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Data sheet 3RS2600-1BW30

Figure similar

Temperature monitoring relay with display for resistance temperature sensors and thermocouples, 24 - 240 V AC/DC Width 22.5 mm, 2 change-over contacts, screw terminal

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	
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
protection class IP	20
shock resistance acc. to IEC 60068-2-27	11g / 15 ms
vibration resistance acc. to IEC 60068-2-6	10 ... 55 Hz: 0.35 mm
switching behavior	monostable
mechanical service life (switching cycles) typical	10 000 000
electrical endurance (switching cycles) at AC-15 at 230 V typical	100 000
thermal current of the switching element with contacts maximum	5 A
certificate of suitability relating to ATEX	Yes, with sensor extension module 3RS29
reference code acc. to IEC 81346-2	K
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
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
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
• at 50 Hz rated value	24 ... 240 V

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• at 60 Hz rated value	24 ... 240 V
control supply voltage 1 at AC	
• at 50 Hz rated value	24 V
• at 50 Hz	24 ... 240 V
• at 60 Hz rated value	24 V
• at 60 Hz	24 ... 240 V
• control supply voltage 2 at AC at 50 Hz rated value	24 V
• control supply voltage 2 at AC at 60 Hz rated value	24 V
control supply voltage at DC rated value	24 ... 240 V
• control supply voltage 1 at DC rated value	24 V
• control supply voltage 1 at DC	24 ... 240 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
influence of the surrounding temperature	0.05% per K deviation from T20
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

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• at 125 V	0.2 A
continuous current of the DIAZED fuse link of the output relay	6 A
continuous current of DIAZED fuse link of the output relay safety-related	2 A
Electromagnetic compatibility	
EMC emitted interference acc. to IEC 60947-1	Class B
conducted interference	
• due to burst acc. to IEC 61000-4-4	2 kV (power ports), 1 kV (signal ports)
• due to conductor-earth surge acc. to IEC 61000-4-5	2 kV (line to ground)
• due to conductor-conductor surge acc. to IEC 61000-4-5	1 kV (line to line)
field-based interference acc. to IEC 61000-4-3	10 V/m
electrostatic discharge acc. 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	Yes
Safety related data	
Safety Integrity Level (SIL) acc. to IEC 61508	1
SIL Claim Limit (subsystem) acc. to EN 62061	1
performance level (PL) acc. to EN ISO 13849-1	c
category acc. to EN ISO 13849-1	1
Safe failure fraction (SFF)	66 %
PFHD with high demand rate acc. to EN 62061	0.0000004 1/h
hardware fault tolerance acc. to IEC 61508	0
T1 value for proof test interval or service life acc. to IEC 61508	20 y
Connections/ Terminals	
product function removable terminal for auxiliary and control circuit	Yes
type of electrical connection	screw-type terminals
• for auxiliary and control circuit	screw-type terminals
type of connectable conductor cross-sections	
• solid	1x (0.5 ... 4.0 mm²), 2x (0.5 ... 2.5 mm²)
• finely stranded with core end processing	1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²)
• at AWG cables solid	1x (20 ... 12), 2x (20 ... 14)
• connectable conductor cross-section solid	0.5 ... 4 mm²
• connectable conductor cross-section finely stranded with core end processing	0.5 ... 4 mm²
• AWG number as coded connectable conductor cross section solid	20 ... 12
• AWG number as coded connectable conductor cross section stranded	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 standard mounting rail
height	100 mm
width	22.5 mm
depth	90 mm
required spacing	
• with side-by-side mounting	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm

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— 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	
installation altitude at height above sea level maximum	2 000 m
• ambient temperature during operation	-25 ... +60 °C
• ambient temperature during storage	-40 ... +85 °C
• ambient temperature during transport	-40 ... +85 °C
relative humidity during operation	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

Certificates/ approvals

General Product Approval			EMC	For use in hazardous locations	
CSA	UL	EAC	RCM	ATEX	EC-Declaration of Conformity EMC

Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates	other	
Type Examination Certificate	CE EG-Konf.	Special Test Certificate	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=3RS2600-1BW30
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RS2600-1BW30
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RS2600-1BW30
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RS2600-1BW30&lang=en
Characteristic: Derating
https://support.industry.siemens.com/cs/ww/en/ps/3RS2600-1BW30/manual

