# **SIEMENS**

Product data sheet 3RU2116-1EB0



OVERLOAD RELAY 2.8...4.0 A FOR MOTOR PROTECTION SZ S00, CLASS 10, F. MOUNTING ONTO CONTACTOR MAIN CIRCUIT:

SCREW TERMINAL AUX. CIRCUIT: SCREW TERMINAL MANUAL-AUTOMATIC-RESET

General technical data:		
product brand name		SIRIUS
product designation		3RU2 thermal overload relay
Protection class IP / on the front		IP20
Insulation voltage / with degree of pollution 3		
• rated value	V	690
Installation altitude / at a height over sea level / maximum	m	2,000
Ambient temperature		
during transport	°C	-55 +80
during storage	°C	-55 +80
during operating	°C	-40 +70
Relative humidity		
during operating phase	/ %	90
Resistance against shock		8g / 11 ms
Impulse voltage resistance / rated value	kV	6
Active power loss / total / typical	W	5.4
Item designation		
<ul> <li>according to DIN 40719 extendable after IEC 204-2 / according to IEC 750</li> </ul>		F
according to DIN EN 61346-2		F

Trip class	CLASS 10
Type of assignement	2
Size of overload relay	S00
Size of the contactor / can be combined	
• company-specific	S00

Main circuit:		
Number of poles / for main current circuit		3
Operating voltage / at AC-3 / rated value		
• maximum	V	690
Operating current / at AC-3 / at 400 V		
• rated value	Α	4
Service power / at AC-3		
• at 400 V / rated value	kW	1.5
• at 500 V / rated value	kW	2.2
• at 690 V / rated value	kW	3
Adjustable response current		
of the current-dependent overload release	Α	2.8 4
Operating current / of the fuse link / rated value	Α	16

Auxiliary circuit:		
Contact reliability / of the auxiliary contacts		< 1 error per 100 million operating cycles
Number of NC contacts / for auxiliary contacts		1
Number of NO contacts / for auxiliary contacts		1
Number of change-over switches / for auxiliary contacts		0
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
• at DC-13		
• at 24 V	Α	1
• at 110 V	Α	0.22
• at 125 V	Α	0.22
• at 220 V	Α	0.11

## Short-circuit:

Design of the fuse link / for short-circuit protection of the	
auxiliary switch / required	

fuse gG: 10 A

Built in orientation		vertical
Type of mounting		direct mounting
Width	mm	45
Height	mm	87
Depth	mm	73
Distance, to be maintained, to the ranks assembly		
• forwards	mm	0
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sidewards	mm	6
Distance, to be maintained, to earthed part		
• forwards	mm	0
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sidewards	mm	6
Distance, to be maintained, conductive elements		
• forwards	mm	0
• backwards	mm	0
• upwards	mm	6
• downwards	mm	6
• sidewards	mm	6
Connections:		
Design of the electrical connection		
for main current circuit		screw-type terminals
for auxiliary and control current circuit		screw-type terminals
Product function / removable terminal for auxiliary and control circuit		No
Type of the connectable conductor cross-section		
• for main contacts		
• solid		2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
• finely stranded		
with conductor end processing		2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)

• for auxiliary contacts

• for AWG conductors / for main contacts

2x (20 ... 16), 2x (18 ... 14), 2x 12

• solid

· finely stranded

• with conductor end processing

• for AWG conductors / for auxiliary contacts

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

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

For use in hazardous locations

2x (20 ... 16), 2x (18 ... 14)

### Certificates/approvals:

Verification of suitability

• ATEX

CE/UL/CSA

Yes

### **General Product Approval**









### **Test Certificates**

Special Test Certificate Type Test
Certificates/Test
Report

### **Shipping Approval**













**Shipping Approval** 

other



Declaration of Conformity

### **UL/CSA** ratings:

Contact rating designation / for auxiliary contacts / according to UL

B600 / R300

Reliability figures:		
Mean time to failure (MTTF) / with high demand rate	а	2,280
Proportion of dangerous failures		
• with low demand rate / according to SN 31920	%	50
<ul> <li>with high demand rate / according to SN 31920</li> </ul>	%	50
Failure rate (FIT value) / with low demand rate		
according to SN 31920	FIT	50
T1 value / for proof test interval or service life		
according to IEC 61508	а	20
Protection against electrical shock		finger-safe

### **Further information:**

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/industrial-controls/catalogs

### Industry Mall (Online ordering system)

http://www.siemens.com/industrial-controls/mall

#### Cax online generator:

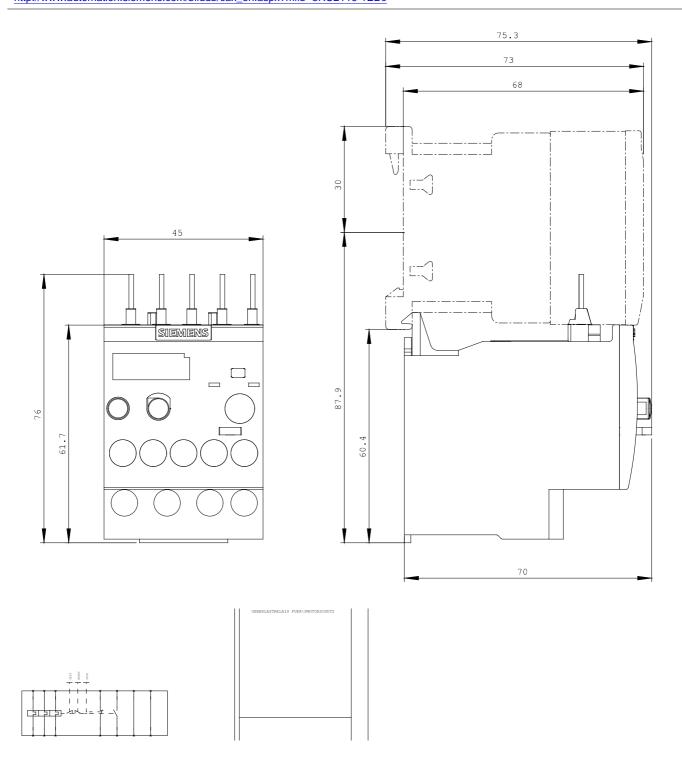
http://www.siemens.com/cax

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

http://support.automation.siemens.com/WW/view/en/3RU2116-1EB0/all

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

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RU2116-1EB0



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