



SIRIUS SAFETY RELAY BASIC UNIT ADVANCED
 SERIES 3 ELECTRONIC ENABLING CIRCUITS 1
 ELECTRONIC SIGNALING UNIT US = 24 V DC
 SPRING-LOADED TERMINAL

Figure similar

| General technical data: | | |
|---|-----|--|
| product brand name | | SIRIUS |
| Product designation | | safety relays |
| Design of the product | | For autonomous safety applications |
| Protection class IP of the enclosure | | IP20 |
| Protection against electrical shock | | finger-safe |
| Insulation voltage Rated value | V | 50 |
| Ambient temperature | | |
| • during storage | °C | -40 ... +80 |
| • during operation | °C | -25 ... +60 |
| Air pressure acc. to SN 31205 | kPa | 90 ... 106 |
| Relative humidity during operation | % | 10 ... 95 |
| Installation altitude at height above sea level maximum | m | 2 000 |
| Vibration resistance acc. to IEC 60068-2-6 | | 5 ... 500 Hz: 0,75 mm |
| Shock resistance | | 10g / 11 ms |
| Surge voltage resistance Rated value | V | 500 |
| 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 | | Installation category III |
| Degree of pollution | | 3 |
| Number of sensor inputs 1-channel or 2-channel | | 1 |
| Design of the cascading | | yes |

| | | |
|---|-----|--------------------------------|
| Type of the safety-related wiring of the inputs | | single-channel and two-channel |
| Product property cross-circuit-proof | | Yes |
| 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 |
| Safe failure fraction (SFF) | % | 99 |
| PFHD with high demand rate acc. to EN 62061 | 1/h | 0.0000000013 |
| Average probability of failure on demand (PFDavg) with low demand rate acc. to IEC 61508 | 1/y | 0.000007 |
| T1 value for proof test interval or service life acc. to IEC 61508 | y | 20 |
| Hardware fault tolerance acc. to IEC 61508 | | 1 |
| Safety device type acc. to IEC 61508-2 | | Type B |
| Number of outputs as contact-affected switching element • as NC contact — for signaling function instantaneous contact — for signaling function delayed switching — safety-related instantaneous contact — safety-related delayed switching • as NO contact — for signaling function instantaneous contact — for signaling function delayed switching | | 0 0 0 0 0 0 |
| Number of outputs as contact-less semiconductor switching element • safety-related — delayed switching — instantaneous contact • for signaling function instantaneous contact | | 0 3 1 |
| Stop category acc. to DIN EN 60204-1 | | 0 |

General technical data:

| | | |
|--|-----|-------------------|
| Design of input • cascading input/functional switching • feedback input • Start input | | Yes Yes Yes |
| Type of electrical connection Plug-in socket | | No |
| Operating frequency maximum | 1/h | 2 000 |
| Switching capacity current • of semiconductor outputs at DC-13 at 24 V | A | 2 |

| | | |
|---|----|--------------|
| Design of the fuse link for short-circuit protection of the NO contacts of the relay outputs required | | not required |
| Cable length | | |
| <ul style="list-style-type: none"> with Cu 1.5 mm² and 150 nF/km per sensor circuit maximum | m | 4 000 |
| Make time with automatic start | | |
| <ul style="list-style-type: none"> for DC maximum | ms | 85 |
| Make time with automatic start after power failure | | |
| <ul style="list-style-type: none"> typical maximum | ms | 6 500 |
| | ms | 6 500 |
| Make time with monitored start | | |
| <ul style="list-style-type: none"> maximum | ms | 85 |
| Backslide delay time after opening of the safety circuits typical | ms | 40 |
| Backslide delay time in the event of power failure | | |
| <ul style="list-style-type: none"> typical maximum | ms | 0 |
| | ms | 0 |
| Recovery time after opening of the safety circuits typical | ms | 30 |
| Recovery time after power failure typical | s | 6.5 |
| Pulse duration | | |
| <ul style="list-style-type: none"> of the sensor input minimum of the ON pushbutton input minimum | ms | 60 |
| | s | 0.15 |

Control circuit/ Control:

| | | |
|---|---|-------------|
| Type of voltage of the control supply voltage | | DC |
| Control supply voltage | | |
| <ul style="list-style-type: none"> for DC — Rated value | V | 24 |
| Operating range factor control supply voltage rated value of the magnet coil | | |
| <ul style="list-style-type: none"> for DC | | 0.8 ... 1.2 |
| Active power loss typical | W | 2 |

Installation/ mounting/ dimensions:

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






Connections/ Terminals:

| | | |
|---|--|--|
| Type of electrical connection | | spring-loaded terminals |
| Type of connectable conductor cross-section | | 1x (0.5 ... 1.5 mm ²), 2x (0.5 ... 1.5 mm ²) |
| <ul style="list-style-type: none"> • solid • finely stranded <ul style="list-style-type: none"> — with core end processing — without core end processing | | 1x (0.5 ... 1.0 mm ²), 2x (0.5 ... 1.0 mm ²) 1x (0.5 ... 1.5 mm ²), 2x (0.5 ... 1.5 mm ²) |
| Type of connectable conductor cross-section for AWG conductors | | |
| <ul style="list-style-type: none"> • solid • stranded | | 1x (20 ... 16), 2x (20 ... 16) 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 | | Yes |
| Suitability for use | | |
| <ul style="list-style-type: none"> • safety switch • Monitoring of floating sensors • Monitoring of non-floating sensors • magnetically operated switch monitoring • safety-related circuits | | Yes Yes Yes Yes Yes |

Certificates/ approvals:

| General Product Approval | EMC | Functional Safety/Safety of Machinery | Declaration of Conformity |
|--|---|---------------------------------------|---|
|  CCC |  C-TICK | Type Examination |  EG-Konf. |
|  CSA | | | |
|  UL | | | |

| Test Certificates | other |
|--|------------------------------|
| Type Test Certificates/Test Report | Confirmation |

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

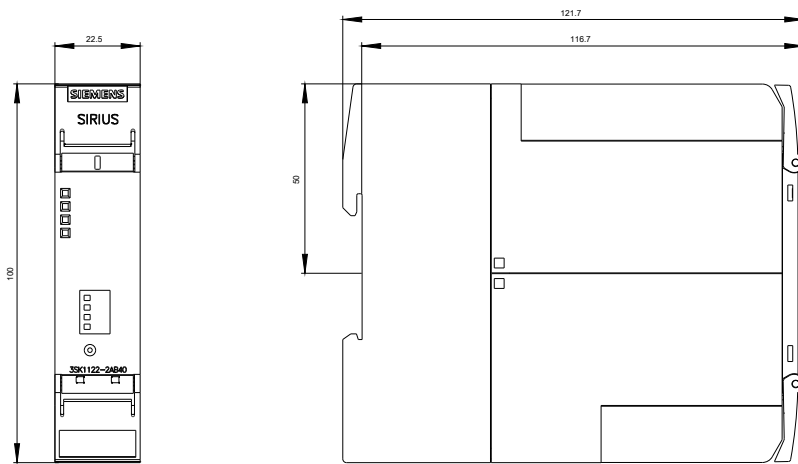
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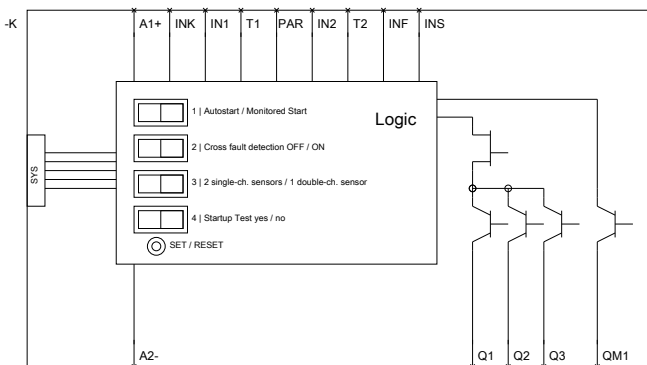
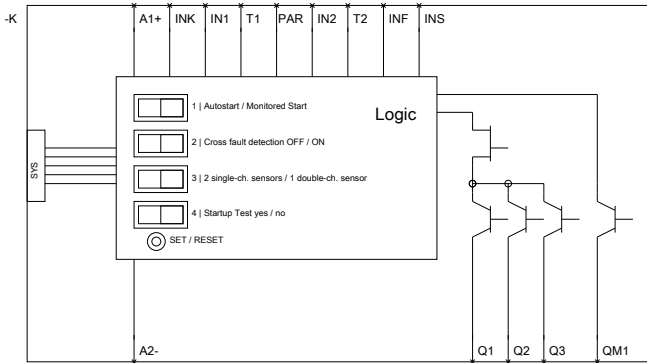
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3SK1122AB40/all>

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

<http://www.automation.siemens.com/bilddb/index.aspx?attID9=3SK1122AB40&lang=en>





last modified:

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