SIEMENS

## Data sheet 3SK1211-2BB40

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)

| | |
|---|---|
| **product brand name** | SIRIUS |
| **product category** | Safety relays |
| **product designation** | Output expansion |
| **design of the product** | Relay enabling circuits |
| **General technical data** | |
| **protection class IP of the enclosure** | IP20 |
| **touch 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 according to SN 31205** | 900 ... 1 060 hPa |
| **relative humidity during operation** | 10 ... 95 % |
| **installation altitude at height above sea level maximum** | 4 000 m; Derating, see Product Notification 109792701 |
| **vibration resistance according 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** | 3 |
| **degree of pollution** | 3 |
| **reference code according to EN 61346-2** | F |
| **reference code according to IEC 81346-2** | F |
| **power loss [W] maximum** | 2.5 W |
| **Safety Integrity Level (SIL) according to IEC 62061** | 3 |
| **Safety Integrity Level (SIL) according to IEC 61508** | 3 |
| **performance level (PL) according to ISO 13849-1** | e |
| **category according to EN ISO 13849-1** | 4 |
| **PFHD with high demand rate according to EN 62061** | 0.0000000017 1/h |
| **PFDavg with low demand rate according to IEC 61508** | 0.000001 |
| **T1 value for proof test interval or service life according to IEC 61508** | 20 y |
| **hardware fault tolerance according to IEC 61508** | 1 |
| **safety device type according to IEC 61508-2** | Type A |
| **Inputs/ Outputs** | |
| **number of outputs as contact-affected switching element** | |
| ● 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 |
| **number of outputs as contact-less semiconductor switching element** | |
| ● for signaling function | |
| — delayed switching | 0 |
| **stop category according to EN 60204-1** | 0 |
| **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** | |
| ● 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 |
| **thermal current of the switching element with contacts maximum** | 5 A |
| **total current maximum** | 12 A |
| **operational 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** | |
| ● typical | 15 ms |
| ● at DC maximum | 30 ms |
| **make time with automatic start after power failure** | |
| ● typical | 15 ms |
| ● maximum | 30 ms |
| **backslide delay time in the event of power failure** | |
| ● typical | 10 ms |
| ● maximum | 15 ms |
| **recovery time after power failure typical** | 0.015 s |
| **Control circuit/ Control** | |
| **type of voltage of the control supply voltage** | DC |
| **control supply voltage** | |
| ● at DC | |
| — rated value | 24 V |
| **operating range factor control supply voltage rated value of magnet coil** | |
| ● at DC | 0.8 ... 1.2 |
| **Installation/ mounting/ dimensions** | |
| **mounting position** | any |
| **required spacing for grounded parts at the side** | 5 mm |
| **required spacing with side-by-side mounting at the side** | 0 mm |
| **fastening method** | screw and snap-on mounting |
| **width** | 22.5 mm |
| **height** | 100 mm |
| **depth** | 121.6 mm |
| **Connections/ Terminals** | |

| | |
|---|---|
| **type of electrical connection** | spring-loaded terminal (push-in) |
| **type of connectable conductor cross-sections** | |
| • solid | 1x (0.5 ... 1.5 mm²), 2x (0.5 ... 1.5 mm²) |
| • finely stranded | |
| — with core end processing | 1x (0.5 ... 1.0 mm²), 2x (0.5 ... 1.0 mm²) |
| — without core end processing | 1x (0.5 ... 1.5 mm²), 2x (0.5 ... 1.5 mm²) |
| **type of connectable conductor cross-sections at AWG cables** | |
| • solid | 1x (20 ... 16), 2x (20 ... 16) |
| • stranded | 1x (20 ... 16), 2x (20 ... 16) |
| **Product Function** | |
| **product function parameterizable** | undelayed/delayed (only with system connector) |
| **suitability for operation device connector 3ZY12** | Yes |
| **suitability for use** | |
| • safety-related circuits | Yes |
| **Certificates/ approvals** | |
| **certificate of suitability** | |
| • TÜV (German technical inspectorate) certificate | Yes |
| • UL approval | Yes |

