SIEMENS

Data sheet 3RU2116-1FC1



Overload relay 3.5...5.0 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	6.6 W
• per pole	2.2 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 safe isolation 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 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	
during operation	-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	3.5 5 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	5 A
operational current at AC-3e at 400 V rated value	5 A

, ri	
operating power	
• at AC-3	4 5 134
— at 400 V rated value	1.5 kW
— at 500 V rated value	2.2 kW
— at 690 V rated value	4 kW
• at AC-3e	A E LAN
— at 400 V rated value	1.5 kW
— at 500 V rated value	2.2 kW
— at 690 V rated value	4 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
trip class design of the overload release	CLASS 10 thermal
design of the overload release	
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	
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 5 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	thermal 5 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	5 A 5 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	thermal 5 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	5 A 5 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	5 A 5 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 5 A 5 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 5 A 5 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 5 A 5 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 5 A 5 A 5 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 5 A 5 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 depth Connections/ Terminals product component removable terminal for auxiliary	thermal 5 A 5 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 depth Connections/ Terminals product component removable terminal for auxiliary and control circuit	thermal 5 A 5 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 5 A 5 A 5 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 5 A 5 A 5 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	thermal 5 A 5 A 5 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	thermal 5 A 5 A 5 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 circuit	thermal 5 A 5 A 5 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 type of connectable conductor cross-sections	thermal 5 A 5 A 5 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 5 A 5 A 5 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	thermal 5 A 5 A 5 A fuse gG: 6 A, quick: 10 A any stand-alone installation 102 mm 45 mm 79 mm No 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	thermal 5 A 5 A 5 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 — finely stranded with core end processing	thermal 5 A 5 A 5 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 5 A 5 A 5 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

- finely stranded with core end processing

- finely stranded without core end processing

• at AWG cables for auxiliary contacts

design of screwdriver shaft

2x (0.5 ... 2.5 mm²)

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)

2x (0.5 ... 1.5 mm²)

2x (20 ... 14)

Diameter 3 mm 3,0 x 0,5 mm

size of the screwdriver tip

Safety related data

failure rate [FIT] with low demand rate according to SN

31920

MTTF with high demand rate

T1 value for proof test interval or service life according to

IEC 61508

protection class IP on the front according to IEC

60529

touch protection on the front according to IEC 60529

20 y IP20

50 FIT

2 280 y

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







IECEx

For use in hazardous locations

Declaration of Conformity

Test Certificates

Marine / Shipping







Type Test Certificates/Test Report

Special Test Certificate



Marine / Shipping













other

Railway

Confirmation

Vibration and Shock

Further information

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=3RU2116-1FC1

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1FC1

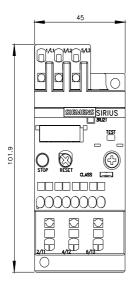
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

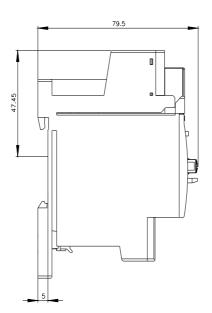
https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1FC1

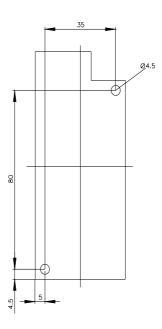
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

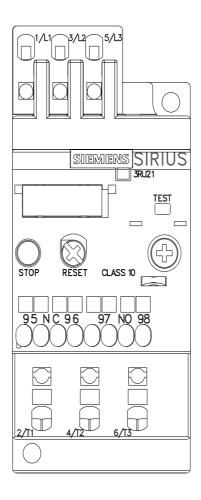
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1FC1&lang=en

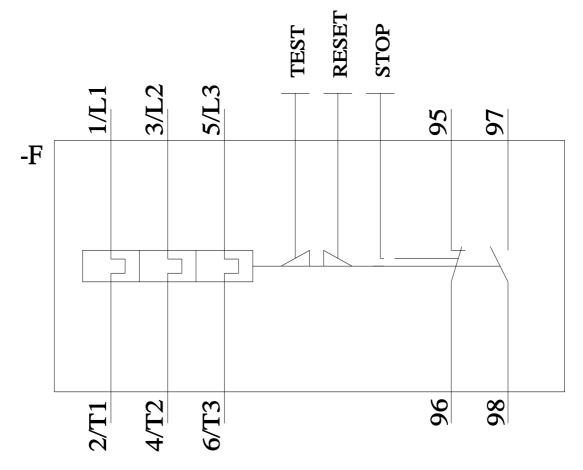
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1FC1&objecttype=14&gridview=view1











last modified: 3/8/2022 🖸