## **SIEMENS**

Data sheet 3RU2116-0BB1



Overload relay 0.14...0.20 A Thermal For motor protection Size S00, Class 10 Stand-alone installation 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
<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
	F
reference code according to IEC 81346-2	1
Substance Prohibitance (Date)	10/01/2009
Substance Prohibitance (Date)	
Substance Prohibitance (Date) Ambient conditions	10/01/2009
Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum	10/01/2009
Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum ambient temperature	10/01/2009 2 000 m
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation	10/01/2009 2 000 m -40 +70 °C
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage	10/01/2009 2 000 m -40 +70 °C -55 +80 °C
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  • during transport	10/01/2009  2 000 m  -40 +70 °C  -55 +80 °C  -55 +80 °C
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during transport  temperature compensation	10/01/2009  2 000 m  -40 +70 °C  -55 +80 °C  -55 +80 °C  -40 +60 °C
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during transport  temperature compensation  relative humidity during operation	10/01/2009  2 000 m  -40 +70 °C  -55 +80 °C  -55 +80 °C  -40 +60 °C
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during transport  temperature compensation relative humidity during operation  Main circuit	10/01/2009  2 000 m  -40 +70 °C  -55 +80 °C  -55 +80 °C  -40 +60 °C  10 95 %
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during transport  temperature compensation  relative humidity during operation  Main circuit  number of poles for main current circuit  adjustable current response value current of the current-	10/01/2009  2 000 m  -40 +70 °C  -55 +80 °C  -55 +80 °C  -40 +60 °C  10 95 %
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during transport  temperature compensation relative humidity during operation  Main circuit  number of poles for main current circuit adjustable current response value current of the current-dependent overload release	10/01/2009  2 000 m  -40 +70 °C  -55 +80 °C  -55 +80 °C  -40 +60 °C  10 95 %
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  • during transport  temperature compensation  relative humidity during operation  Main circuit  number of poles for main current circuit  adjustable current response value current of the current-dependent overload release  operating voltage	10/01/2009  2 000 m  -40 +70 °C  -55 +80 °C  -55 +80 °C  -40 +60 °C  10 95 %  3  0.14 0.2 A
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during transport  temperature compensation  relative humidity during operation  Main circuit  number of poles for main current circuit  adjustable current response value current of the current-dependent overload release  operating voltage • rated value	10/01/2009  2 000 m  -40 +70 °C  -55 +80 °C  -55 +80 °C  -40 +60 °C  10 95 %  3  0.14 0.2 A
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  • during transport  temperature compensation  relative humidity during operation  Main circuit  number of poles for main current circuit  adjustable current response value current of the current-dependent overload release  operating voltage  • rated value  • at AC-3e rated value maximum	10/01/2009  2 000 m  -40 +70 °C  -55 +80 °C  -55 +80 °C  -40 +60 °C  10 95 %  3  0.14 0.2 A
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during transport  temperature compensation relative humidity during operation  Main circuit  number of poles for main current circuit  adjustable current response value current of the current-dependent overload release  operating voltage • rated value • at AC-3e rated value maximum  operating frequency rated value	10/01/2009  2 000 m  -40 +70 °C  -55 +80 °C  -55 +80 °C  -40 +60 °C  10 95 %  3  0.14 0.2 A  690 V  690 V  50 60 Hz

