SIEMENS

Data sheet 3RU2116-1FB0



OVERLOAD RELAY 3.5...5.0 A FOR MOTOR PROTECTION SZ S00, CLASS 10, F. MOUNTING ONTO CONTACTOR MAIN CIRCUIT: SCREW TERMINAL AUX. CIRCUIT: SCREW TERMINAL MANUAL-AUTOMATIC-RESET

KE-541	
product brand name	SIRIUS
F	
Product designation	3RU2 thermal overload relay
1 Toddot designation	ortoz tricimai overload relay

General technical data:		
Active power loss total typical	W	6.1
Insulation voltage		
 with degree of pollution 3 Rated value 	V	690
Shock resistance		
● acc. to IEC 60068-2-27		8g / 11 ms
Surge voltage resistance Rated value	kV	6
Temperature compensation	°C	-40 +60
Size of contactor can be combined company-specific		S00
Type of assignment		2
Protection class IP		
• on the front		IP20
• of the terminal		IP20
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	Α	3.5 5
Operating voltage		
Rated value	V	690
 at AC-3 Rated value maximum 	V	690
Operating frequency Rated value	Hz	50 60

Operating current Rated value	Α	5
Operating current		
• at AC-3		
— at 400 V Rated value	Α	5
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	Α	3
● at 110 V	Α	3
● at 120 V	Α	3
● at 125 V	Α	3
● at 230 V	Α	2
● at 400 V	Α	1
Operating current of the auxiliary contacts at DC-13		
● at 24 V	Α	2
● at 110 V	Α	0.22
● at 125 V	Α	0.22
• at 220 V	Α	0.11
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	Α	5
• at 600 V Rated value	Α	5
Contact rating of the auxiliary contacts acc. to UL		B600 / R300
Installation/ mounting/ dimensions:		
mounting position		any
Mounting type		direct mounting
Height	mm	76
Width	mm	45
Depth	mm	70
Required spacing		

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

Connections/ Terminals:		
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
Product function		
 removable terminal for auxiliary and control circuit 		No
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)
Tightening torque		
 for main contacts with screw-type terminals 	N·m	0.8 1.2
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
Failure rate [FIT] with low demand rate acc. to SN 31920	FIT	50
MTTF with high demand rate	У	2 280
T1 value for proof test interval or service life acc. to IEC 61508	У	20
Protection against electrical shock		finger-safe
Mechanical data:		
Size of overload relay		S00
Ambient conditions:		
Installation altitude at height above sea level maximum	m	2 000
Ambient temperature		
during operation	°C	-40 + 70
during storage	°C	-55 + 80
during transport	°C	-55 + 80
Relative humidity during operation	%	0 90
Display:		
Display version		
• for switching status		Slide switch
Certificates/ approvals:		

General Product Approval For use in hazardous Conformity locations













Test Certificates

Shipping Approval

Special Test Certificate Type Test
Certificates/Test
Report







other



GL

Shipping Approval











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

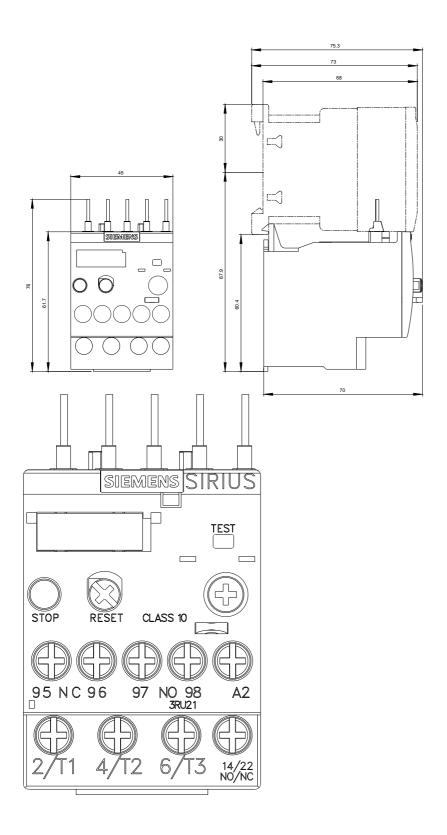
Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU21161FB0

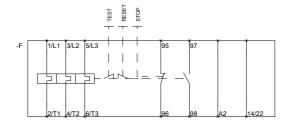
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

http://support.automation.siemens.com/WW/view/en/3RU21161FB0/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU21161FB0&lang=en



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