



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 Screw terminal

Figure similar

<b>product brand name</b>	SIRIUS
<b>product designation</b>	Temperature monitoring relay
<b>design of the product</b>	Analog multifunction device, 1 sensor, 1 threshold value
<b>product type designation</b>	3RS2
<b>General technical data</b>	
<b>product function</b>	temperature monitoring
<b>display version LED</b>	Yes
insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value	300 V
<b>test voltage for isolation test</b>	4 kV
<b>degree of pollution</b>	3
<b>protection class IP</b>	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
mechanical service life (switching cycles) typical	10 000 000
electrical endurance (switching cycles) at AC-15 at 230 V typical	100 000
<b>thermal current of the switching element with contacts maximum</b>	5 A
certificate of suitability relating to ATEX	no
<b>reference code acc. to IEC 81346-2</b>	K
<b>measurable temperature</b>	
• initial value	-50 °C
• full-scale value	1 000 °C
<b>Substance Prohibitance (Date)</b>	01.05.2012 00:00:00
<b>product function</b>	
• error memory	No
• external reset	No
<b>design of the sensor connectable</b>	Resistance sensors: Pt100 Thermocouples: Type J, K
<b>Control circuit/ Control</b>	
<b>type of voltage of the control supply voltage</b>	AC/DC
<b>control supply voltage at AC</b>	
• at 50 Hz rated value	24 ... 24 V
• at 60 Hz rated value	24 ... 24 V
<b>control supply voltage 1 at AC</b>	
• 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

<b>control supply voltage 2 at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> <li>• at 60 Hz rated value</li> </ul>	24 V 24 V
control supply voltage at DC rated value	24 ... 24 V
<b>control supply voltage 1</b>	
<ul style="list-style-type: none"> <li>• at DC rated value</li> <li>• at DC</li> </ul>	24 V 24 ... 24 V
<b>operating range factor control supply voltage rated value at DC</b>	
<ul style="list-style-type: none"> <li>• initial value</li> <li>• full-scale value</li> </ul>	0.85 1.1
<b>operating range factor control supply voltage rated value at AC at 50 Hz</b>	
<ul style="list-style-type: none"> <li>• initial value</li> <li>• full-scale value</li> </ul>	0.85 1.1
<b>operating range factor control supply voltage rated value at AC at 60 Hz</b>	
<ul style="list-style-type: none"> <li>• initial value</li> <li>• full-scale value</li> </ul>	0.85 1.1
supply voltage frequency for auxiliary and control circuit	50 ... 60 Hz
<b>number of measuring circuits</b>	1
<b>buffering time in the event of power failure minimum</b>	20 ms
<b>Precision</b>	
<b>relative metering precision</b>	5 %
<b>Short-circuit protection</b>	
<b>design of the fuse link</b>	
<ul style="list-style-type: none"> <li>• for short-circuit protection of the NO contacts of the relay outputs required</li> </ul>	gL/gG: 6 A or MCB type C: 1 A
<ul style="list-style-type: none"> <li>• for short circuit protection of the NC contacts of the relay outputs required</li> </ul>	gL/gG: 6 A or MCB type C: 1 A
<b>design of the fuse link</b>	
<ul style="list-style-type: none"> <li>• for short-circuit protection of the NO contacts of the relay outputs safety-related required</li> </ul>	gL/gG: 2 A or MCB type C: 1 A
<ul style="list-style-type: none"> <li>• for short circuit protection of the NC contacts of the relay outputs safety-related required</li> </ul>	gL/gG: 2 A or MCB type C: 1 A
<b>Communication/ Protocol</b>	
protocol is supported IO-Link protocol	No
<b>Auxiliary circuit</b>	
<b>material of switching contacts</b>	AgSnO <sub>2</sub>
<b>number of NC contacts for auxiliary contacts</b>	0
<b>number of NO contacts for auxiliary contacts</b>	0
number of CO contacts for auxiliary contacts	1
<b>operational current of auxiliary contacts at DC-13</b>	
<ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 125 V</li> <li>• at 250 V</li> </ul>	1 A 0.2 A 0.1 A
<b>contact reliability of auxiliary contacts</b>	one incorrect switching operation of 100 million switching operations (17 V, 5 mA)
<b>contact rating of auxiliary contacts according to UL</b>	R300 / B300
<b>influence of the surrounding temperature</b>	0.05% per K deviation from T20
<b>operating frequency rated value</b>	50 ... 60 Hz
ampacity of the output relay at AC-15 at 250 V at 50/60 Hz	3 A
<b>ampacity of the output relay at DC-13</b>	
<ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 125 V</li> </ul>	1 A 0.2 A
<b>continuous current of the DIAZED fuse link of the output relay</b>	6 A
<b>continuous current of DIAZED fuse link of the output relay safety-related</b>	2 A
<b>Electromagnetic compatibility</b>	
EMC emitted interference acc. to IEC 60947-1	Class B
<b>conducted interference</b>	

