# **SIEMENS**

#### Data sheet

### 3RU2116-0FB0



OVERLOAD RELAY 0.35...0.50 A FOR MOTOR PROTECTION SZ S00, CLASS 10, F. MOUNTING ONTO CONTACTOR 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	W	4.2		
Insulation voltage	-	7.2		
•	N/	600		
<ul> <li>with degree of pollution 3 Rated value</li> </ul>	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-	А	0.35 0.5		
dependent overload release				
Operating voltage				
Rated value	V	690		
<ul> <li>at AC-3 Rated value maximum</li> </ul>	V	690		
Operating frequency Rated value	Hz	50 60		

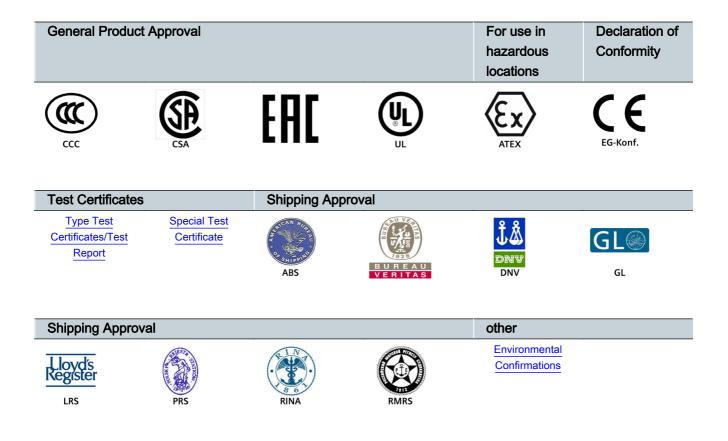
Operating current Rated value	А	0.5
Operating current	-	
• at AC-3		
— at 400 V Rated value	А	0.5
Auxiliary circuit:		
Number of NC contacts		
<ul> <li>for auxiliary contacts</li> </ul>		1
— Note		for contactor disconnection
Number of NO contacts	-	
<ul> <li>for auxiliary contacts</li> </ul>		1
— Note		for message "Tripped"
Number of CO contacts		
<ul> <li>for auxiliary contacts</li> </ul>		0
Design of the auxiliary switch	-	integrated
Operating current of the auxiliary contacts at AC-15	-	
• at 24 V	А	3
● at 110 V	А	3
• at 120 V	А	3
• at 125 V	А	3
• at 230 V	А	2
● at 400 V	А	1
Operating current of the auxiliary contacts at DC-13		
• at 24 V	А	2
● at 110 V	А	0.22
● at 125 V	А	0.22
• at 220 V	А	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	А	0.5
● at 600 V Rated value	А	0.5
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		

<ul> <li>with side-by-side mounting</li> </ul>		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	6
— downwards	mm	6
— at the side	mm	6
<ul> <li>for grounded parts</li> </ul>		
— 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		
<ul> <li>for main current circuit</li> </ul>		screw-type terminals
<ul> <li>for auxiliary and control current circuit</li> </ul>		screw-type terminals
Arrangement of electrical connectors for main current circuit		Top and bottom
Product function		
		Na
<ul> <li>removable terminal for auxiliary and control aircuit</li> </ul>		No
circuit		
Type of connectable conductor cross-section		
<ul> <li>for main contacts</li> </ul>		
<ul> <li>— single or multi-stranded</li> </ul>		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)
<ul> <li>for AWG conductors for main contacts</li> </ul>		2x (20 16), 2x (20 18), 2x 12
<ul> <li>for auxiliary contacts</li> </ul>		
— 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)
<ul> <li>for AWG conductors for auxiliary contacts</li> </ul>		2x (20 16), 2x (18 14)
Tightening torque		
<ul> <li>for main contacts with screw-type terminals</li> </ul>	N∙m	0.8 1.2
Design of screwdriver shaft		5 to 6 mm diameter
Design of the thread of the connection screw		
<ul> <li>for main contacts</li> </ul>		M3

<ul> <li>of the auxiliary and control contacts</li> </ul>		M3	
Safety related data:			
Proportion of dangerous failures			
<ul> <li>with low demand rate acc. to SN 31920</li> </ul>	%	50	
<ul> <li>with high demand rate acc. to SN 31920</li> </ul>	%	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	-		
<ul> <li>during operation</li> </ul>	°C	-40 +70	
• during storage	°C	-55 +80	
<ul> <li>during transport</li> </ul>	°C	-55 +80	
Relative humidity during operation	%	0 90	
Display:			
Display version			
• for switching status		Slide switch	
Certificates/ approvals:			



#### Further information

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

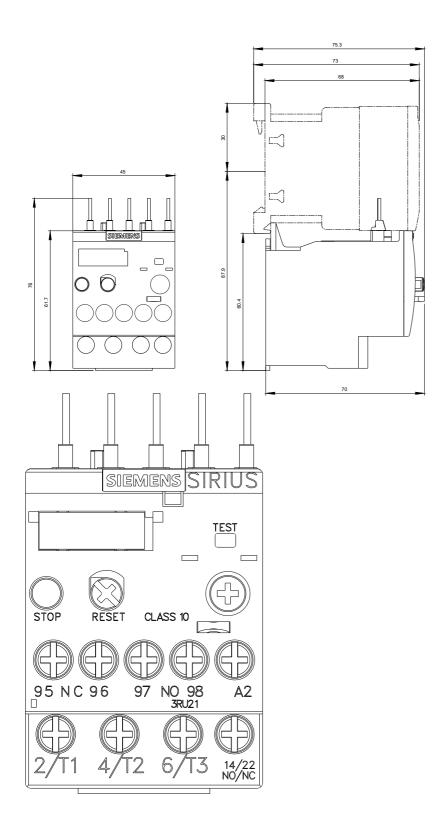
Industry Mall (Online ordering system) http://www.siemens.com/industrymall

Cax online generator

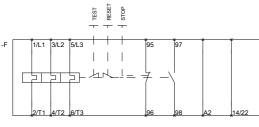
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU21160FB0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3RU21160FB0/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=3RU21160FB0&lang=en



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