SIEMENS

Data sheet 3RU2116-1EB1

OVERLOAD RELAY 2.8...4.0 A FOR MOTOR PROTECTION SZ S00, CLASS 10, STAND-ALONE INSTALLATION MAIN CIRCUIT: SCREW TERMINAL AUX. CIRCUIT: SCREW TERMINAL MANUAL-AUTOMATIC-RESET

product brand name	SIRIUS
Product designation	3RU2 thermal overload relay

General technical data:	
Active power loss total typical	5.4 W
Insulation voltage	
• with degree of pollution 3 Rated value	690 V
Surge voltage resistance Rated value	6 kV
Temperature compensation	-40 ... +60 °C
Size of contactor can be combined company-specific	S00
Type of assignment	2
Protection class IP	
• on the front	IP20
• of the terminal	IP20
Type of protection	DMT 98 ATEX G 001
Equipment marking	
• acc. to DIN EN 81346-2	F

Main circuit:	
Number of poles for main current circuit	3
Adjustable response value current of the current-dependent overload release	2.8 ... 4 A
Operating voltage	
• Rated value	690 V
• at AC-3 Rated value maximum	690 V
Operating frequency Rated value	50 ... 60 Hz
Operating current Rated value	4 A

Operating current	
• at AC-3	
— at 400 V Rated value	4 A

Auxiliary circuit:	
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
Design of the auxiliary switch	integrated
Operating current of the 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
Operating current of the auxiliary contacts at DC-13	
• at 24 V	2 A
• at 110 V	0.22 A
• at 125 V	0.22 A
• at 220 V	0.11 A

Protective and monitoring functions:	
Trip class	CLASS 10
Design of the overload circuit breaker	thermal

UL/CSA ratings:	
Full-load current (FLA) for three-phase AC motor	
• at 480 V Rated value	4 A
• at 600 V Rated value	4 A
Contact rating of the auxiliary contacts acc. to UL	B600 / R300

Installation/ mounting/ dimensions:	
mounting position	any
Mounting type	stand-alone installation
Height	89 mm
Width	45 mm
Depth	80 mm
Required spacing	
• with side-by-side mounting	

— forwards	0 mm
— Backwards	0 mm
— upwards	6 mm
— downwards	6 mm
— at the side	6 mm
• for grounded parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	6 mm
— at the side	6 mm
— downwards	6 mm
• for live parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	6 mm
— downwards	6 mm
— at the side	6 mm

Connections/ Terminals:

Product function	
• removable terminal for auxiliary and control circuit	No
Type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control current circuit	screw-type terminals
Arrangement of electrical connectors for main current circuit	Top and bottom
Type of connectable conductor cross-section	
• for main contacts	
— single or multi-stranded	2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²), 2x 4 mm²
— finely stranded with core end processing	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
• for AWG conductors for main contacts	2x (20 ... 16), 2x (20 ... 18), 2x 12
• for auxiliary contacts	
— single or multi-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 conductors for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14)
Design of screwdriver shaft	5 to 6 mm diameter
Design of the thread of the connection screw	
• for main contacts	M3
• of the auxiliary and control contacts	M3

Safety related data:

Proportion of dangerous failures	

• with low demand rate acc. to SN 31920	50 %
• with high demand rate acc. to SN 31920	50 %
MTTF with high demand rate	2 280 y
T1 value for proof test interval or service life acc. to IEC 61508	20 y
Protection against electrical shock	finger-safe

Mechanical data:

Size of overload relay	S00

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
Relative humidity during operation	0 ... 90 %

Display:

Display version	
• for switching status	Slide switch

Certificates/ approvals:

General Product Approval				For use in hazardous locations	Declaration of Conformity
CCC	CSA	EAC	UL	ATEX	EG-Konf.

