SIEMENS

Data sheet 3RU2116-1EB1



Overload relay 2.8...4.0 A Thermal For motor protection Size S00, Class 10 Standalone 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	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 in networks with grounded star point			
 between auxiliary and auxiliary circuit 	440 V		
 between auxiliary and auxiliary circuit 	440 V		
 between main and auxiliary circuit 	440 V		
 between main and auxiliary circuit 	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 and according to IFC 0424C 0	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 %		
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 2.8 4 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 2.8 4 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 2.8 4 A 690 V 690 V 50 60 Hz		

• at AC-3			
● at AC-3 — at 400 V rated value	1.5 kW		
— at 500 V rated value	2.2 kW		
— at 690 V rated value	3 kW		
• at AC-3e	4.5 1344		
— at 400 V rated value	1.5 kW		
— at 500 V rated value	2.2 kW		
— at 690 V rated value	3 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			
Protective and monitoring functions trip class	CLASS 10		
-	CLASS 10 thermal		
trip class			
trip class design of the overload release			
trip class design of the overload release UL/CSA ratings			
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor	thermal		
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value	thermal 4 A		
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	thermal 4 A		
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	thermal 4 A		
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	thermal 4 A 4 A		
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	thermal 4 A 4 A fuse gG: 6 A, quick: 10 A		
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	thermal 4 A 4 A		
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor	thermal 4 A 4 A 5 If use gG: 6 A, quick: 10 A any		
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	thermal 4 A 4 A 5 fuse gG: 6 A, quick: 10 A any stand-alone installation		
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	thermal 4 A 4 A 4 A fuse gG: 6 A, quick: 10 A any stand-alone installation 89 mm		
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	thermal 4 A 4 A fuse gG: 6 A, quick: 10 A any stand-alone installation 89 mm 45 mm		
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	thermal 4 A 4 A fuse gG: 6 A, quick: 10 A any stand-alone installation 89 mm 45 mm		
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor	thermal 4 A 4 A 4 A fuse gG: 6 A, quick: 10 A any stand-alone installation 89 mm 45 mm 80 mm		
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor	thermal 4 A 4 A fuse gG: 6 A, quick: 10 A any stand-alone installation 89 mm 45 mm 80 mm		
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor	thermal 4 A 4 A 4 A fuse gG: 6 A, quick: 10 A any stand-alone installation 89 mm 45 mm 80 mm No screw-type terminals		
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor	thermal 4 A 4 A 4 A fuse gG: 6 A, quick: 10 A any stand-alone installation 89 mm 45 mm 80 mm		
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor	thermal 4 A 4 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		
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor	thermal 4 A 4 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		
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 • for main contacts	thermal 4 A 4 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		
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor	thermal 4 A 4 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		
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor	thermal 4 A 4 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)		
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor	thermal 4 A 4 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		
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor	thermal 4 A 4 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)		

 — solid or stranded 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)		
 finely stranded with core end processing 	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			
 for main contacts with screw-type terminals 	0.8 1.2 N·m		
 for auxiliary contacts with screw-type terminals 	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		
 of the auxiliary and control contacts 	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











Declaration of Conformity

Test Certificates

Marine / Shipping





Special Test Certificate

Type Test Certificates/Test Report





Marine / Shipping





LRS







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=3RU2116-1EB1

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1EB1

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

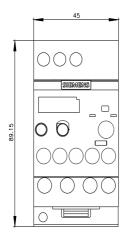
https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1EB1

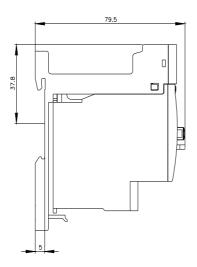
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

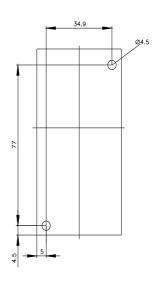
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1EB1&lang=en

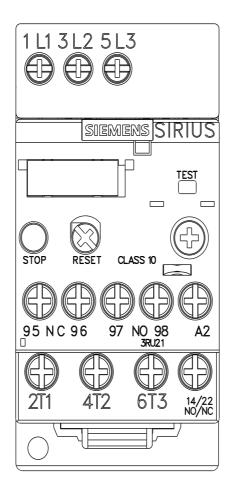
Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1EB1/char

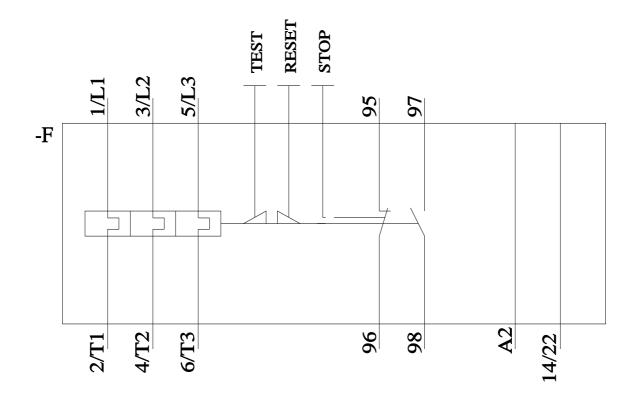
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1EB1&objecttype=14&gridview=view1











last modified: 3/8/2022 🖸