SIEMENS

## Data sheet 3RS2600-1BA30

Temperature monitoring relay with display for resistance temperature sensors and thermocouples, 24 V AC/DC, Width 22.5 mm, 2 change-over contacts, screw terminal

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| **product brand name** | SIRIUS |
| **product designation** | Temperature monitoring relay |
| **design of the product** | Digital device, 1 sensor, 2 threshold values |
| **product type designation** | 3RS2 |
| **General technical data** | |
| **product function** | temperature monitoring |
| **display version LED** | No |
| insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value | 300 V |
| **test voltage for isolation test** | 4 kV |
| **degree of pollution** | 3 |
| **shock resistance according to IEC 60068-2-27** | 11 g / 15 ms |
| **vibration resistance according to IEC 60068-2-6** | 10 ... 55 Hz: 0.35 mm |
| **switching behavior** | monostable |
| **mechanical service life (operating cycles) typical** | 10 000 000 |
| electrical endurance (operating cycles) at AC-15 at 230 V typical | 100 000 |
| **thermal current of the switching element with contacts maximum** | 5 A |
| **reference code according to IEC 81346-2** | K |
| **influence of the surrounding temperature** | 0.05% per K deviation from T20 |
| **measurable temperature** | |
| ● initial value | -99 °C |
| ● full-scale value | 1 800 °C |
| **measurable Fahrenheit temperature** | |
| ● initial value | -146 °F |
| ● full-scale value | 3 276 °F |
| **Substance Prohibitance (day/month/year)** | 05/01/2012 |
| **SVHC substance name** | Lead CAS-No. 7439-92-1<br>Lead monoxide (lead oxide) CAS-No. 1317-36-8<br>2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5<br>Melamine CAS-No. 108-78-1<br>6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1 |
| **Net Weight** | 0.18 kg |
| **product function** | |
| ● error memory | Yes |
| ● external reset | Yes |
| **design of the sensor connectable** | Resistance sensors: Pt100, Pt1000, KTY83-110, KTY84, NTC Thermocouples: Type J, K, T, E, N, S, R, B |
| measurable temperature with KTY-sensor maximum | 300 °C |
| **sensor current with KTY-sensor** | 0.33 mA |

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| **Control circuit/ Control** | |
| **type of voltage of the control supply voltage** | AC/DC |
| **control supply voltage at AC** | |
| ● at 50 Hz rated value | 24 V |
| ● at 60 Hz rated value | 24 V |
| **control supply voltage 1 at AC** | |
| ● at 50 Hz rated value | 24 V |
| ● at 50 Hz | 24 V |
| **control supply voltage 2 at AC** | |
| ● at 50 Hz rated value | 24 V |
| ● at 60 Hz rated value | 24 V |
| **control supply voltage at DC rated value** | 24 V |
| **control supply voltage 1 at DC rated value** | 24 V |
| **operating range factor control supply voltage rated value at DC** | |
| ● initial value | 0.85 |
| ● full-scale value | 1.1 |
| **operating range factor control supply voltage rated value at AC at 50 Hz** | |
| ● initial value | 0.85 |
| ● full-scale value | 1.1 |
| **operating range factor control supply voltage rated value at AC at 60 Hz** | |
| ● initial value | 0.85 |
| ● full-scale value | 1.1 |
| supply voltage frequency for auxiliary and control circuit | 50 ... 60 Hz |
| **number of measuring circuits** | 1 |
| **buffering time in the event of power failure minimum** | 20 ms |
| **Precision** | |
| **relative metering precision** | 1 % |
| **Short-circuit protection** | |
| **design of the fuse link** | |
| ● for short-circuit protection of the NO contacts of the relay outputs required | gL/gG: 6 A or MCB type C: 1 A |
| ● for short circuit protection of the NC contacts of the relay outputs required | gL/gG: 6 A or MCB type C: 1 A |
| **design of the fuse link** | |
| ● for short-circuit protection of the NO contacts of the relay outputs safety-related required | gL/gG: 2 A or MCB type C: 1 A |
| ● for short circuit protection of the NC contacts of the relay outputs safety-related required | gL/gG: 2 A or MCB type C: 1 A |
| **Communication/ Protocol** | |
| protocol is supported IO-Link protocol | No |
| **Auxiliary circuit** | |
| **material of switching contacts** | AgSnO2 |
| **number of NC contacts for auxiliary contacts** | 0 |
| **number of NO contacts for auxiliary contacts** | 0 |
| number of CO contacts for auxiliary contacts | 2 |
| **operational current of auxiliary contacts at DC-13** | |
| ● at 24 V | 1 A |
| ● at 125 V | 0.2 A |
| ● at 250 V | 0.1 A |
| **contact reliability of auxiliary contacts** | one incorrect switching operation of 100 million switching operations (17 V, 5 mA) |
| **contact rating of auxiliary contacts according to UL** | R300 / B300 |
| **operating frequency rated value** | 50 ... 60 Hz |
| ampacity of the output relay at AC-15 at 250 V at 50/60 Hz | 3 A |
| **ampacity of the output relay at DC-13** | |
| ● at 24 V | 1 A |
| ● at 125 V | 0.2 A |
| **continuous current of the DIAZED fuse link of the output** | 6 A |

