

SIRIUS safety relay Output expansion 4RO with relay enabling circuits 4 NO contacts plus Relay signaling circuit 1 NC contact Us = 24 V DC Spring-type terminal (push-in)



General technical data	
Product brand name	SIRIUS
Product category	Safety relays
Product designation	Output expansion
Design of the product	Relay enabling circuits
Protection class IP of the enclosure	IP20
Protection against electrical shock	finger-safe
Insulation voltage rated value	300 V
Ambient temperature	
• during storage	-40 ... +80 °C
• during operation	-25 ... +60 °C
Air pressure acc. to SN 31205	90 kPa ... 106 kPa
Relative humidity during operation	10 ... 95 %
Installation altitude at height above sea level maximum	2 000 m
Vibration resistance acc. to IEC 60068-2-6	5 ... 500 Hz: 0.75 mm
Shock resistance	10g / 11 ms
Surge voltage resistance rated value	4 000 V
EMC emitted interference	IEC 60947-5-1, IEC 61000

<b>Installation environment regarding EMC</b>	This product is suitable for Class B environments and can also be used in domestic environments.
<b>Overvoltage category</b>	3
<b>Degree of pollution</b>	3
<b>Reference code acc. to DIN EN 61346-2</b>	F
<b>Safety Integrity Level (SIL) acc. to IEC 61508</b>	3
<b>Performance level (PL) acc. to EN ISO 13849-1</b>	e
<b>Category acc. to EN ISO 13849-1</b>	4
<b>PFHD with high demand rate acc. to EN 62061</b>	0.0000000017 1/h
<b>PFDavg with low demand rate acc. to IEC 61508</b>	0.000001
<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	20 y
<b>Hardware fault tolerance acc. to IEC 61508</b>	1
<b>Safety device type acc. to IEC 61508-2</b>	Type A
<b>Number of outputs as contact-affected switching element</b>	
• as NC contact	
— for signaling function delayed switching	0
— for feedback circuit instantaneous contact	1
— safety-related instantaneous contact	0
— safety-related delayed switching	0
• as NO contact	
— for signaling function instantaneous contact	0
— for signaling function delayed switching	0
— safety-related instantaneous contact	4
— safety-related delayed switching	0
<b>Stop category acc. to DIN EN 60204-1</b>	0

General technical data	
<b>Type of electrical connection Plug-in socket</b>	No
<b>Operating frequency maximum</b>	360 1/h
<b>Switching capacity current of the NO contacts of the relay outputs</b>	
• at DC-13	
— at 24 V	5 A
— at 115 V	0.2 A
— at 230 V	0.1 A
• at AC-15	
— at 24 V	5 A
— at 115 V	5 A
— at 230 V	5 A
<b>Thermal current of the switching element with contacts maximum</b>	5 A

<b>Operating current at 17 V minimum</b>	5 mA
<b>Mechanical service life (switching cycles) 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	15 ms
• at DC maximum	30 ms
<b>Make time with automatic start after power failure</b>	
• typical	15 ms
• maximum	30 ms
<b>Backslide delay time in the event of power failure</b>	
• typical	10 ms
• maximum	15 ms
<b>Recovery time after power failure typical</b>	0.015 s

#### Control circuit/ Control

<b>Type of voltage of the control supply voltage</b>	DC
<b>Control supply voltage</b>	
• at DC	
— rated value	24 V
<b>Operating range factor control supply voltage rated value of magnet coil</b>	
• at DC	0.8 ... 1.2
<b>Power loss [W] typical</b>	2.5 W

#### Installation/ mounting/ dimensions

<b>Mounting position</b>	any
<b>Required spacing for grounded parts at the side</b>	5 mm
<b>Required spacing with side-by-side mounting at the side</b>	0 mm
<b>Mounting type</b>	screw and snap-on mounting
<b>Width</b>	22.5 mm
<b>Height</b>	100 mm
<b>Depth</b>	121.6 mm

