SIEMENS

Data sheet 3SK1220-2AB40

SIEMENS SPRIUS SPRIUS SPRIUS

SIRIUS SAFETY RELAY ADVANCED EXPANSION UNIT INPUT EXTENSION FOR ONE ADDITIONAL 2-CHANNEL OR TWO 1-CHANNEL SENSORS US = 24 V DC SPRING-LOADED CONNECTION

Figure similar

| General technical data: | |
|---|---|
| product brand name | SIRIUS |
| Product designation | Input expansions |
| Design of the product | Sensor expansion for safety-related expansion of the Advanced basic units by adding a further two-channel sensor or two single-channel sensors. |
| Protection class IP of the enclosure | IP20 |
| Protection against electrical shock | finger-safe |
| Insulation voltage rated value | 50 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 | 800 V | | |
|--|--|--|--|
| EMC emitted interference | IEC 60947-5-1, Class A | | |
| Installation environment regarding EMC | This product is suitable for Class A environments only. It can cause undesired radio-frequency interference in residential environments. If this is the case, the user must take appropriate measures. | | |
| Overvoltage category | 3 | | |
| Degree of pollution | 3 | | |
| Equipment marking acc. to DIN EN 61346-2 | F | | |
| Number of sensor inputs 1-channel or 2-channel | 1 | | |
| Type of the safety-related wiring of the inputs | single-channel and two-channel | | |
| Product feature cross-circuit-proof | Yes | | |
| Safety Integrity Level (SIL) acc. to IEC 61508 | SIL3 | | |
| Performance level (PL) acc. to EN ISO 13849-1 | е | | |
| Category acc. to EN ISO 13849-1 | 4 | | |
| PFHD with high demand rate acc. to EN 62061 | 0.00000001 1/h | | |
| PFDavg with low demand rate acc. to IEC 61508 | 0.000007 | | |
| 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 | Туре В | | |
| Number of outputs | | | |
| as contact-affected switching element as | 0 | | |
| NC contact for signaling function instantaneous contact | | | |
| as contact-affected switching element as NC contact for signaling function delayed switching | 0 | | |
| as contact-affected switching element as NC contact safety-related instantaneous contact | 0 | | |
| as contact-affected switching element as NC contact safety-related delayed switching | 0 | | |
| Number of outputs as contact-affected switching element as NO contact | | | |
| for signaling function instantaneous contact | 0 | | |
| for signaling function delayed switching | 0 | | |
| — safety-related instantaneous contact | 0 | | |
| — safety-related delayed switching | 0 | | |
| Stop category acc. to DIN EN 60204-1 | 0 | | |
| General technical data: | | | |
| onorchi commodi data. | | | |
| Design of input Start input | Yes | | |

| Wire length between sensor and electronic | 4 000 m | | |
|---|------------------------------------|--|--|
| evaluation device with Cu 1.5 mm² and 150 nF/km | 4 000 111 | | |
| maximum | | | |
| Make time with automatic start | | | |
| • typical | 60 ms | | |
| at DC maximum | 60 ms | | |
| Make time with automatic start after power failure | | | |
| • typical | 6 500 ms | | |
| maximum | 6 500 ms | | |
| Make time with monitored start | 0 000 1110 | | |
| maximum | 60 ms | | |
| | 60 ms | | |
| • typical | | | |
| Backslide delay time after opening of the safety circuits typical | 40 ms | | |
| Recovery time after opening of the safety circuits | 30 ms | | |
| typical | | | |
| Pulse duration | | | |
| of the sensor input minimum | 60 ms | | |
| of the ON pushbutton input minimum | 0.15 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 | | |
| Power loss [W] typical | 1.2 W | | |
| 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 | | |
| Mounting type | screw and snap-on mounting | | |
| Width | 17.5 mm | | |
| Height | 100 mm | | |
| Depth | 121.6 mm | | |
| Connections/Terminals: | | | |
| Type of electrical connection | Push-in terminal | | |
| Type of connectable conductor cross-sections | | | |
| • solid | 1x (0.5 1.5 mm²), 2x (0.5 1.5 mm²) | | |
| finely stranded | | | |
| - y - | | | |

| — 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 conductors | |
| • solid | 1x (20 16), 2x (20 16) |
| • stranded | 1x (20 16), 2x (20 16) |

| Product Function: | | | |
|---|---|--|--|
| Product function parameterizable | Sensor floating / sensor non-floating, monitored start / autostart, | | |
| | 1-channel / 2-channel sensor connection, cross-circuit detection, | | |
| | startup testing, antivalent sensors, 2-hand switches | | |
| Suitability for operation Device connector 3ZY12 | Yes | | |
| Suitability for interaction press control | No | | |
| Suitability for use | | | |
| safety switch | Yes | | |
| Monitoring of floating sensors | Yes | | |
| Monitoring of non-floating sensors | Yes | | |
| magnetically operated switch monitoring | Yes | | |
| safety-related circuits | Yes | | |

| Certifica | tes/a _l | pproval | IS |
|-----------|--------------------|---------|----|
|-----------|--------------------|---------|----|

Certificate of suitability

• TÜV (German technical inspectorate) certificate Yes

• UL approval Yes

General Product Approval

EMC

Functional

Safety/Safety

of Machinery











Baumusterbescheini gung

| Declaration of | Test | Shipping Approval | | other | Railway |
|----------------|---------------------------------------|---------------------|------|---------------|---------------|
| Conformity | Certificates | | | | |
| CE | Typprüfbescheinigu ng/Werkszeugnis | Lloyd's Register | | Bestätigungen | Bestätigungen |
| EG-Konf. | | LRS | RMRS | | |

Further information

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

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

Industry Mall (Online ordering system)

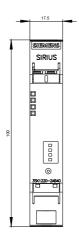
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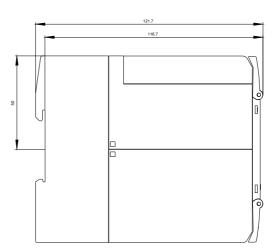
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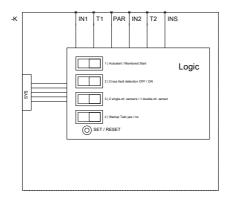
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SK1220-2AB40

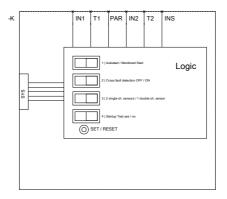
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3SK1220-2AB40

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3SK1220-2AB40&lang=en









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