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| **relay** | |
| **continuous current of DIAZED fuse link of the output relay safety-related** | 2 A |
| **Electromagnetic compatibility** | |
| EMC emitted interference according to IEC 60947-1 | Class B |
| **conducted interference** | |
| ● due to burst according to IEC 61000-4-4 | 2 kV (power ports), 1 kV (signal ports) |
| ● due to conductor-earth surge according to IEC 61000-4-5 | 2 kV (line to ground) |
| ● due to conductor-conductor surge according to IEC 61000-4-5 | 1 kV (line to line) |
| **field-based interference according to IEC 61000-4-3** | 10 V/m |
| **electrostatic discharge according to IEC 61000-4-2** | 6 kV contact discharge / 8 kV air discharge |
| **Galvanic isolation** | |
| **design of the electrical isolation** | galvanic isolation |
| **galvanic isolation** | |
| ● between input and output | Yes |
| ● between the outputs | Yes |
| ● between the voltage supply and other circuits | No |
| IEC 62061 | |
| SIL Claim Limit (subsystem) according to EN 62061 | 1 |
| **Safety Integrity Level (SIL) according to IEC 62061** | SIL 1 |
| PFHD with high demand rate according to IEC 62061 | 3.9E-7 1/h |
| ISO 13849 | |
| performance level (PL) according to EN ISO 13849-1 | c |
| category according to EN ISO 13849-1 | 1 |
| **performance level (PL)** | |
| ● **according to ISO 13849-1** | PL c |
| ● for delayed release circuit according to ISO 13849-1 | c |
| IEC 61508 | |
| **Safety Integrity Level (SIL)** | |
| ● according to IEC 61508 | 1 |
| ● for delayed release circuit according to IEC 61508 | 1 |
| **safety device type according to IEC 61508-2** | Type B |
| **Safe failure fraction (SFF)** | 66 % |
| hardware fault tolerance according to IEC 61508 | 0 |
| T1 value for proof test interval or service life according to IEC 61508 | 20 a |
| **ATEX** | |
| certificate of suitability relating to ATEX | Yes, with 3RS29 sensor expansion module |
| **Connections/ Terminals** | |
| **product component removable terminal for auxiliary and control circuit** | Yes |
| **type of electrical connection** | screw terminal |
| ● for auxiliary and control circuit | screw-type terminals |
| **type of connectable conductor cross-sections** | |
| ● solid | 1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²) |
| ● finely stranded with core end processing | 1x (0.5 ... 4 mm²), 2x (0.5 ... 1.5 mm²) |
| ● for AWG cables solid | 1x (20 ... 12), 2x (20 ... 14) |
| **connectable conductor cross-section** | |
| ● solid | 0.5 ... 4 mm² |
| ● finely stranded with core end processing | 0.5 ... 4 mm² |
| **AWG number as coded connectable conductor cross section** | |
| ● solid | 20 ... 12 |
| tightening torque with screw-type terminals | 0.6 ... 0.8 N·m |
| **Installation/ mounting/ dimensions** | |
| **mounting position** | any |
| **fastening method** | screw and snap-on mounting onto 35 mm DIN rail |
| **height** | 100 mm |
| **width** | 22.5 mm |