Test Certificates		Shipping Approval			
Type Test Certificates/Test Report	Special Test Certificate	ABS	BUREAU VERITAS	DNV	GL

Shipping Approval				other
LRS	PRS	RINA	RMRS	Environmental Confirmations

Further information

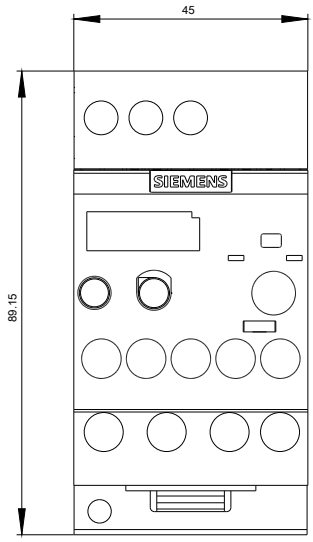
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

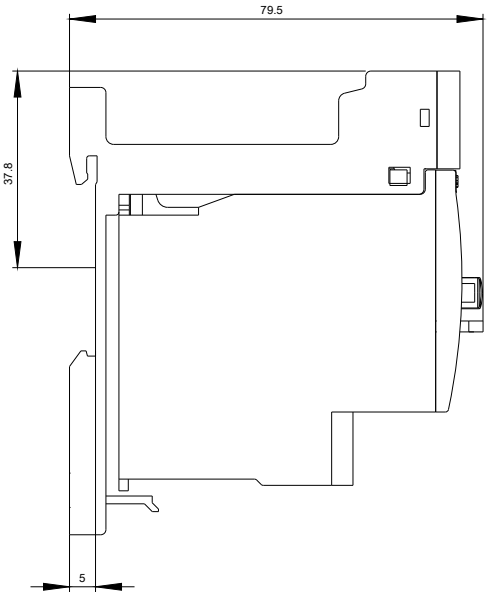
Industry Mall (Online ordering system)
http://www.siemens.com/industrymall

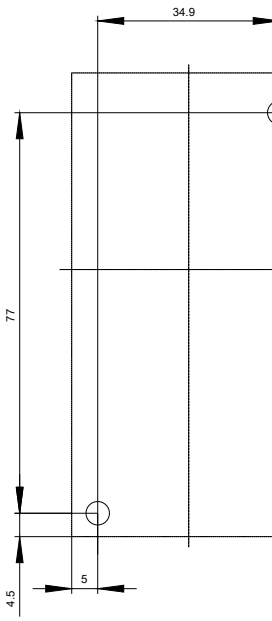
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU21161EB1

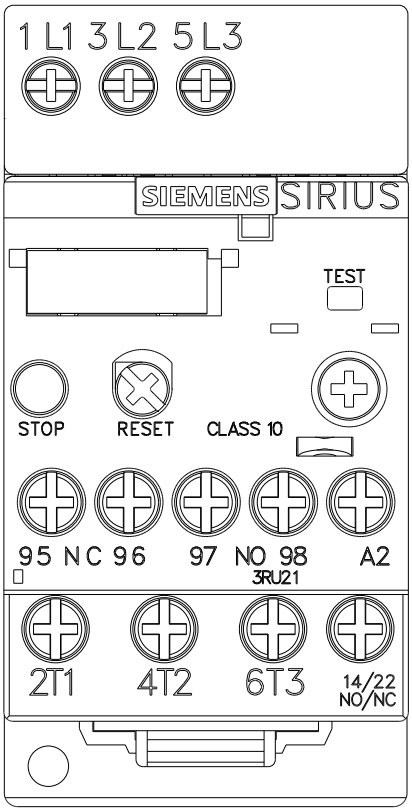
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RU21161EB1

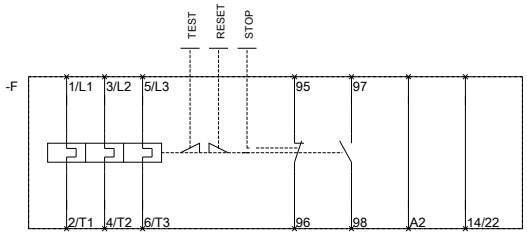
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU21161EB1&lang=en











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