## **SIEMENS**

Data sheet 3RU2116-1AB0



OVERLOAD RELAY 1.1...1.6 A FOR MOTOR PROTECTION SZ S00, CLASS 10, F. MOUNTING ONTO CONTACTOR MAIN CIRCUIT: SCREW TERMINAL AUX. CIRCUIT: SCREW TERMINAL MANUAL-AUTOMATIC-RESET

+ E-241	
product brand name	SIRIUS
Product designation	3RU2 thermal overload relay

General technical data:		
Active power loss total typical	W	5.1
Insulation voltage		
<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 <b>+</b> 60
Size of contactor can be combined company-specific		S00
Type of assignment		2
Protection class IP		
• on the front		IP20
<ul><li>of the terminal</li></ul>		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	1.1 1.6
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	Α	1.6
Operating current		
• at AC-3		
— at 400 V Rated value	Α	1.6
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		
<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	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	1.6
• at 600 V Rated value	Α	1.6
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
• 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
<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		
<ul> <li>removable terminal for auxiliary and control circuit</li> </ul>		No
Type of connectable conductor cross-section		
• for main contacts		
<ul><li>— single or multi-stranded</li></ul>		2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm²
<ul> <li>finely stranded with core end processing</li> </ul>		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
• for auxiliary contacts		
<ul><li>— single or multi-stranded</li></ul>		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		
• for main contacts		M3

of the auxiliary and control contacts		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		
during operation	°C	-40 <b>+</b> 70
during storage	°C	-55 <b>+</b> 80
during transport	°C	-55 <b>+</b> 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

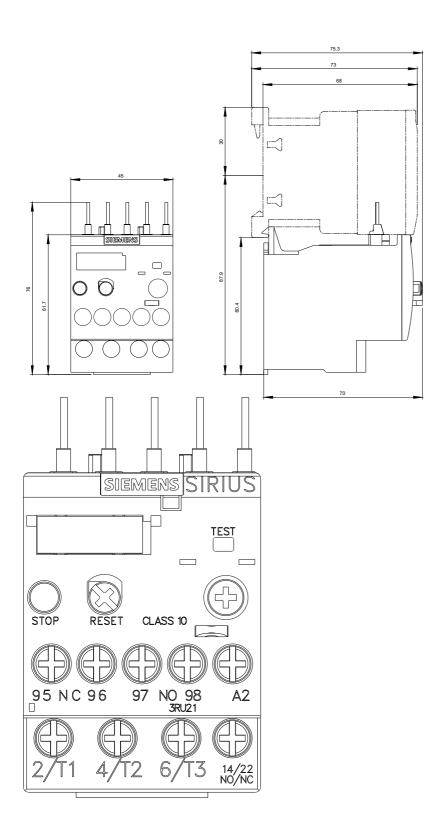
Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU21161AB0

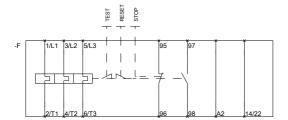
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

http://support.automation.siemens.com/WW/view/en/3RU21161AB0/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=3RU21161AB0&lang=en



MICEIORISACHTREZAIS FUER



MONTHUM THE CATY OF OR

last modified:

11.03.2015