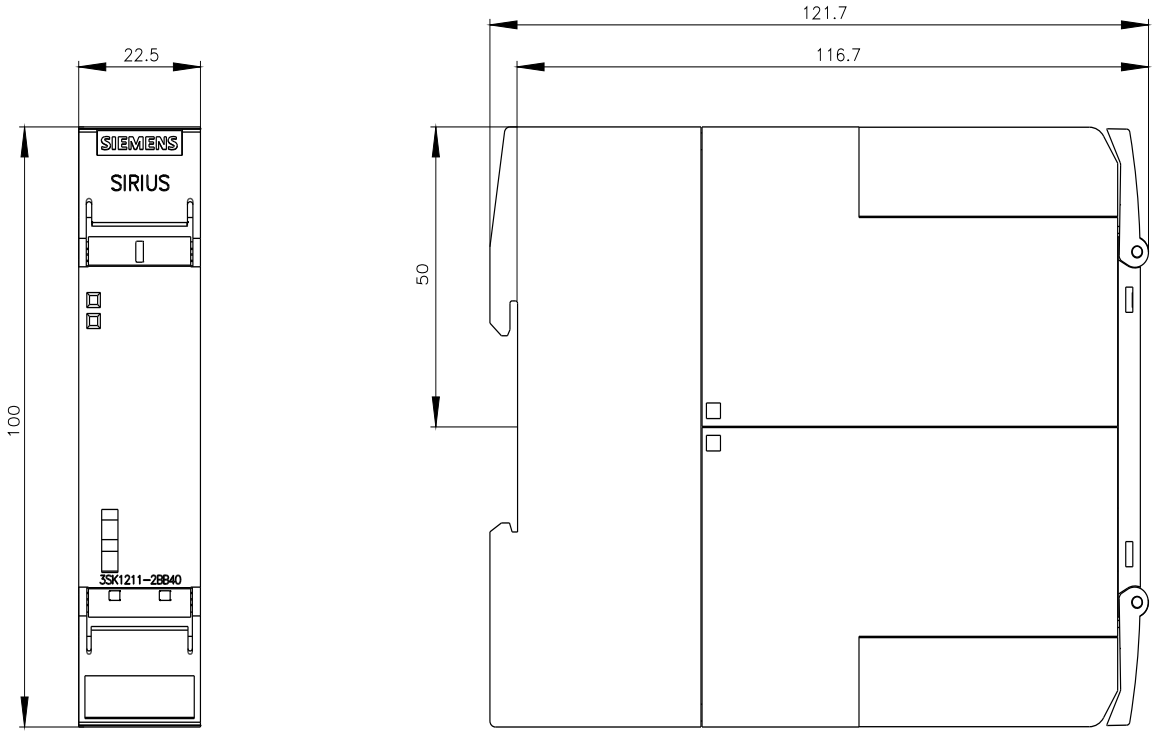
| General Product Approval | | | | | EMC |
|---|---|---|---|---|---|
| CSA | Confirmation | CCC | UL | EAC | RCM |

