



SIRIUS SAFETY RELAY OUTPUT EXTENSION 4RO WITH  
RELAY ENABLING CIRCUITS 4 NO CONTACTS + RELAY  
SIGNALING CIRCUIT 1 NC CONTACT US = 24 V AC  
SCREW CONNECTION

### General technical details:

product brand name		SIRIUS
product designation		safety relays
Design of the product		Expansion unit
protection class IP / of the housing		IP20
Protection against electrical shock		finger-safe
Insulation voltage / rated value	V	300
Ambient temperature		
• during storage	°C	-40 ... +80
• during operating	°C	-25 ... +60
Air pressure		
• according to SN 31205	kPa	90 ... 106
Relative humidity		
• during operating phase	%	10 ... 95
Installation altitude / at a height over sea level / maximum	m	2,000
Resistance against vibration / according to IEC 60068-2-6		5 ... 500 Hz: 0,75 mm
Resistance against shock		10g / 11 ms
Impulse voltage resistance / rated value	V	4,000
EMC emitted interference		IEC 60947-5-1, IEC 61000

<b>Installation environment relating to EMC</b>		This product is suitable for Class B environments and can also be used in domestic environments.
<b>Overvoltage class</b>		Installation category III
<b>Degree of pollution</b>		3
<b>Item designation</b> • according to DIN EN 61346-2		F
<b>Safety Integrity Level (SIL) / according to IEC 61508</b>		SIL3
<b>Performance level (PL) / according to ISO 13849-1</b>		e
<b>Category / according to ISO 13849-1</b>		4
<b>Probability of dangerous failure per hour (PFHD) / with high demand rate / according to EN 62061</b>	1/h	0.17000000000000004E-8
<b>Average probability of failure on demand (PFDavg) / with low demand rate / according to IEC 61508</b>	1/y	0.1E-5
<b>T1 value / for proof test interval or service life / according to IEC 61508</b>	a	20
<b>Hardware fault tolerance / according to IEC 61508</b>		1
<b>Safety device type / according to IEC 61508-2</b>		Type A
<b>Number of outputs / as contact-affected switching element</b> • as NC contact / for reporting function / instantaneous switching • as NO contact / for reporting function / instantaneous switching • as NC contact / for reporting function / delayed switching • as NO contact / for reporting function / delayed switching • as NC contact / safety-related / instantaneous switching • as NO contact / safety-related / instantaneous switching • as NC contact / safety-related / delayed switching • as NO contact / safety-related / delayed switching		0 0 0 0 0 4 0 0
<b>Stop category / according to DIN EN 60204-1</b>		0

#### General technical details:

<b>Design of the electrical connection / jumper socket</b>		No
<b>Operating cycles / maximum</b>	1/h	360
<b>Switching capacity current / of the NO contacts of the relay outputs</b> • at DC-13 • at 24 V • at 115 V • at 230 V • at AC-15 • at 24 V • at 115 V • at 230 V	A A A A A A A	5 0.2 0.1 4 4 4

<b>Thermal current / of the contact-affected switching element / maximum</b>	A	5
<b>Mechanical operating cycles as operating time / typical</b>		10,000,000
<b>Design of the fuse link / for short-circuit protection of the NO contacts of the relay outputs / required</b>		gL/gG: 6A or circuit breaker type A: 3A or circuit breaker type B: 2A or circuit breaker type C: 1A
<b>Make time / with automatic start</b>		
• typical	ms	25
• for AC / maximum	ms	40
<b>Make time / with automatic start / after mains power cut</b>		
• typical	ms	25
• maximum	ms	40
<b>Backslide delay time / at mains power cut</b>		
• typical	ms	45
• maximum	ms	50
<b>Recovery time / after mains power cut / typical</b>	s	0.06

#### Control circuit:

<b>Type of voltage / of the controlled supply voltage</b>		AC
<b>Control supply voltage frequency</b>		
• 1 / rated value	Hz	50
• 2 / rated value	Hz	60
<b>Control supply voltage</b>		
• at 50 Hz / at AC / rated value	V	24
• at 60 Hz / at AC / rated value	V	24
<b>operating range factor control supply voltage rated value / of the magnet coil</b>		
• at 50 Hz		
• for AC		0.85 ... 1.1
• at 60 Hz		
• for AC		0.85 ... 1.1
<b>Active power loss / typical</b>	W	2.5

#### Installation/mounting/dimensions:

<b>mounting position</b>		any
<b>Distance, to be maintained, to earthed part / sideways</b>	mm	5
<b>Distance, to be maintained, to the racks assembly / sideways</b>	mm	0
<b>Type of mounting</b>		screw and snap-on mounting
<b>Width</b>	mm	22.5
<b>Height</b>	mm	100
<b>Depth</b>	mm	121.6

## Connections:

### Design of the electrical connection

screw-type terminals

### Type of the connectable conductor cross-section

- solid
- finely stranded
  - with wire end processing

1x (0.5 ... 2.5 mm<sup>2</sup>), 2x (1.0 ... 1.5 mm<sup>2</sup>)

1x (0.5 ... 2.5 mm<sup>2</sup>), 2x (0.5 ... 1.0 mm<sup>2</sup>)

### Type of the connectable conductor cross-section / for AWG conductors

- solid

1x (20 ... 14), 2x (18 ... 16)

## Product Function:

### Suitability for use / device connector 3ZY12

No

### Suitability for use

- safety-related circuits

Yes

## Certificates/approvals:

### Verification of suitability

- TÜV (German technical inspectorate) certificate
- UL-registration

Yes

Yes

### General Product Approval

### EMC

### Declaration of Conformity

### Test Certificates



CSA



UL



C-TICK



EG-Konf.

