SIEMENS

Data sheet

3TK2810-0BA01



SIRIUS safety relay safety-oriented Standstill monitoring 24 V DC, 45 mm screw terminal EC instantaneous: 3 NO + 1 NC EC delayed: 0 SC: 3 Auto-start Basic unit max. error category EN 954-1: 4 Maximum achievable PL according to EN 13849-1: Maximum achievable SIL according to IEC 61508: 3

| product brand name | SIRIUS |
|--|--|
| product designation | Standstill monitor |
| design of the product | for safe stoppage monitoring |
| General technical data | for sale stoppage monitoring |
| | 1000 |
| protection class IP of the enclosure | IP20 |
| protection class IP of the terminal | IP20 |
| touch protection against electrical shock | finger-safe |
| insulation voltage rated value | 690 V |
| ambient temperature | |
| during storage | -40 +75 °C |
| during operation | -25 +60 °C |
| air pressure according 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 according to IEC 60068-2-6 | 10 55 Hz: 0.35 mm |
| shock resistance | 8g / 10 ms |
| surge voltage resistance rated value | 6 000 V |
| EMC emitted interference | IEC 61000-6-2, IEC 61000-6-3 |
| installation environment regarding EMC | This product is suitable for Class A environments only. In household environments, this device can cause unwanted radio interference. The user is required to implement appropriate measures in this case. |
| reference code according to DIN 40719 extended according to IEC 204-2 according to IEC 750 | КТ |
| reference code according to EN 61346-2 | F |
| number of sensor inputs | |
| • 1-channel or 2-channel | 1 |
| design of the cascading | none |
| type of the safety-related wiring of the inputs | measuring inputs |
| product feature cross-circuit-proof | No |
| Safety Integrity Level (SIL) | |
| according to IEC 61508 | 3 |
| according to IEC 62061 | 3 |
| for delayed release circuit according to IEC 61508 | SIL3 |
| SIL Claim Limit (subsystem) according to EN 62061 | 3 |
| performance level (PL) | |
| according to ISO 13849-1 | е |
| category according to EN ISO 13849-1 | 4 |
| hardware fault tolerance according to IEC 61508 | 1 |
| safety device type according to IEC 61508-2 | Туре В |
| PFHD with high demand rate according to EN 62061 | 1.5E-9 1/h |
| Average probability of failure on demand (PFDavg) with low | 0.002 1/y |

| demand rate acc. to IEC 61508 | |
|---|----------------------------|
| T1 value for proof test interval or service life according to | 20 a |
| IEC 61508 | |
| number of outputs as contact-affected switching element | |
| as NC contact | |
| — for signaling function instantaneous contact | 2 |
| as NO contact | |
| — safety-related instantaneous contact | 4 |
| — safety-related delayed switching | 0 |
| number of outputs as contact-less semiconductor | |
| switching element | |
| safety-related | 0 |
| — delayed switching — instantaneous contact | 0 |
| for signaling function | 0 |
| delayed switching | 0 |
| — instantaneous contact | 2 |
| stop category according to EN 60204-1 | 0 |
| Inputs | • |
| design of input | |
| cascading input/functional switching | No |
| feedback input | Yes |
| start input | No |
| voltage measuring range at the measurement inputs at AC | |
| according to UL maximum | 600 V |
| • maximum | 690 V |
| input resistance at the measurement inputs | 500 kΩ |
| adjustable response value voltage for standstill detection | 20 400 mV |
| Outputs | |
| type of electrical connection plug-in socket | Yes |
| operating frequency maximum | 1 200 1/h |
| switching capacity current | |
| of semiconductor outputs | |
| — for signaling function at DC-13 at 24 V | 0.1 A |
| of the NO contacts of the relay outputs at DC-13 | |
| — at 24 V | 2 A |
| of the NO contacts of the relay outputs at AC-15 | |
| — at 115 V | 3 A |
| — at 230 V | 3 A |
| of the NC contacts of the relay outputs at DC-13 | |
| — at 24 V | 2 A |
| of the NC contacts of the relay outputs at AC-15 | |
| — at 115 V | 2 A |
| — at 230 V | 2 A |
| thermal current of the switching element with contacts maximum | 5 A |
| electrical endurance (operating cycles) typical | 200 000 |
| mechanical service life (operating cycles) typical | 50 000 000 |
| design of the fuse link for short-circuit protection of the NO | quick: 5 A |
| contacts of the relay outputs required | |
| Times | |
| adjustable downtime | 0.2 6 s |
| Control circuit/ Control | |
| type of voltage of the control supply voltage | DC |
| control supply voltage 1 | 24.14 |
| at DC rated value | 24 V |
| operating range factor control supply voltage rated value of magnet coil | |
| • at DC | 0.9 1.2 |
| Installation/ mounting/ dimensions | |
| mounting position | any |
| fastening method | screw and snap-on mounting |
| | |