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| **depth** | 90 mm |
| **required spacing** | |
| ● with side-by-side mounting | |
| — forwards | 0 mm |
| — backwards | 0 mm |
| — upwards | 0 mm |
| — downwards | 0 mm |
| — at the side | 0 mm |
| ● for grounded parts | |
| — forwards | 0 mm |
| — backwards | 0 mm |
| — upwards | 0 mm |
| — at the side | 0 mm |
| — downwards | 0 mm |
| ● for live parts | |
| — forwards | 0 mm |
| — backwards | 0 mm |
| — upwards | 0 mm |
| — downwards | 0 mm |
| — at the side | 0 mm |

## Ambient conditions

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| installation altitude at height above sea level maximum | 2 000 m |
| **ambient temperature** | |
| ● during operation | -25 ... +60 °C |
| ● during storage | -40 ... +85 °C |
| ● during transport | -40 ... +85 °C |
| relative humidity during operation maximum | 70 % |
| **explosion protection category for dust** | Ex II (2) D [b1] [Ex h] [pyb] [tb] [mb] [kb] [sb] III C Db |
| **explosion protection category for gas** | Ex II (2) G [b1] [Ex h] [db] [eb] [pyb] [mb] [ob] [q] [kb] [sb] II C Gb |

## Approvals Certificates

| Environment | General Product Approval | | | | |
|---|---|---|---|---|---|
| Environmental Confirmations | CCC | TUEV | cULus | EAC | CE EG-Konf. |

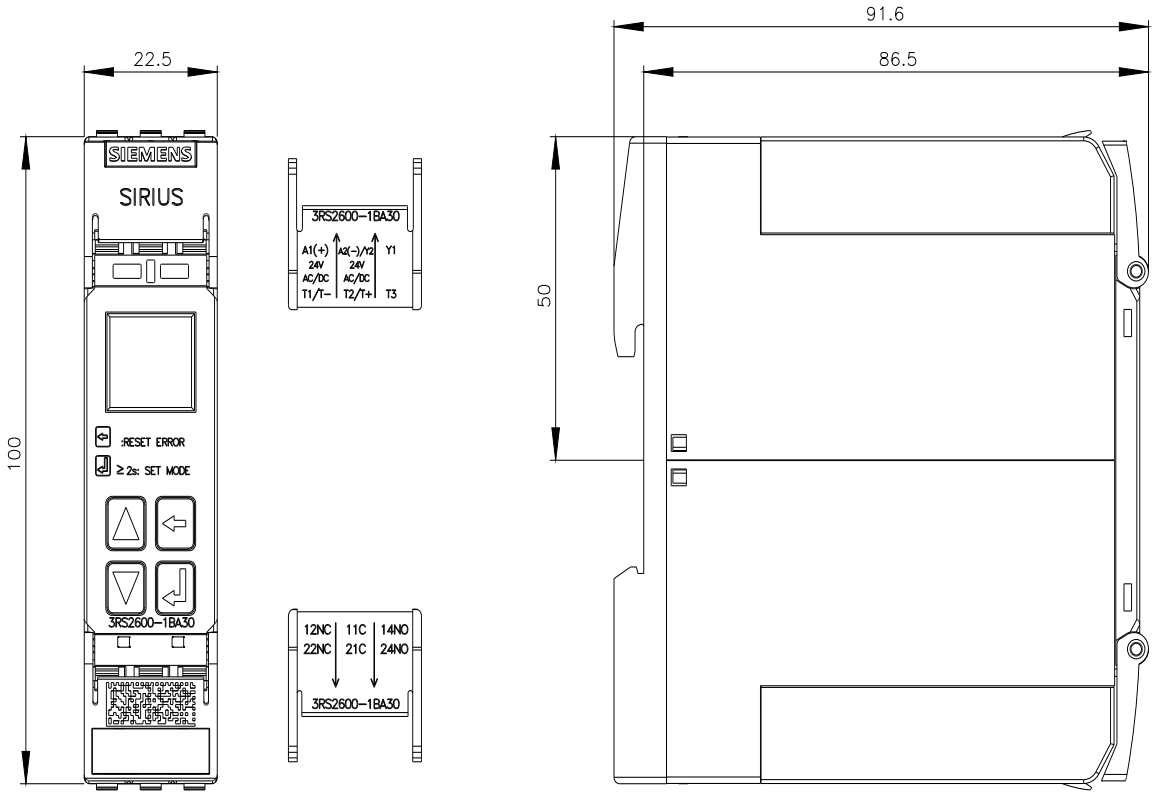
| General Product Approval | EMV | | For use in hazardous locations | | Test Certificates |
|---|---|---|---|---|---|
| UKCA | KC | RCM | ATEX | Miscellaneous | Special Test Certificate |

