



SIRIUS SAFETY RELAY OUTPUT EXTENSION 4RO WITH RELAY ENABLING CIRCUITS 4 NO CONTACTS + RELAY FEEDBACK CIRCUIT 1 NC CONTACT US = 24 V AC SPRING-LOADED CONNECTION

Figure similar

General technical data:	
product brand name	SIRIUS
Product designation	safety relays
Design of the product	Expansion unit
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 ... 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
Installation environment regarding EMC	This product is suitable for Class B environments and can also be used in domestic environments.
Overvoltage category	Installation category III
Degree of pollution	3
Equipment marking acc. to DIN EN 61346-2	F
Safety Integrity Level (SIL) acc. to IEC 61508	SIL3
Performance level (PL) acc. to EN ISO 13849-1	e
Category acc. to EN ISO 13849-1	4

PFHD with high demand rate acc. to EN 62061	0.0000000017 1/h
Average probability of failure on demand (PFDavg) with low demand rate acc. to IEC 61508	0.000001 1/y
T1 value for proof test interval or service life acc. to IEC 61508	20 y
Hardware fault tolerance acc. to IEC 61508	1
Safety device type acc. to IEC 61508-2	Type A
Number of outputs as contact-affected switching element	
<ul style="list-style-type: none"> <li>• as NC contact <ul style="list-style-type: none"> <li>— for signaling function instantaneous contact</li> <li>— for signaling function delayed switching</li> <li>— safety-related instantaneous contact</li> <li>— safety-related delayed switching</li> </ul> </li> <li>• as NO contact <ul style="list-style-type: none"> <li>— for signaling function instantaneous contact</li> <li>— for signaling function delayed switching</li> <li>— safety-related instantaneous contact</li> <li>— safety-related delayed switching</li> </ul> </li> </ul>	 0 0 0 0  0 0 4 0
Stop category acc. to DIN EN 60204-1	0

#### General technical data:

Type of electrical connection Plug-in socket	No
Operating frequency maximum	360 1/h
Switching capacity current of the NO contacts of the relay outputs	
<ul style="list-style-type: none"> <li>• at DC-13 <ul style="list-style-type: none"> <li>— at 24 V</li> <li>— at 115 V</li> <li>— at 230 V</li> </ul> </li> <li>• at AC-15 <ul style="list-style-type: none"> <li>— at 24 V</li> <li>— at 115 V</li> <li>— at 230 V</li> </ul> </li> </ul>	 5 A 0.2 A 0.1 A  5 A 5 A 5 A
Thermal current of the switching element with contacts maximum	5 A
Operating current at 17 V minimum	5 mA
Mechanical service life (switching cycles) typical	10 000 000
Design of the fuse link for short-circuit protection of the NO contacts of the relay outputs required	gL/gG: 6A or circuit breaker type A: 3A or circuit breaker type B: 2A or circuit breaker type C: 1A
Make time with automatic start	
<ul style="list-style-type: none"> <li>• typical</li> </ul>	25 ms

<ul style="list-style-type: none"> <li>• with AC maximum</li> </ul>	40 ms
<b>Make time with automatic start after power failure</b>	
<ul style="list-style-type: none"> <li>• typical</li> </ul>	25 ms
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	40 ms
<b>Backslide delay time in the event of power failure</b>	
<ul style="list-style-type: none"> <li>• typical</li> </ul>	45 ms
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	50 ms
<b>Recovery time after power failure typical</b>	0.06 s

#### Control circuit/ Control:

<b>Type of voltage of the control supply voltage</b>	AC
<b>Control supply voltage frequency</b>	
<ul style="list-style-type: none"> <li>• 1 Rated value</li> </ul>	50 Hz
<ul style="list-style-type: none"> <li>• 2 Rated value</li> </ul>	60 Hz
<b>Control supply voltage</b>	
<ul style="list-style-type: none"> <li>• with AC <ul style="list-style-type: none"> <li>— at 50 Hz <ul style="list-style-type: none"> <li>— Rated value</li> </ul> </li> <li>— at 60 Hz <ul style="list-style-type: none"> <li>— Rated value</li> </ul> </li> </ul> </li> </ul>	24 V
	24 V
<b>Operating range factor control supply voltage rated value of the magnet coil</b>	
<ul style="list-style-type: none"> <li>• with AC <ul style="list-style-type: none"> <li>— at 50 Hz</li> <li>— at 60 Hz</li> </ul> </li> </ul>	0.85 ... 1.1
	0.85 ... 1.1
<b>Active power loss 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>	spring-loaded terminals
<b>Type of connectable conductor cross-section</b>	
<ul style="list-style-type: none"> <li>• solid</li> </ul>	1x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• finely stranded <ul style="list-style-type: none"> <li>— with core end processing</li> <li>— without core end processing</li> </ul> </li> </ul>	1x (0.5 ... 1.0 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )
	1x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )

<b>Type of connectable conductor cross-section for AWG conductors</b>	
<ul style="list-style-type: none"> <li>• solid</li> </ul>	1x (20 ... 16), 2x (20 ... 16)
<ul style="list-style-type: none"> <li>• stranded</li> </ul>	1x (20 ... 16), 2x (20 ... 16)

