



Figure similar

Temperature monitoring relay Pt100, Thermocouple J, K 1 threshold value,
Width 22.5 mm Overshoot and undershoot 24 - 240 V AC/DC 1 change-
over contact, quiescent current principle screw terminal

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
vibration resistance according to IEC 60068-2-6	10 ... 55 Hz: 0.35 mm
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	K
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
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 ... 240 V
• 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	

<ul style="list-style-type: none"> • at 50 Hz rated value • at 60 Hz rated value 	24 V
control supply voltage at DC rated value	24 V
control supply voltage 1	24 ... 240 V
<ul style="list-style-type: none"> • at DC rated value • at DC 	24 V
operating range factor control supply voltage rated value at DC	24 ... 240 V
<ul style="list-style-type: none"> • initial value • full-scale value 	0.85
operating range factor control supply voltage rated value at AC at 50 Hz	1.1
<ul style="list-style-type: none"> • initial value • full-scale value 	0.85
operating range factor control supply voltage rated value at AC at 60 Hz	1.1
<ul style="list-style-type: none"> • initial value • full-scale value 	0.85
supply voltage frequency for auxiliary and control circuit	1.1
number of measuring circuits	50 ... 60 Hz
buffering time in the event of power failure minimum	1
	20 ms

Precision

relative metering precision	5 %
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Short-circuit protection

design of the fuse link	
<ul style="list-style-type: none"> • for short-circuit protection of the NO contacts of the relay outputs required • 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	
<ul style="list-style-type: none"> • for short-circuit protection of the NO contacts of the relay outputs safety-related required • for short circuit protection of the NC contacts of the relay outputs safety-related required 	gL/gG: 6 A or MCB type C: 1 A
	gL/gG: 2 A or MCB type C: 1 A
	gL/gG: 2 A or MCB type C: 1 A

Communication/ Protocol

protocol is supported IO-Link protocol	No
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Auxiliary circuit

material of switching contacts	AgSnO ₂
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	
<ul style="list-style-type: none"> • at 24 V • at 125 V • at 250 V 	1 A
contact reliability of auxiliary contacts	0.2 A
contact rating of auxiliary contacts according to UL	0.1 A
operating frequency rated value	one incorrect switching operation of 100 million switching operations (17 V, 5 mA)
ampacity of the output relay at AC-15 at 250 V at 50/60 Hz	R300 / B300
ampacity of the output relay at DC-13	50 ... 60 Hz
<ul style="list-style-type: none"> • at 24 V • at 125 V 	3 A
continuous current of the DIAZED fuse link of the output relay	1 A
continuous current of DIAZED fuse link of the output relay safety-related	0.2 A
	6 A
	2 A

Electromagnetic compatibility

EMC emitted interference according to IEC 60947-1	Class B
conducted interference	
<ul style="list-style-type: none"> • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 	2 kV (power ports), 1 kV (signal ports)
	2 kV (line to ground)
	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	Yes
Connections/ Terminals	
product component 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 mm ²), 2x (0.5 ... 2.5 mm ²)
• finely stranded with core end processing	1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²)
• at AWG cables solid	1x (20 ... 12), 2x (20 ... 14)
connectable conductor cross-section	
• solid	0.5 ... 4 mm ²
• finely stranded with core end processing	0.5 ... 4 mm ²
AWG number as coded connectable conductor cross section	
• solid	20 ... 12
• 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 DIN 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
— 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
• during storage	-40 ... +85 °C
• during transport	-40 ... +85 °C
relative humidity during operation	70 %
Certificates/ approvals	
General Product Approval	EMC



[Confirmation](#)



Declaration of Conformity

Marine / Shipping

other



[Confirmation](#)

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=3RS2500-1AW30>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RS2500-1AW30>

