

Thermistor motor protection relay Compact evaluation unit 17.5 mm enclosure screw terminal 1 change-over contact US = 24 V-240 V AC/DC Auto-reset suitable for bimetallic switch Supply =output voltage 1 LED (READY)



Figure similar

<b>Product brand name</b>	SIRIUS
<b>Product category</b>	SIRIUS 3RN2 thermistor motor protection
<b>Product designation</b>	Thermistor motor protection relay
<b>Design of the product</b>	Compact evaluation unit, suitable for bimetallic switch (terminal A1 jumpered with root of changeover contact)
<b>Product type designation</b>	3RN2

General technical data	
<b>Display version LED</b>	Yes
<b>Power loss [W] for rated value of the current</b>	
• at AC in hot operating state	0.9 W
• at DC in hot operating state	0.9 W
<b>Insulation voltage</b>	
• for overvoltage category III according to IEC 60664	
— with degree of pollution 3 rated value	300 V
<b>Degree of pollution</b>	3
<b>Surge voltage resistance rated value</b>	4 kV
<b>Protection class IP</b>	IP20

<b>Shock resistance</b>	
• acc. to IEC 60068-2-27	11g / 15 ms
<b>Mechanical service life (switching cycles)</b>	
• typical	10 000 000
<b>Electrical endurance (switching cycles)</b>	
• at AC-15 at 230 V typical	100 000
<b>Thermal current of the switching element with contacts maximum</b>	5 A
<b>Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</b>	K
<b>Reference code acc. to DIN EN 81346-2</b>	K
<b>Reference code acc. to DIN EN 61346-2</b>	K

#### Control circuit/ Control

<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 ... 240 V
• at 60 Hz rated value	24 ... 240 V
<b>Control supply voltage at DC</b>	
• rated value	24 ... 240 V
<b>Operating range factor control supply voltage rated value at DC</b>	
• initial value	0.85
• Full-scale value	1.1
<b>Operating range factor control supply voltage rated value at AC at 50 Hz</b>	
• initial value	0.85
• Full-scale value	1.1
<b>Operating range factor control supply voltage rated value at AC at 60 Hz</b>	
• initial value	0.85
• Full-scale value	1.1
<b>Inrush current peak</b>	
• at 24 V	0.3 A
• at 240 V	8 A
<b>Duration of inrush current peak</b>	
• at 24 V	0.15 ms
• at 240 V	0.15 ms

#### Measuring circuit

<b>Buffering time in the event of power failure minimum</b>	40 ms
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#### Precision

<b>Relative metering precision</b>	9 %
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Auxiliary circuit	
Material of switching contacts	AgSnO <sub>2</sub>
Number of NC contacts for auxiliary contacts	0
Number of NO contacts for auxiliary contacts	0
Number of CO contacts	
• for auxiliary contacts	1
Operating current of auxiliary contacts at DC-13	
• at 24 V	1 A
• at 125 V	0.2 A
• at 250 V	0.1 A

Main circuit	
Operating frequency rated value	50 ... 60 Hz

Outputs	
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

Electromagnetic compatibility	
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)
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 entrance and outlet	Yes
• between the voltage supply and other circuits	No

Connections/Terminals	
Product function	
• removable terminal for auxiliary and control circuit	Yes
Type of electrical connection	screw-type terminals
Type of connectable conductor cross-sections	
• solid	1x (0.5 ... 4.0 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
• finely stranded with core end processing	1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )

<ul style="list-style-type: none"> <li>• at AWG conductors solid</li> </ul>	1x (20 ... 12), 2x (20 ... 14)
<b>Connectable conductor cross-section</b> <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> </ul>	0.5 ... 4 mm <sup>2</sup> 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> <li>• stranded</li> </ul>	20 ... 12 20 ... 12
<b>Tightening torque</b> <ul style="list-style-type: none"> <li>• with screw-type terminals</li> </ul>	0.6 ... 0.8 N·m

### Installation/ mounting/ dimensions

<b>Mounting position</b>	any
<b>Mounting type</b>	screw and snap-on mounting onto 35 mm standard mounting rail
<b>Height</b>	100 mm
<b>Width</b>	17.5 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> <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> <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>	0 mm 0 mm 0 mm 0 mm 0 mm  0 mm 0 mm 0 mm 0 mm 0 mm  0 mm 0 mm 0 mm 0 mm 0 mm

### Ambient conditions

<b>Installation altitude at height above sea level</b> <ul style="list-style-type: none"> <li>• maximum</li> </ul>	2 000 m
<b>Ambient temperature</b> <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> </ul>	-25 ... +60 °C -40 ... +85 °C

- during transport

-40 ... +85 °C

**Relative humidity**

- during operation

70 %

Certificates/approvals

General Product Approval

EMC

Declaration of  
Conformity



Test Certificates

Marine / Shipping

other

[Type Test Certificates/Test Report](#)



[Confirmation](#)

Further information

**Information- and Downloadcenter (Catalogs, Brochures,...)**

<http://www.siemens.com/industrial-controls/catalogs>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mfb=3RN2000-1AW30>