| width | | | 45 mr | n | | | |
|--|----------------------------------|--------------------|------------------------------------|---|-----------------------------------|--------------------------------|--|
| height | | | 138.5 | mm | | | |
| depth | | | 120 n | ım | | | |
| Connections/ Terminals | ; | | _ | | | | |
| type of electrical conr | nection | | screw | -type terminals | | | |
| type of connectable c | onductor cross-sections | 6 | | | | | |
| solid | | | 1x (0. | (0.5 4.0 mm ²), 2x (0.5 2.5 mm ²) | | | |
| finely stranded | | | | | | | |
| - with core end processing | | | 1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²) | | | | |
| | onductor cross-sections | s for AWG | | | | | |
| cables | | | 0.4 (0) | 14) | | | |
| solid | | | |) 14) | | | |
| stranded roduct Function | | | ZX (20 |) 14) | | | |
| | | | - | | | | |
| product function | toring | | No | | | | |
| light barrier moni | | | No | | | | |
| standstill monitor | ÷ | | Yes No | | | | |
| protective door m automatic start | lonitoring | | No | | | | |
| | rated switch monitoring N | C-NO | No | | | | |
| | | | No | | | | |
| rotation speed m | • | | NO | | | | |
| laser scanner mo monitored start u | 0 | | NO | | | | |
| monitored start-u light array monitor | - | | NO | | | | |
| • • | erated switch monitoring N | C-NC | No | | | | |
| EMERGENCY O | • | 0-110 | No | | | | |
| pressure-sensitiv | | | No | | | | |
| suitability for interacti | | | No | | | | |
| suitability for use | | | NO | | | | |
| safety switch | | | Yes | | | | |
| position switch monitoring | | | No | | | | |
| EMERGENCY-OFF circuit monitoring | | No | | | | | |
| valve monitoring | | No | | | | | |
| tactile sensor monitoring | | No | | | | | |
| magnetically operated switch monitoring | | | No | | | | |
| safety-related cir | • | | Yes | | | | |
| Certificates/ approvals | | | 100 | | | | |
| certificate of suitabilit | V | | | SA EN 60204-1 EN IS | SO 12100, EN 954-1, IEC 61 | 508 | |
| | y chnical inspectorate) certi | ficate | Yes | o, , En 00201, EN IC | 12100, EN 00-F-1, IEO 01 | | |
| UL approval | | | Yes | | | | |
| BG BIA approval | | | Yes | | | | |
| - 20 Bir approva | | | 100 | | Functional | | |
| General Product App | roval | | | | Safety/Safety of Ma- chinery | Declaration of Con- formity | |
| | | | | | | | |
| | (m) | \square | | FAC | Type Examination Cer- tificate | (6 | |
| | | | | ΕΠΙ | | | |
| CSA | ccc | UL | | | | EG-Konf. | |
| | | | | | | | |
| Declaration of Con- formity | Test Certificates | other | | Railway | | | |
| UИ | Special Test Certific- | <u>Confirmatio</u> | <u>on</u> | Confirmation | | | |
| ŪK | ate | | | | | | |
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Further information

Siemens has decided to exit the Russian market (see here). https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business Siemens is working on the renewal of the current EAC certificates. Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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=3TK2810-0BA01

Cax online generator

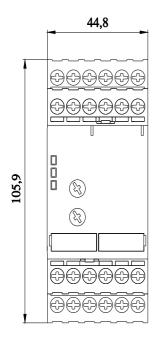
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TK2810-0BA01

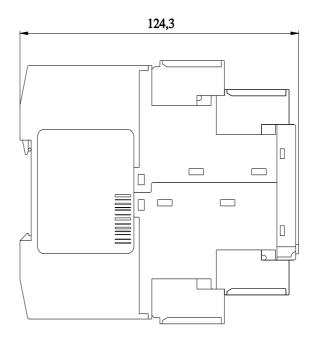
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

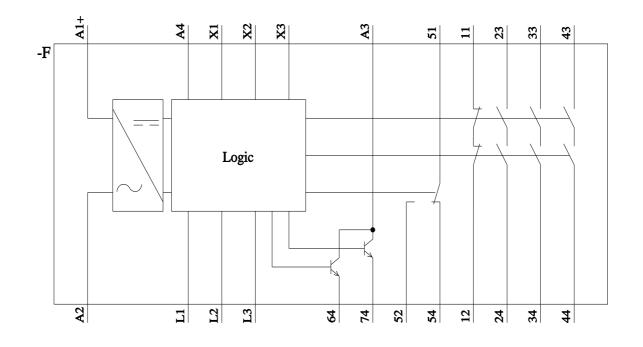
https://support.industry.siemens.com/cs/ww/en/ps/3TK2810-0BA01

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TK2810-0BA01&lang=en







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