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

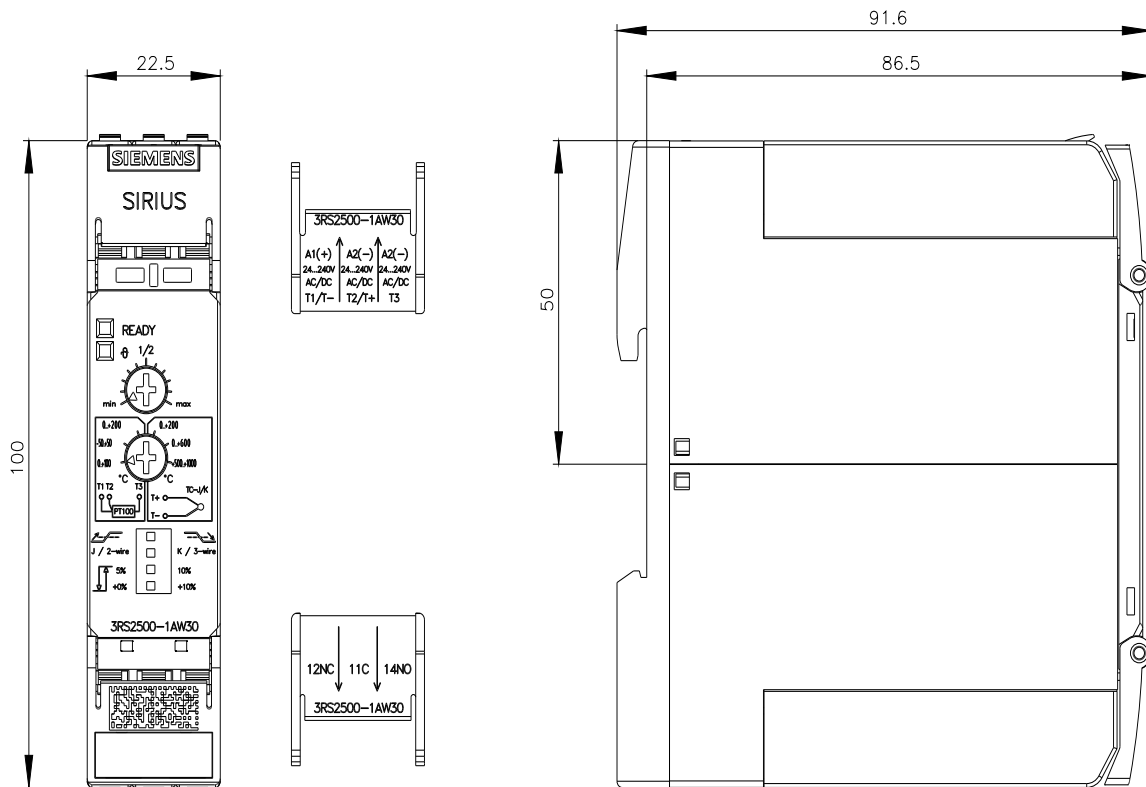
<https://support.industry.siemens.com/cs/ww/en/ps/3RS2500-1AW30>

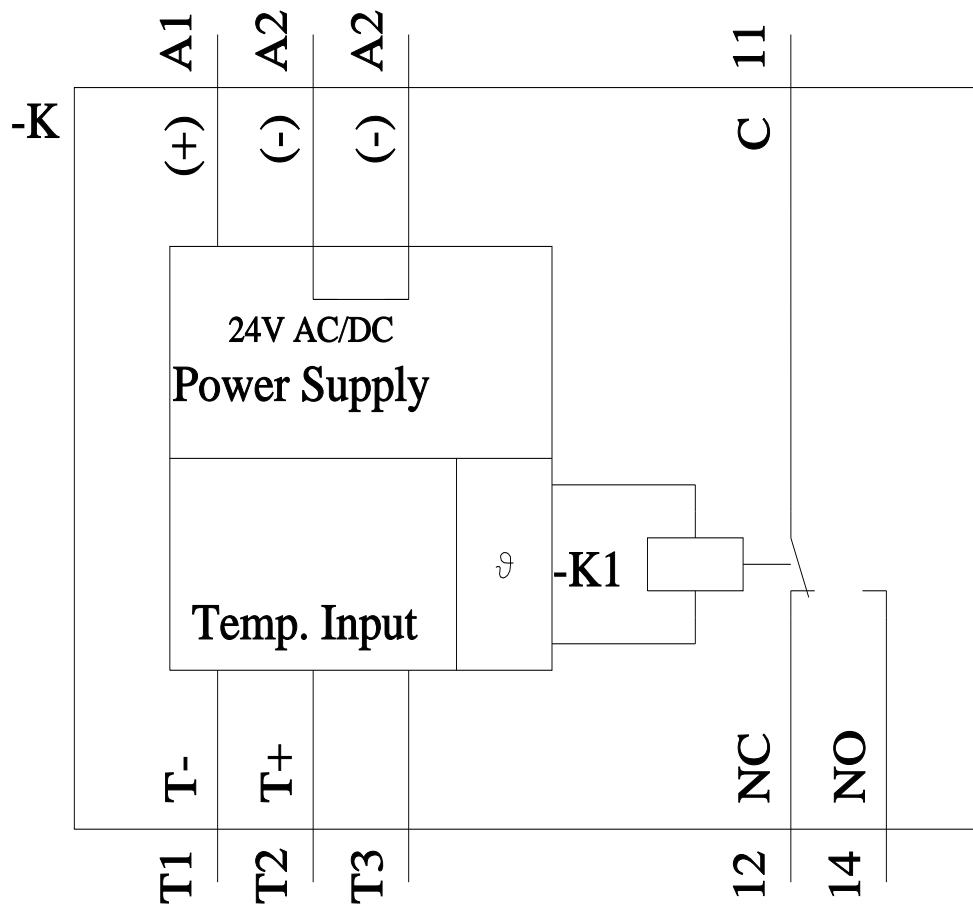
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RS2500-1AW30&lang=en

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RS2500-1AW30/manual>





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