SIEMENS

Data sheet

3RS2500-2AA30



Temperature monitoring relay Pt100, thermocouple J, K 1 threshold value, width 22.5 mm Overshoot and undershoot 24 V AC/DC 1 change-over contact, quiescent current principle Spring-type terminal (push-in)

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product brand name	SIRIUS
product designation	Temperature monitoring relay
design of the product	Analog multifunction device, 1 sensor, 1 threshold value
product type designation	3RS2
General technical data	
product function	temperature monitoring
display version LED	Yes
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 according to IEC 60068-2-27	11g / 15 ms
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
certificate of suitability relating to ATEX	no
reference code according to IEC 81346-2	К
influence of the surrounding temperature	0.05% per K deviation from T20
measurable temperature	
initial value	-50 °C
• full-scale value	1 000 °C
Substance Prohibitance (Date)	05/01/2012
SVHC substance name	Blei - 7439-92-1 Bleimonoxid (Bleioxid) - 1317-36-8
product function	
error memory	No
external reset	No
design of the sensor connectable	Resistance sensors: Pt100 Thermocouples: Type J, K
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
• at 50 Hz rated value	24 24 V
• at 60 Hz rated value	24 24 V
control supply voltage 1 at AC	
• at 50 Hz rated value	24 V
• at 50 Hz	24 24 V
● at 60 Hz rated value	24 V

• at 60 Hz	24 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 24 V
control supply voltage 1	
at DC rated value	24 V
● at DC	24 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	5 %
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	1
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 relay	6 A
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)

a due to conductor parth curren according to IEC 64000.4 E	$2 \frac{1}{1}$ (line to ground)
• 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 voltage supply and other circuits 	No
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	spring-loaded terminal (push-in)
 for auxiliary and control circuit 	spring-loaded terminals (push-in)
type of connectable conductor cross-sections	
• solid	0.5 4 mm²
 finely stranded with core end processing 	0.5 2.5 mm²
 finely stranded without core end processing 	0.5 4 mm²
 for AWG cables solid 	20 12
 for AWG cables stranded 	20 12
connectable conductor cross-section	
• solid	0.5 4 mm²
 finely stranded with core end processing 	0.5 2.5 mm ²
 finely stranded without core end processing 	0.5 4 mm²
AWG number as coded connectable conductor cross section	
• solid	20 12
stranded	20 12
Installation/ mounting/ dimensions	
mounting position	any
factoring method	screw and snap-on mounting onto 35 mm DIN rail
fastening method	Screw and shap-on mounting onto 55 mm Divitali
height	100 mm
height	100 mm
height width	100 mm 22.5 mm
height width depth	100 mm 22.5 mm
height width depth required spacing	100 mm 22.5 mm
height width depth required spacing • with side-by-side mounting	100 mm 22.5 mm 90 mm
height width depth required spacing • with side-by-side mounting — forwards	100 mm 22.5 mm 90 mm 0 mm
height width depth required spacing • with side-by-side mounting — forwards — backwards	100 mm 22.5 mm 90 mm 0 mm 0 mm
height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards	100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm
height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side	100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm
height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards	100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm
height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts	100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm
height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards	100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm
height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards	100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm
height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — upwards	100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm
height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — at the side — forwards — backwards — upwards — at the side — at the side — at the side — at the side — downwards	100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm
height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — at the side — forwards — at the side — forwards — upwards — upwards — upwards — upwards — upwards — at the side	100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm
height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — at the side — forwards — upwards — backwards — upwards — for ilve parts	100 mm 22.5 mm 90 mm 0 mm
height width depth required spacing • with side-by-side mounting - forwards - backwards - upwards - downwards - at the side • for grounded parts - forwards - backwards - backwards - backwards - at the side - forwards - at the side - for live parts - forwards - backwards - backwards - backwards	100 mm 22.5 mm 90 mm 0 mm
height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — backwards — upwards — at the side — for live parts — forwards — backwards — upwards • for live parts — forwards — upwards	100 mm 22.5 mm 90 mm 0 mm
height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — downwards • for live parts — downwards — upwards — upwards — upwards — upwards — downwards	100 mm 22.5 mm 90 mm 0 mm
height width depth required spacing • with side-by-side mounting - forwards - backwards - upwards - downwards - at the side • for grounded parts - forwards - backwards - upwards - backwards - upwards - backwards - upwards - at the side - for live parts - forwards - backwards - upwards - downwards - at the side - downwards - at the side - downwards - upwards - at the side	100 mm 22.5 mm 90 mm 0 mm
height width depth required spacing • with side-by-side mounting - forwards - backwards - upwards - downwards - at the side • for grounded parts - forwards - backwards - at the side • for grounded parts - forwards - backwards - upwards - backwards - backwards - upwards - at the side - downwards • for live parts - forwards - upwards - upwards - at the side - downwards - at the side - downwards - at the side	100 mm 22.5 mm 90 mm 0 mm
height width depth required spacing • with side-by-side mounting - forwards - backwards - upwards - downwards - at the side • for grounded parts - forwards - backwards - backwards - backwards - backwards - upwards - at the side - for live parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - upwards - backwards - at the side Movements - at the side - at the side Mbient conditions installation altitude at height above sea level maximum	100 mm 22.5 mm 90 mm 0 mm
height width depth required spacing • with side-by-side mounting - forwards - backwards - upwards - downwards - at the side • for grounded parts - forwards - backwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - upwards - at the side - downwards - backwards - upwards - backwards - upwards - at the side - downwards - at the side Mbient conditions installation altitude at height above sea level maximum ambient temperature	100 mm 22.5 mm 90 mm 0 mm
height width depth required spacing • with side-by-side mounting - forwards - backwards - upwards - downwards - at the side • for grounded parts - forwards - backwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - upwards - at the side - downwards - backwards - upwards - at the side - downwards - at the side - downwards - at the side Mbient conditions installation altitude at height above sea level maximum ambient temperature • during operation	100 mm 22.5 mm 90 mm 0 mm
height width depth required spacing • with side-by-side mounting - forwards - backwards - upwards - downwards - at the side • for grounded parts - forwards - backwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - upwards - backwards - upwards - backwards - upwards - downwards - at the side Motiont conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage	100 mm 22.5 mm 90 mm 0 mm
height width depth required spacing • with side-by-side mounting - forwards - backwards - upwards - downwards - at the side • for grounded parts - forwards - backwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - upwards - at the side - downwards - backwards - upwards - at the side - downwards - at the side - downwards - at the side Mbient conditions installation altitude at height above sea level maximum ambient temperature • during operation	100 mm 22.5 mm 90 mm 0 mm

