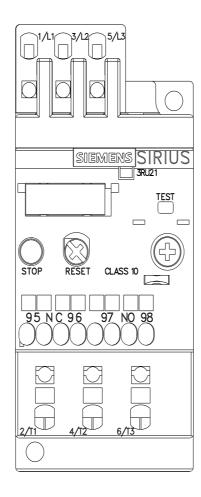
 $\label{eq:Characteristic: Tripping characteristics, I^2t, Let-through current} \end{substitute}$ 

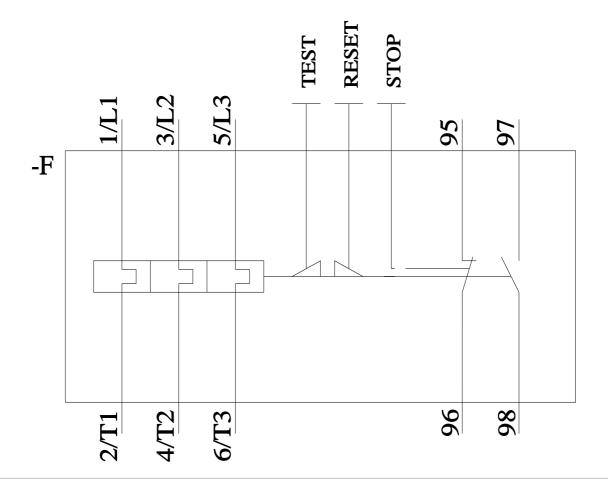
https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-0AC1/char











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