<ul style="list-style-type: none"> <li>• due to burst acc. to IEC 61000-4-4</li> <li>• due to conductor-earth surge acc. to IEC 61000-4-5</li> <li>• due to conductor-conductor surge acc. to IEC 61000-4-5</li> </ul>	<p>2 kV (power ports), 1 kV (signal ports)</p> <p>2 kV (line to ground)</p> <p>1 kV (line to line)</p>
<b>field-based interference acc. to IEC 61000-4-3</b>	10 V/m
<b>electrostatic discharge acc. to IEC 61000-4-2</b>	6 kV contact discharge / 8 kV air discharge
<b>Galvanic isolation</b>	
<b>design of the electrical isolation</b>	galvanic isolation
<b>galvanic isolation</b>	
<ul style="list-style-type: none"> <li>• between input and output</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• between the voltage supply and other circuits</li> </ul>	No
<b>Connections/ Terminals</b>	
<b>product component removable terminal for auxiliary and control circuit</b>	Yes
<b>type of electrical connection</b>	screw-type terminals
<ul style="list-style-type: none"> <li>• for auxiliary and control circuit</li> </ul>	screw-type terminals
<b>type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>• solid</li> </ul>	1x (0.5 ... 4.0 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• finely stranded with core end processing</li> </ul>	1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• at AWG cables solid</li> </ul>	1x (20 ... 12), 2x (20 ... 14)
<b>connectable conductor cross-section</b>	
<ul style="list-style-type: none"> <li>• solid</li> </ul>	0.5 ... 4 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>• finely stranded with core end processing</li> </ul>	0.5 ... 4 mm <sup>2</sup>
<b>AWG number as coded connectable conductor cross section</b>	
<ul style="list-style-type: none"> <li>• solid</li> </ul>	20 ... 12
<ul style="list-style-type: none"> <li>• stranded</li> </ul>	20 ... 12
tightening torque with screw-type terminals	0.6 ... 0.8 N·m
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	any
<b>fastening method</b>	screw and snap-on mounting onto 35 mm standard mounting rail
<b>height</b>	100 mm
<b>width</b>	22.5 mm
<b>depth</b>	90 mm
<b>required spacing</b>	
<ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards</li> <li>— backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul>	<p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p>
<ul style="list-style-type: none"> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— backwards</li> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> </ul> </li> </ul>	<p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p>
<ul style="list-style-type: none"> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul>	<p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p>
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
<b>ambient temperature</b>	
<ul style="list-style-type: none"> <li>• during operation</li> </ul>	-25 ... +60 °C
<ul style="list-style-type: none"> <li>• during storage</li> </ul>	-40 ... +85 °C
<ul style="list-style-type: none"> <li>• during transport</li> </ul>	-40 ... +85 °C
relative humidity during operation	70 %

Certificates/ approvals

General Product Approval	EMC	Declaration of Conformity
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Declaration of Conformity	Marine / Shipping	other
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[Miscellaneous](#)



[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=3RS2500-1AA30>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RS2500-1AA30>

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

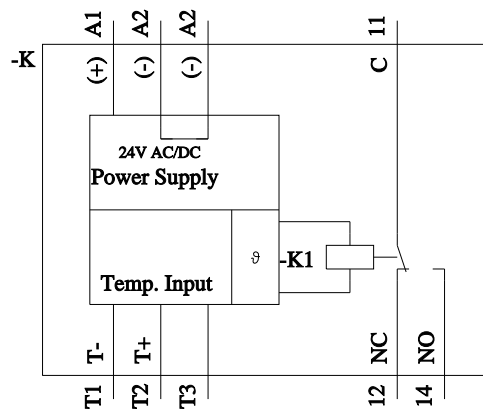
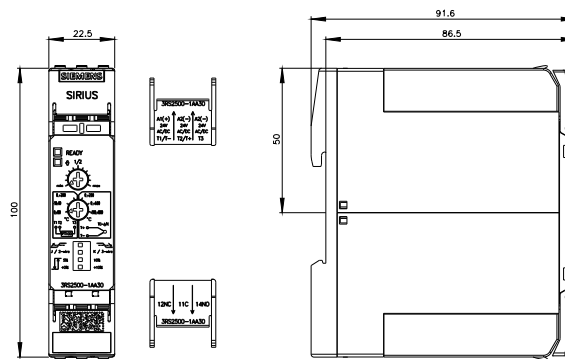
<https://support.industry.siemens.com/cs/ww/en/ps/3RS2500-1AA30>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RS2500-1AA30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RS2500-1AA30&lang=en)

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RS2500-1AA30/manual>



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