Approvals Certificates	5			
General Product Ap	proval			
UK CA	CE EG-Konf.	<u>Confirmation</u>		EHC
EMC	Marine / Shipping	other		
		<u>Confirmation</u>		

Further information

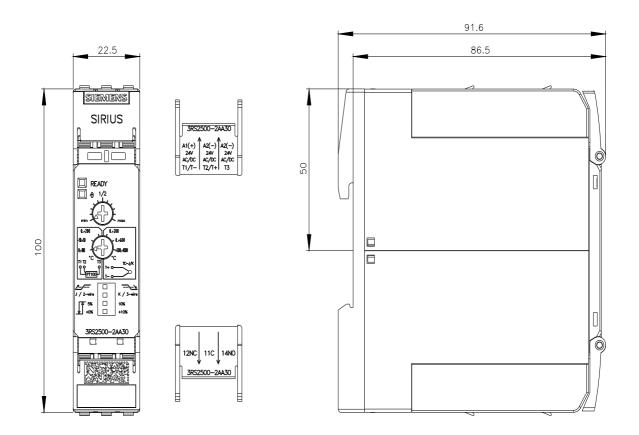
Siemens has decided to exit the Russian market (see here). https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business Siemens is working on the renewal of the current EAC certificates. Please contact your local Siemens office on the status of validity of the EAC certification 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/Catalog/product?mlfb=3RS2500-2AA30 Cax online generator http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RS2500-2AA30 Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

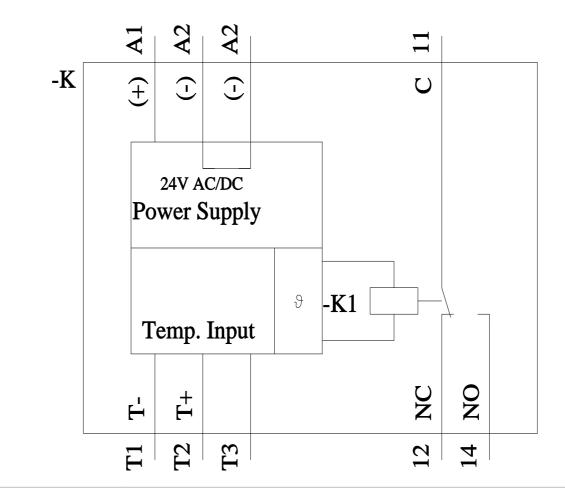
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RS2500-2AA30&lang=en

Characteristic: Derating

https://support.industry.siemens.com/cs/ww/en/ps/3RS2500-2AA30/manual





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