• at AC-3			
● at AC-3  — at 400 V rated value	0.06 kW		
— at 500 V rated value	0.06 kW		
— at 690 V rated value	0.09 kW		
• at AC-3e	0.00 144		
— at 400 V rated value	0.06 kW		
— at 500 V rated value	0.06 kW		
— at 690 V rated value	0.09 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	91.400.40		
trip class	CLASS 10		
design of the overload release	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  0.2 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  0.2 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	thermal  0.2 A  0.2 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	thermal  0.2 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	thermal  0.2 A  0.2 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  0.2 A  0.2 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  0.2 A  0.2 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  0.2 A 0.2 A  0.2 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 89 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  0.2 A  0.2 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 89 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  depth	thermal  0.2 A 0.2 A  1.2 A  1.2 A  1.3 A  1.4 A  1.5 A  1.5 A  1.6 A  1.7 A  1		
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	thermal  0.2 A  0.2 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 89 mm 45 mm 80 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	thermal  0.2 A  0.2 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 89 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  depth  Connections/ Terminals  product component removable terminal for auxiliary and control circuit	thermal  0.2 A  0.2 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 89 mm 45 mm 80 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	thermal  0.2 A 0.2 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 89 mm 45 mm 80 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  • for main current circuit	thermal  0.2 A 0.2 A  1.2 A  1.2 A  1.3 A  1.4 A  1.5 A  1.5 A  1.6 A  1.7 A  1		
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  0.2 A 0.2 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 89 mm 45 mm 80 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 • for main current circuit • for auxiliary and control circuit  arrangement of electrical connectors for main current	thermal  0.2 A 0.2 A 0.2 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 89 mm 45 mm 80 mm  No  Screw-type terminals screw-type 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  0.2 A 0.2 A 0.2 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 89 mm 45 mm 80 mm  No  Screw-type terminals screw-type 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  type of connectable conductor cross-sections	thermal  0.2 A 0.2 A 0.2 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 89 mm 45 mm 80 mm  No  Screw-type terminals screw-type 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  type of connectable conductor cross-sections  • for main contacts	thermal  0.2 A 0.2 A 0.2 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 89 mm 45 mm 80 mm  No  screw-type terminals screw-type 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  0.2 A 0.2 A 0.2 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 89 mm 45 mm 80 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		
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  0.2 A 0.2 A 0.2 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 89 mm 45 mm 80 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)		
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 • for AWG cables for main contacts	thermal  0.2 A 0.2 A 0.2 A  fuse gG: 6 A, quick: 10 A  any stand-alone installation 89 mm 45 mm 80 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)		

<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)		
for AWG cables for auxiliary contacts	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		
T1 value for proof test interval or service life according to IEC 61508	20 a		
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		
Certificates/ approvals			
General Product Approval		For use in hazardous locations	

Confirmation











IECEx

**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping





Special Test Certificate

Type Test Certificates/Test Report





Marine / Shipping

ĴÅ DNV



100







Confirmation

other

other

Railway



Vibration and Shock

## Further information

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

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=3RU2116-0BB1

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-0BB1

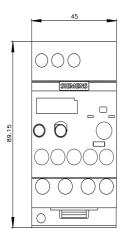
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

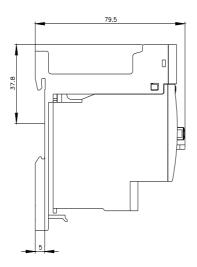
https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-0BB1

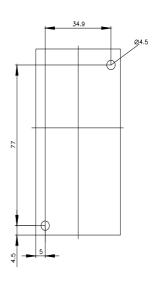
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RU2116-0BB1&lang=en

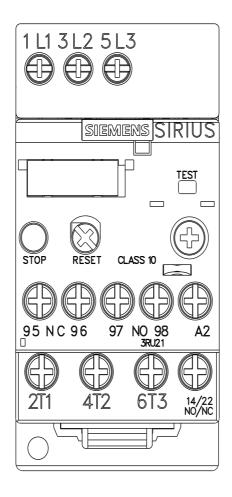
Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-0BB1/char

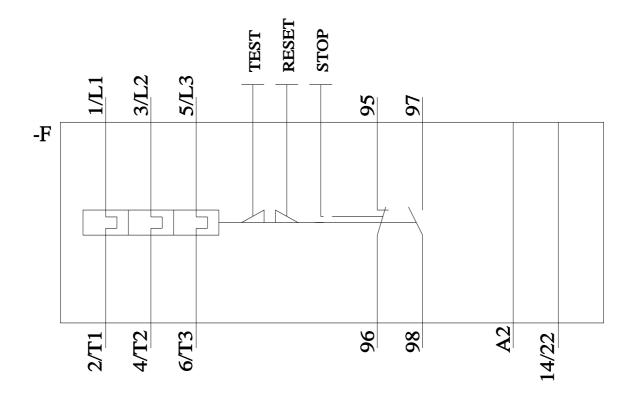
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-0BB1&objecttype=14&gridview=view1











last modified: 3/8/2022 🖸