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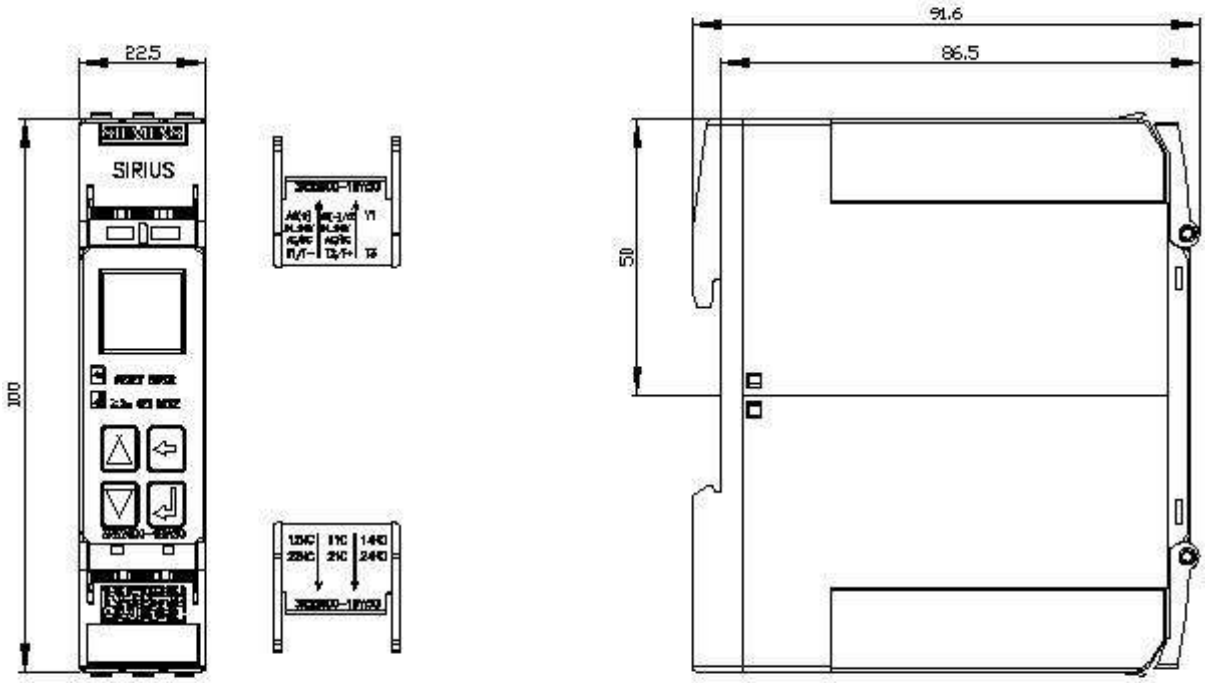

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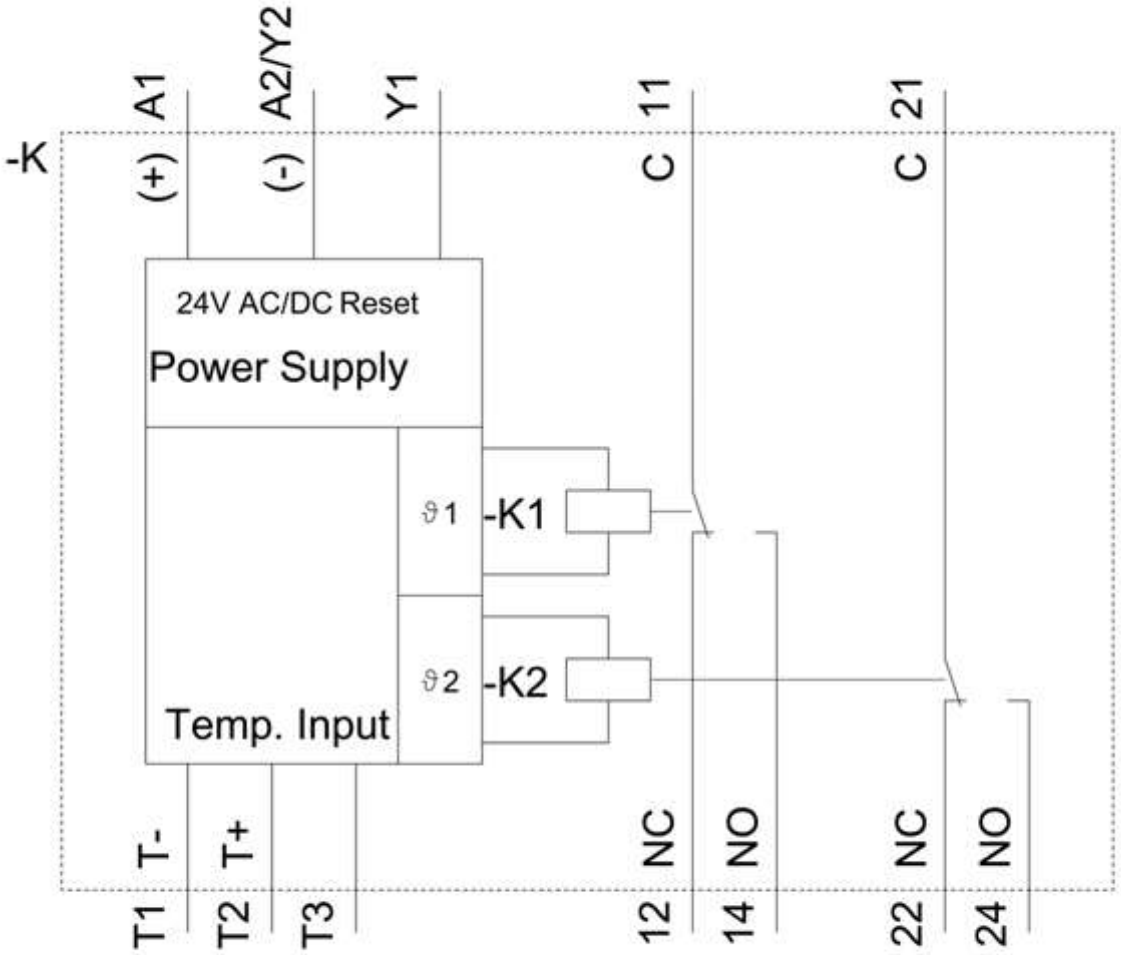

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