

SIRIUS SAFETY RELAY OUTPUT EXTENSION 4RO WITH RELAY ENABLING CIRCUITS 4 NO CONTACTS + RELAY FEEDBACK CIRCUIT 1 NC CONTACT US = 24 V DC 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> | <ul style="list-style-type: none"> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>0</li> <li>4</li> <li>0</li> </ul> |
| Stop category acc. to DIN EN 60204-1   | 0  |

|  |  |
|--|--|
| <b>General technical data:</b>   |  |
| 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> | <ul style="list-style-type: none"> <li>5 A</li> <li>0.2 A</li> <li>0.1 A</li> <li>5 A</li> <li>5 A</li> <li>5 A</li> </ul> |

|  |   |
|--|---|
| <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 the magnet coil</b> |             |
| • at DC   | 0.8 ... 1.2 |
| <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> |  |
| • 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-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) |

|   |  |
|---|--|
| <b>Product Function:</b>  |  |
| <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  |

|   |     |
|---|-----|
| <b>Certificates/ approvals:</b>   |     |
| <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> |
|---------------------------------|------------|--|----------------------------------|



[Baumusterbescheinigung](#)



|                          |              |
|--------------------------|--------------|
| <b>Test Certificates</b> | <b>other</b> |
|--------------------------|--------------|

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### 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**

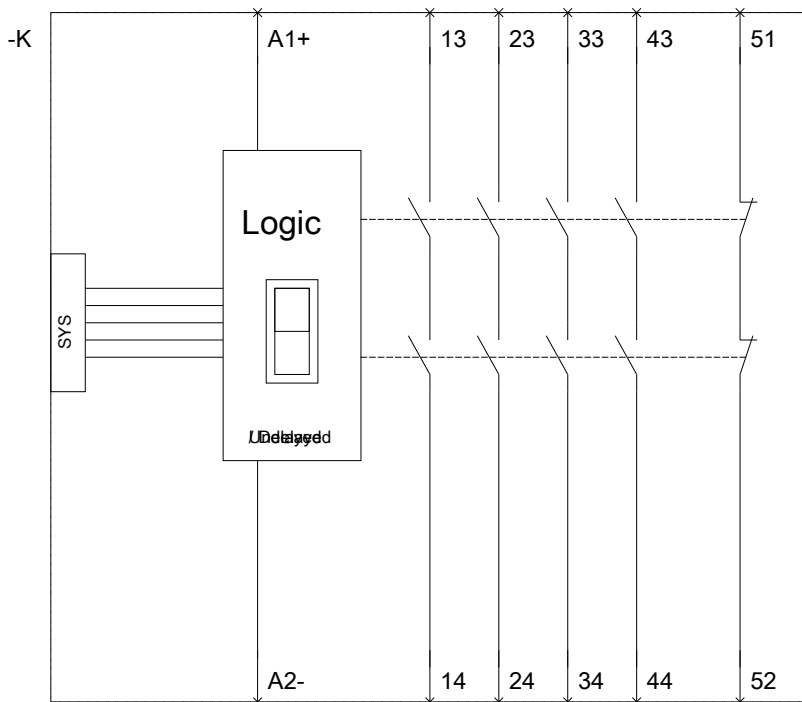
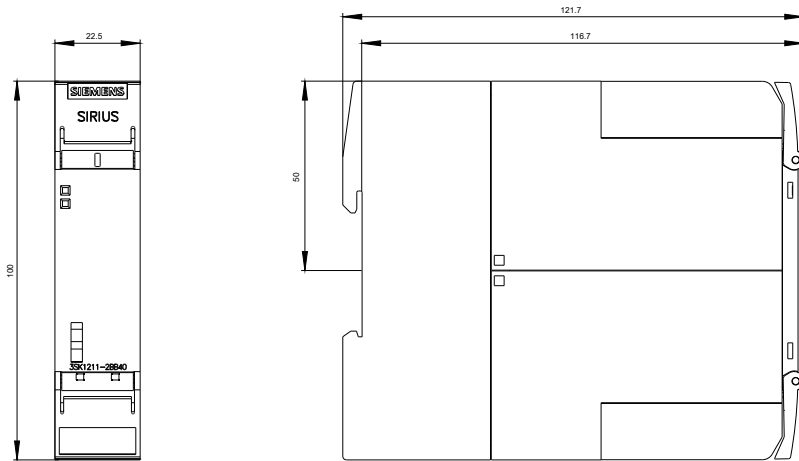
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SK12112BB40>

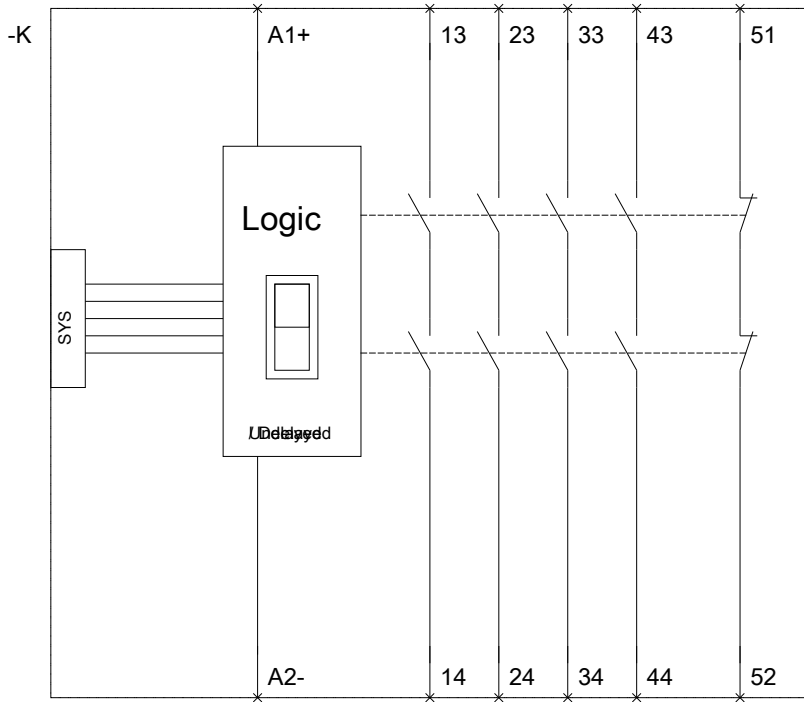
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3SK12112BB40>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3SK12112BB40&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3SK12112BB40&lang=en)





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