**Cax online generator**

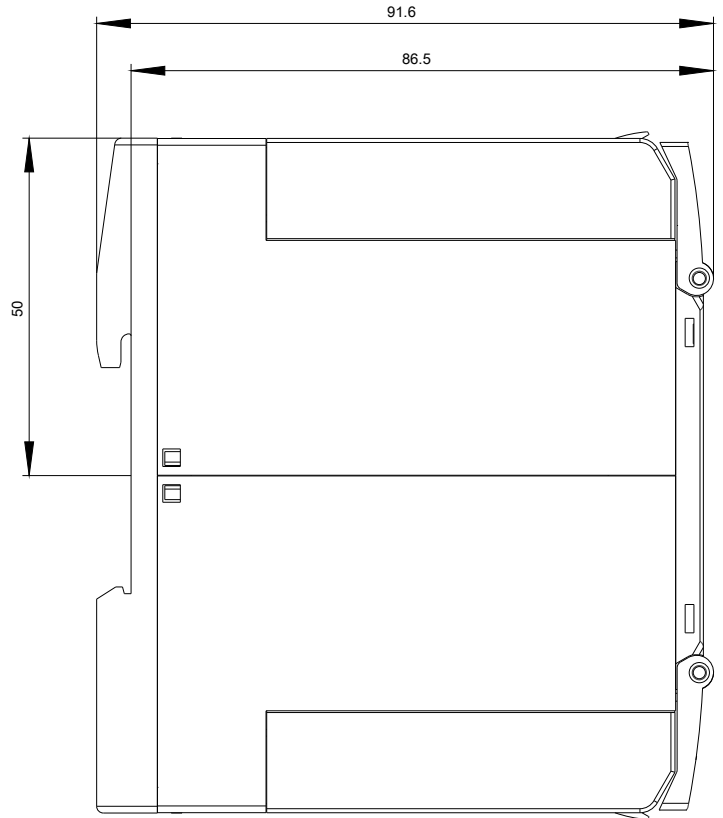
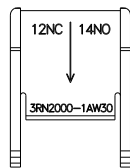
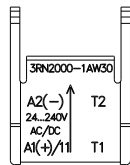
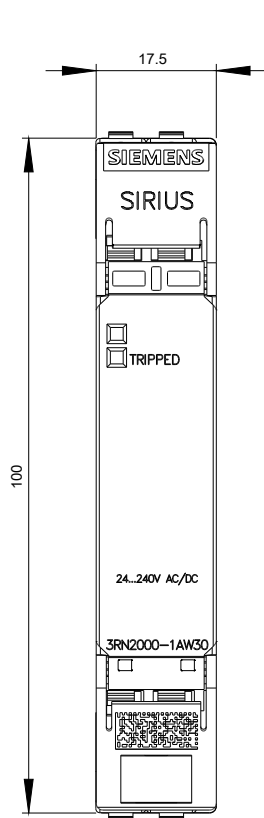
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RN2000-1AW30>

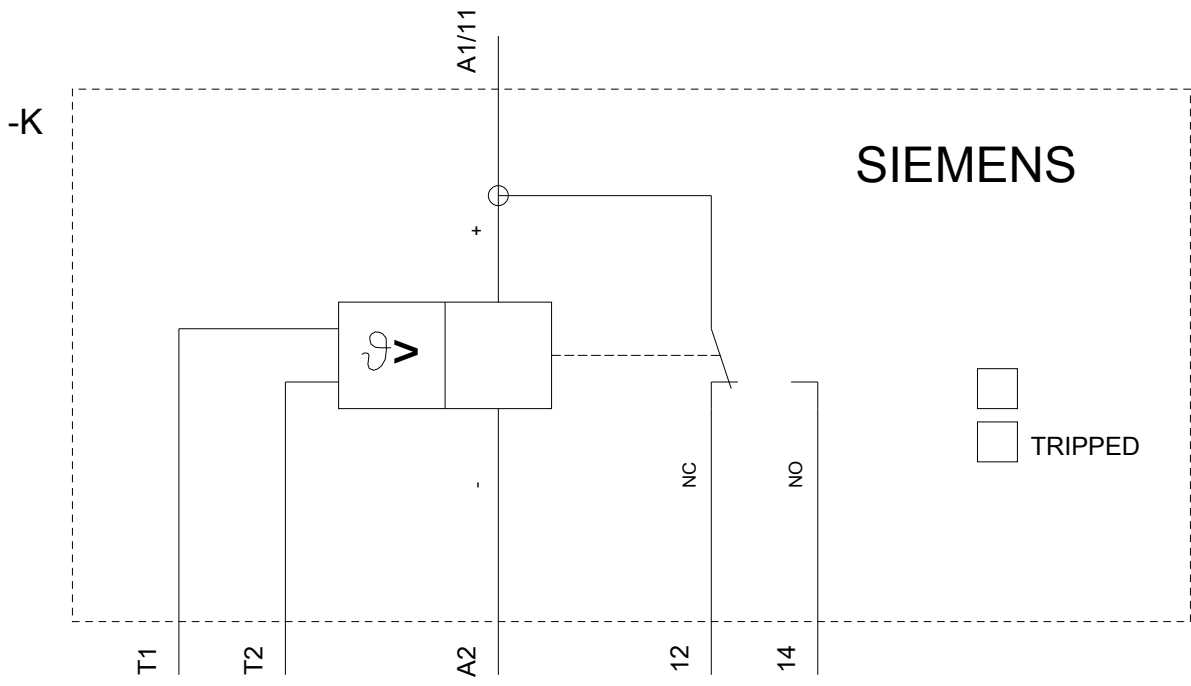
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RN2000-1AW30>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3RN2000-1AW30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RN2000-1AW30&lang=en)





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