[Type Test  
Certificates/Test  
Report](#)

## 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:

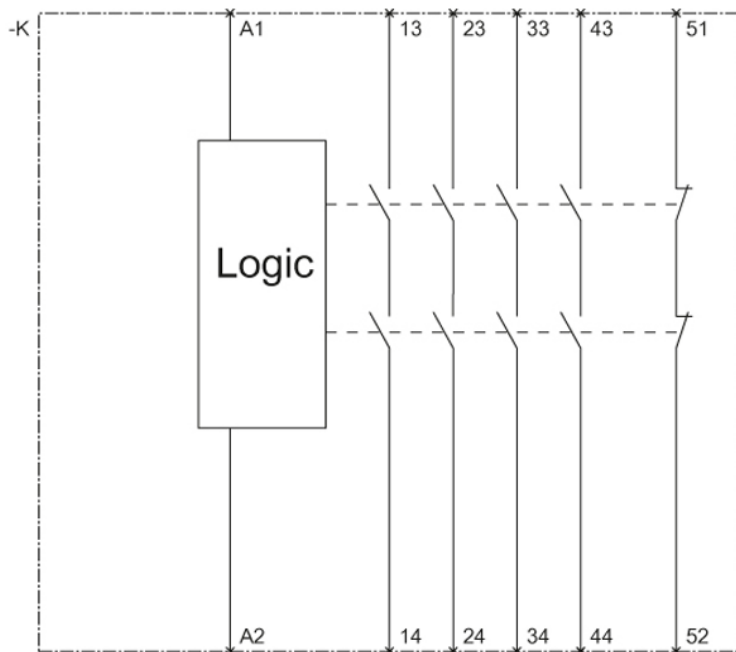
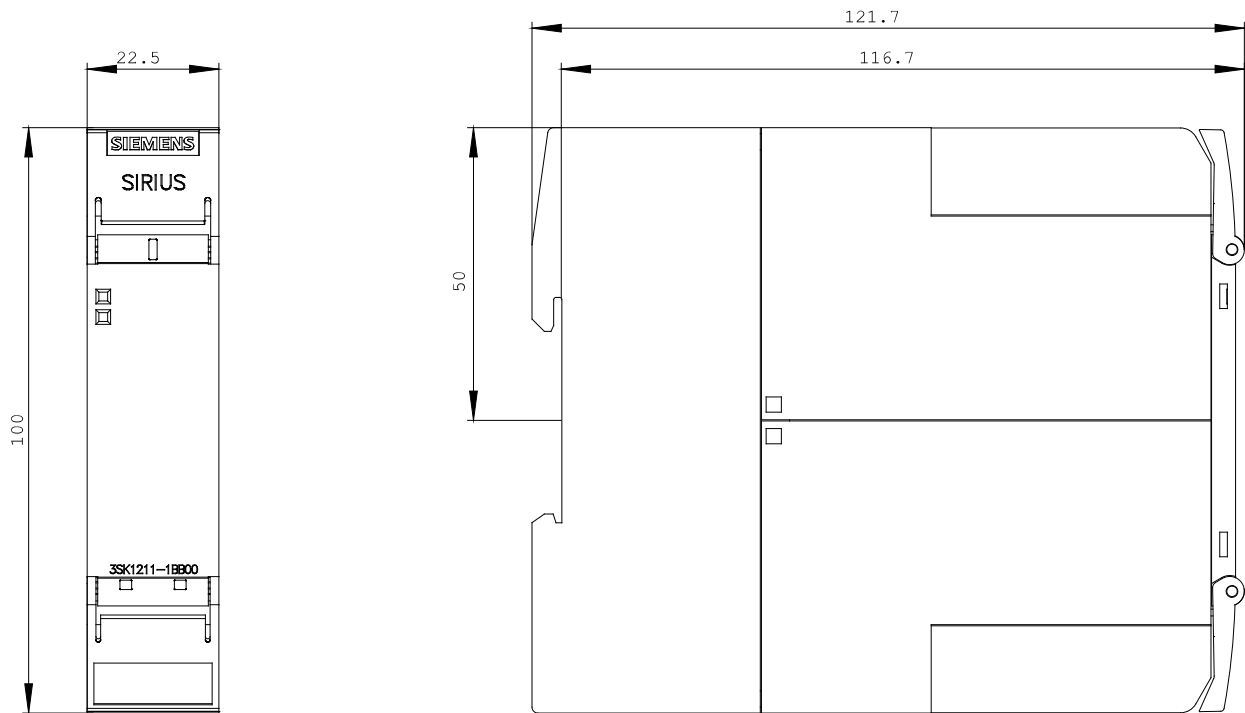
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3SK1211-1BB00/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3SK1211-1BB00](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3SK1211-1BB00)



last change:

Mar 11, 2013