**Product Function:**

<b>Suitability for operation Device connector 3ZY12</b>	No
<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>	<b>Declaration of Conformity</b>
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[Type Examination](#)



<b>Test Certificates</b>	<b>other</b>
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**Further information**

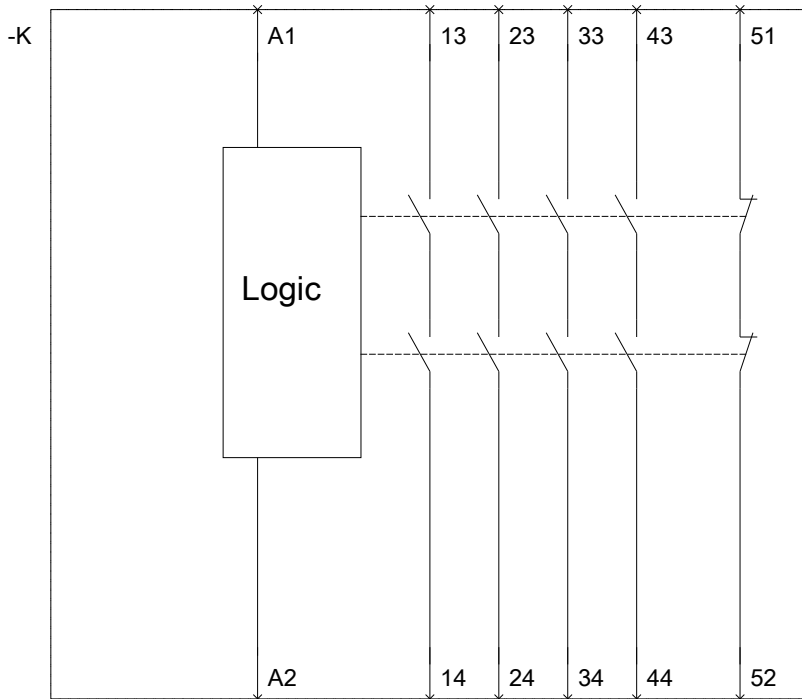
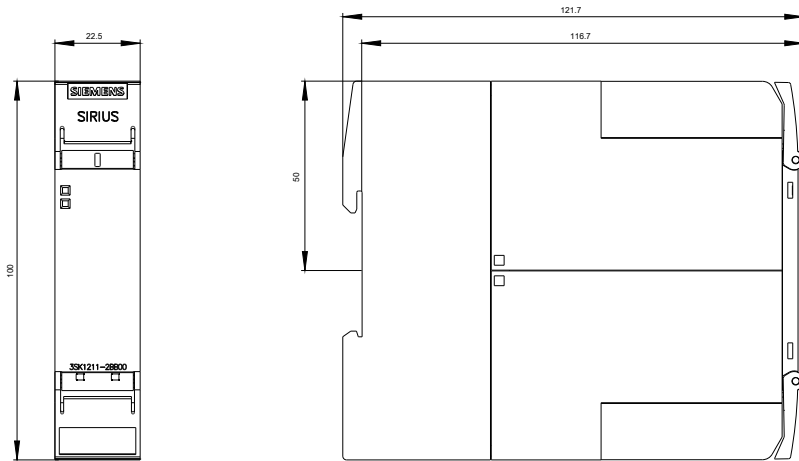
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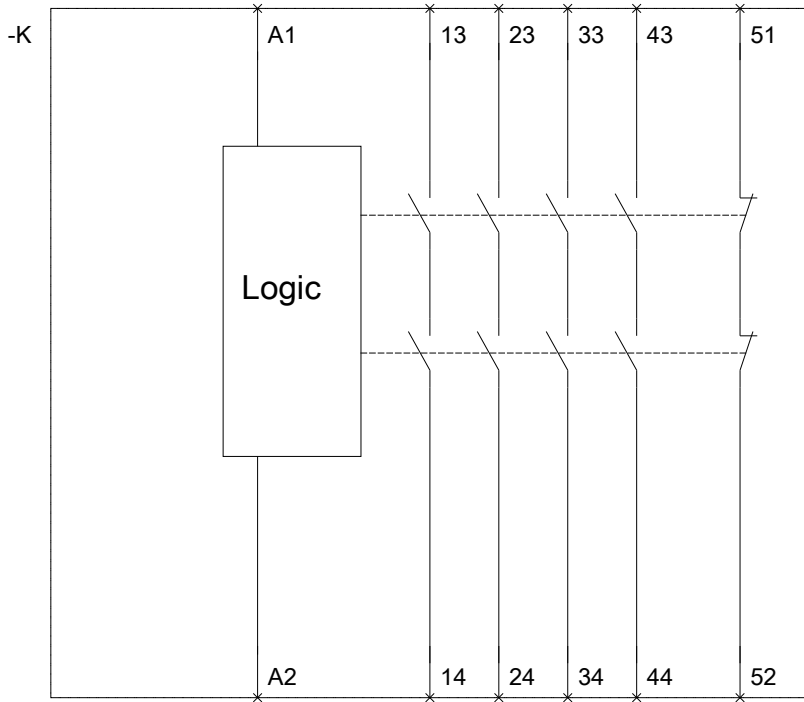
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