#### Connections/Terminals

<b>Type of electrical connection</b>	Push-in terminal
<b>Type of connectable conductor cross-sections</b>	
• solid	1x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
• finely stranded	
— with core end processing	1x (0.5 ... 1.0 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )
— without core end processing	1x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
<b>Type of connectable conductor cross-sections at AWG conductors</b>	
• solid	1x (20 ... 16), 2x (20 ... 16)

- stranded

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

### Product Function

<b>Product function parameterizable</b>	undelayed/delayed (only with system connector)
<b>Suitability for operation Device connector 3ZY12</b>	Yes
<b>Suitability for use</b>	
<ul style="list-style-type: none"> <li>• safety-related circuits</li> </ul>	Yes

### Certificates/approvals

<b>Certificate of suitability</b>	
<ul style="list-style-type: none"> <li>• TÜV (German technical inspectorate) certificate</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• UL approval</li> </ul>	Yes

<b>General Product Approval</b>	<b>EMC</b>	<b>Functional Safety/Safety of Machinery</b>
---------------------------------	------------	--



[Type Examination Certificate](#)

<b>Declaration of Conformity</b>	<b>Test Certificates</b>	<b>Shipping Approval</b>
----------------------------------	--------------------------	--------------------------



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)



<b>other</b>	<b>Railway</b>
<a href="#">Confirmation</a>	<a href="#">Confirmation</a>

### Further information

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

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

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3SK1211-2BB40>

**Cax online generator**

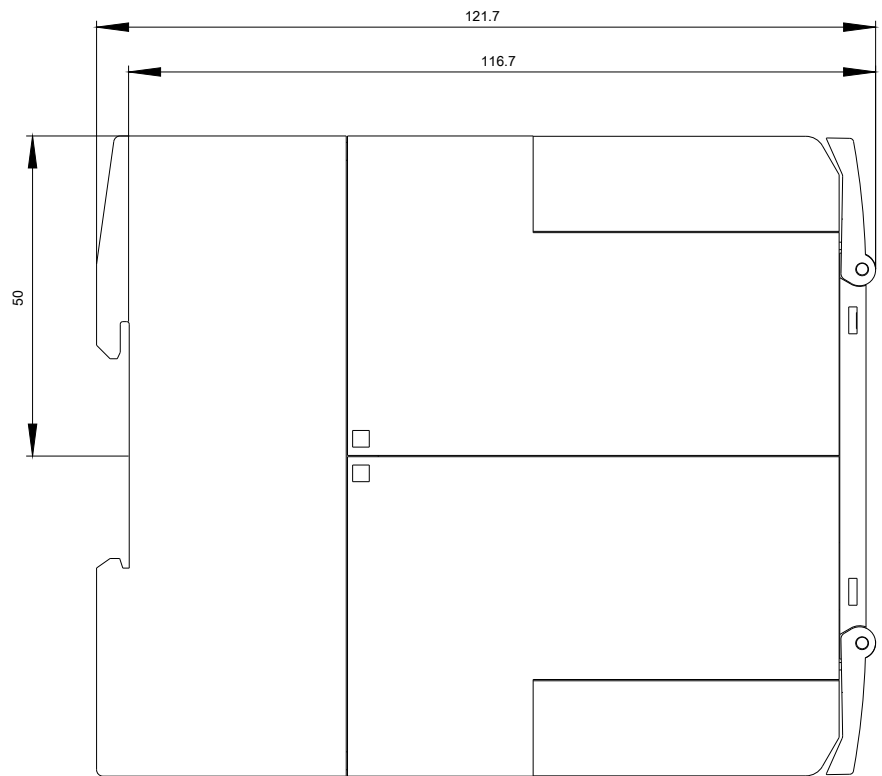
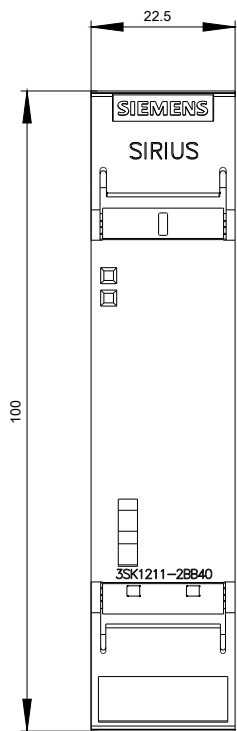
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SK1211-2BB40>