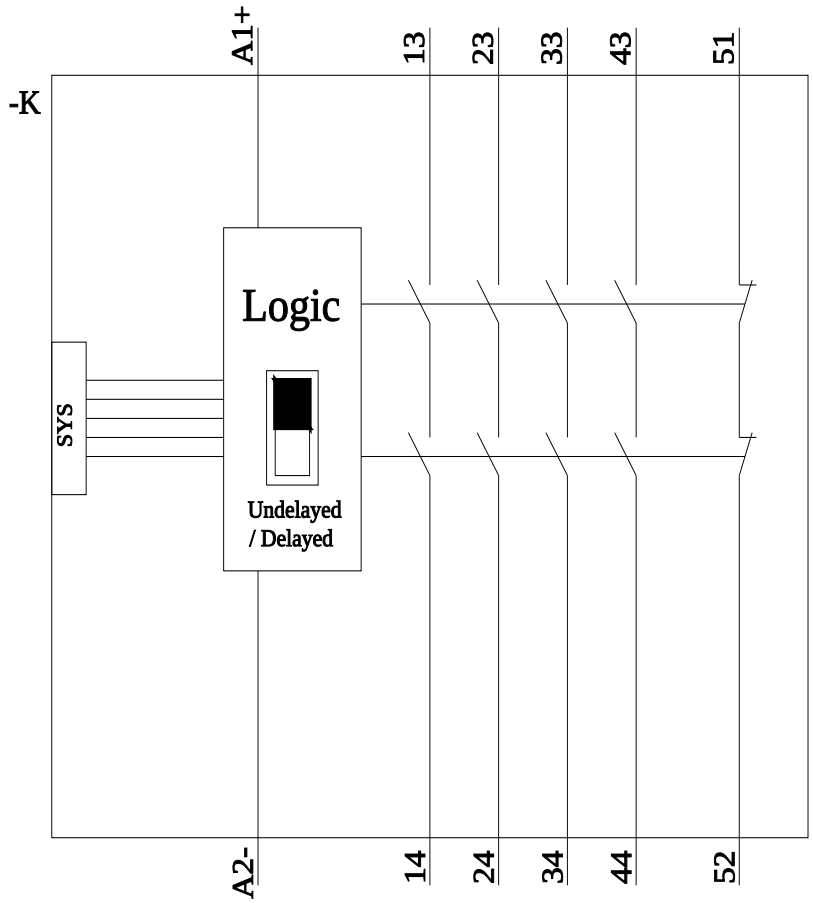
| Functional Safety/Safety of Machinery | Declaration of Conformity | Test Certificates | Marine / Shipping | | |
|---|---|---|---|---|---|
| Type Examination Certificate | EG-Konf. | Type Test Certific-ates/Test Report | DNV | LRS | RINA |

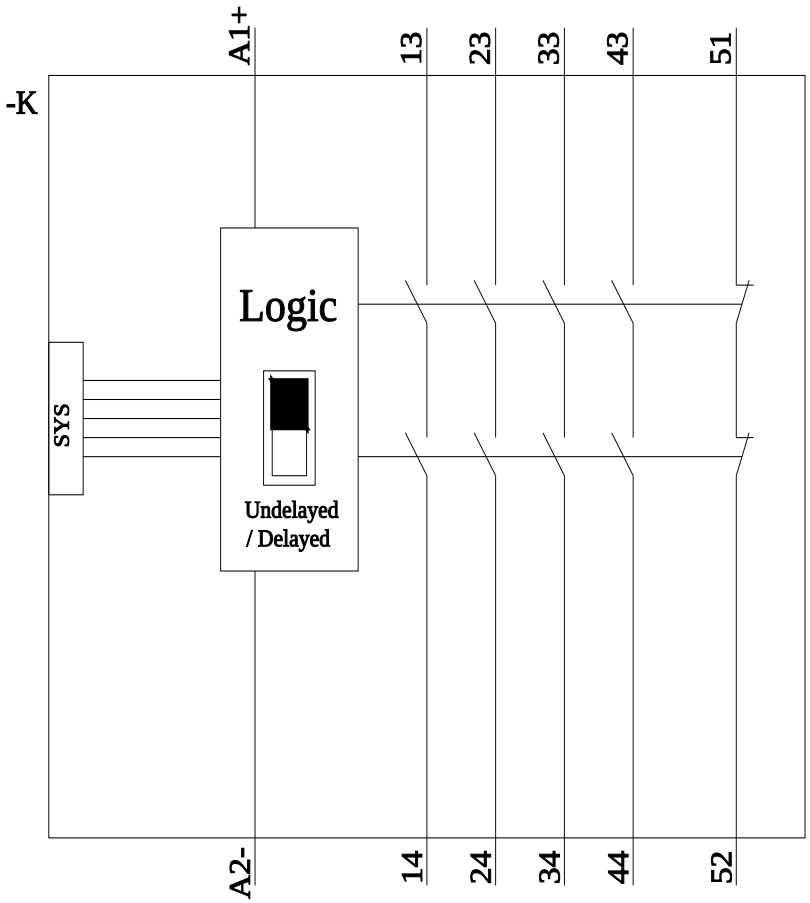
| Marine / Shipping | other | Railway |
|---|---|---|
| RMRS | Confirmation | Confirmation |

**Further information**

**Information- and Downloadcenter (Catalogs, Brochures,…)**
https://www.siemens.com/ic10
**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



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