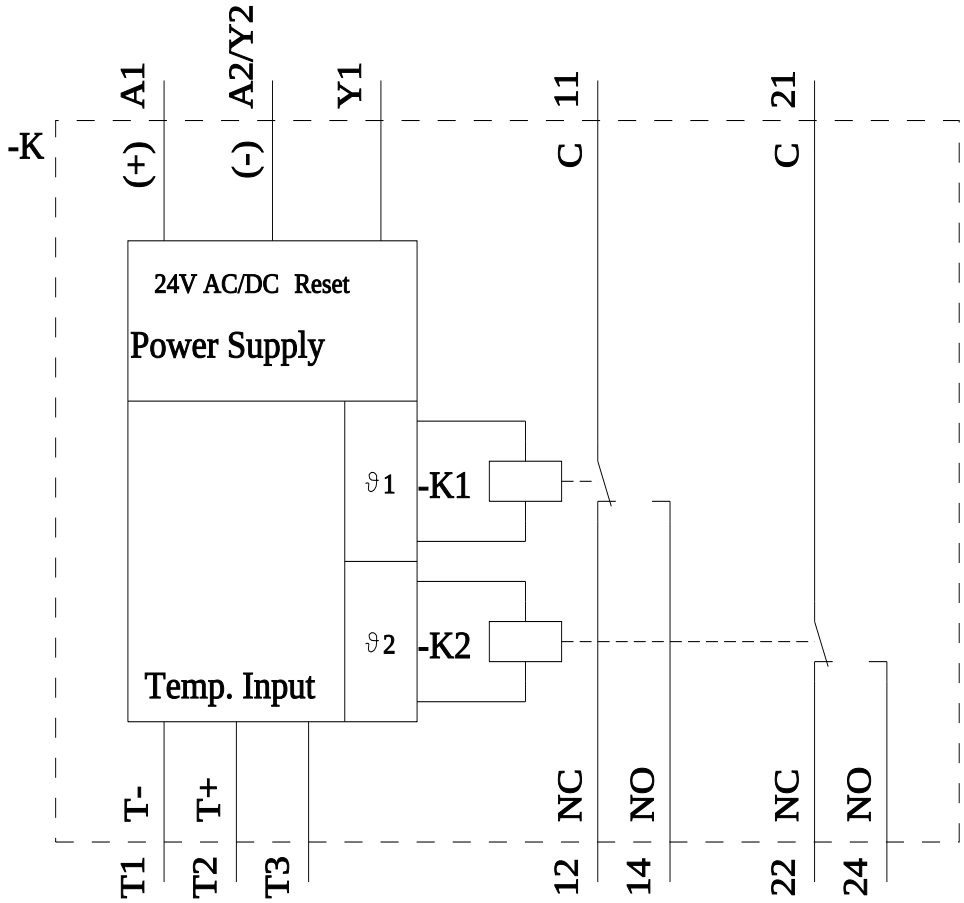
| Test Certificates | Maritime application | other | |
|---|---|---|---|
| Type Test Certificates/Test Report | DNV | Confirmation | 产品合格 QC PASS |

## Further information

**Information on the packaging**
https://support.industry.siemens.com/cs/ww/en/view/109813875
**Information for data generation and storage**
https://support.industry.siemens.com/cs/ww/en/view/109995012
**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=3RS2600-1BA30

**Cax online generator**
https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RS2600-1BA30
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/3RS2600-1BA30
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RS2600-1BA30&lang=en



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