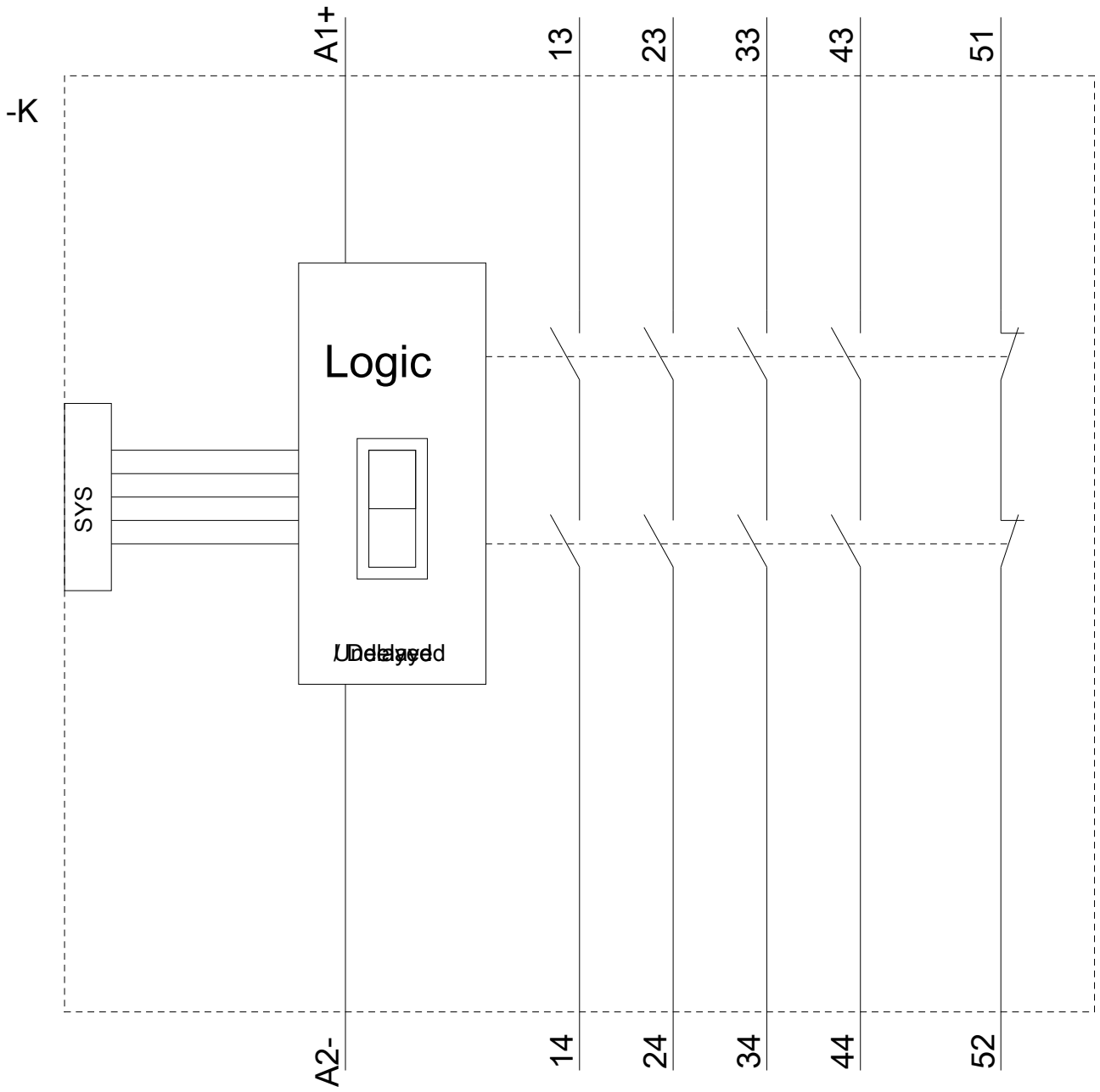
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

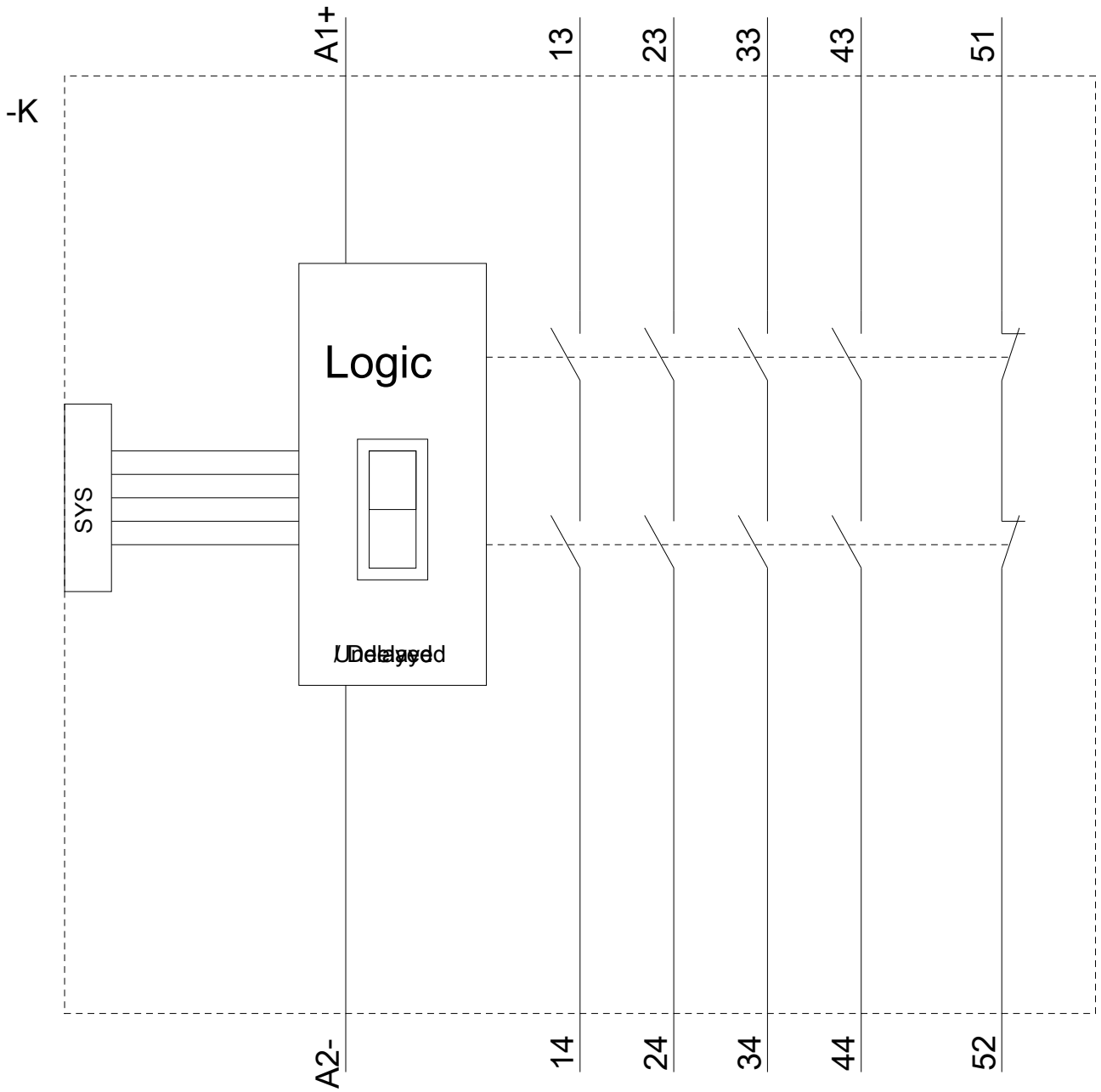
<https://support.industry.siemens.com/cs/ww/en/ps/3SK1211-2BB40>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3SK1211-2BB40&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3SK1211-2BB40&lang=en)







last modified:

04/01/2019