



Thermistor motor protection relay Compact evaluation unit 17.5 mm enclosure  
Screw terminal 1 NO contact, 1 NC contact US = 24 V AC/DC Auto RESET  
suitable for bimetallic switch 2 LEDs (Ready/Tripped) galvanic isolation

<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
<b>product type designation</b>	3RN2
<b>General technical data</b>	
<b>product function</b>	thermistor motor protection
<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>degree of pollution</b>	3
<b>surge voltage resistance rated value</b>	4 kV
<b>protection class IP</b>	IP20
<b>shock resistance according to IEC 60068-2-27</b>	11g / 15 ms
<b>mechanical service life (operating cycles) typical</b>	10 000 000
<b>electrical endurance (operating cycles) at AC-15 at 230 V typical</b>	100 000
<b>thermal current of the switching element with contacts maximum</b>	5 A
<b>reference code according to IEC 81346-2</b>	K
<b>Substance Prohibitance (Date)</b>	05/28/2009
<b>SVHC substance name</b>	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
<b>Product Function</b>	
<b>product function</b>	
• error memory	No
• dynamic open-circuit detection	No
• external reset	No
• auto-RESET	Yes
• manual RESET	No
<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 at DC rated value</b>	
•	24 ... 24 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</b>	

<b>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
<b>inrush current peak</b>	
<ul style="list-style-type: none"> <li>at 24 V</li> </ul>	1.8 A
<b>duration of inrush current peak</b>	
<ul style="list-style-type: none"> <li>at 24 V</li> </ul>	2 ms
<b>Measuring circuit</b>	
<b>buffering time in the event of power failure minimum</b>	40 ms
<b>Precision</b>	
<b>relative metering precision</b>	9 %
<b>Auxiliary circuit</b>	
<b>material of switching contacts</b>	AgSnO <sub>2</sub>
<b>number of NC contacts for auxiliary contacts</b>	1
<b>number of NO contacts for auxiliary contacts</b>	1
<b>number of CO contacts for auxiliary contacts</b>	0
<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>Main circuit</b>	
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>ampacity of the output relay at AC-15 at 250 V at 50/60 Hz</b>	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>Electromagnetic compatibility</b>	
<b>conducted interference</b>	
<ul style="list-style-type: none"> <li>due to burst according to IEC 61000-4-4</li> <li>due to conductor-earth surge according to IEC 61000-4-5</li> <li>due to conductor-conductor surge according to IEC 61000-4-5</li> </ul>	2 kV (power ports) / 1 kV (signal ports) 2 kV (line to ground) 1 kV (line to line)
<b>electrostatic discharge according 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> <li>between the outputs</li> <li>between the voltage supply and other circuits</li> </ul>	Yes Yes No
<b>Connections/ Terminals</b>	
<b>product component removable terminal for auxiliary and control circuit</b>	Yes
<b>type of electrical connection</b>	screw terminal
<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> <li>finely stranded with core end processing</li> <li>for AWG cables solid</li> </ul>	1x (0.5 ... 4.0 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> ) 1x (0.5 ... 4 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> ) 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 with screw-type terminals</b>	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	17.5 mm
depth	90 mm
required spacing	
<ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— backwards 0 mm</li> <li>— upwards 0 mm</li> <li>— downwards 0 mm</li> <li>— at the side 0 mm</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— backwards 0 mm</li> <li>— upwards 0 mm</li> <li>— at the side 0 mm</li> <li>— downwards 0 mm</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— backwards 0 mm</li> <li>— upwards 0 mm</li> <li>— downwards 0 mm</li> <li>— at the side 0 mm</li> </ul> </li> </ul>	

Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul style="list-style-type: none"> <li>• during operation -25 ... +60 °C</li> <li>• during storage -40 ... +85 °C</li> <li>• during transport -40 ... +85 °C</li> </ul>	
relative humidity during operation maximum	70 %

### Approvals Certificates

#### General Product Approval

[Confirmation](#)



EMV	Test Certificates	Marine / Shipping	other
	<a href="#">Type Test Certificates/Test Report</a>		

[Confirmation](#)

### Environment

[Environmental Confirmations](#)

### Further information

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?mifb=3RN2010-1CA30>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RN2010-1CA30>

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

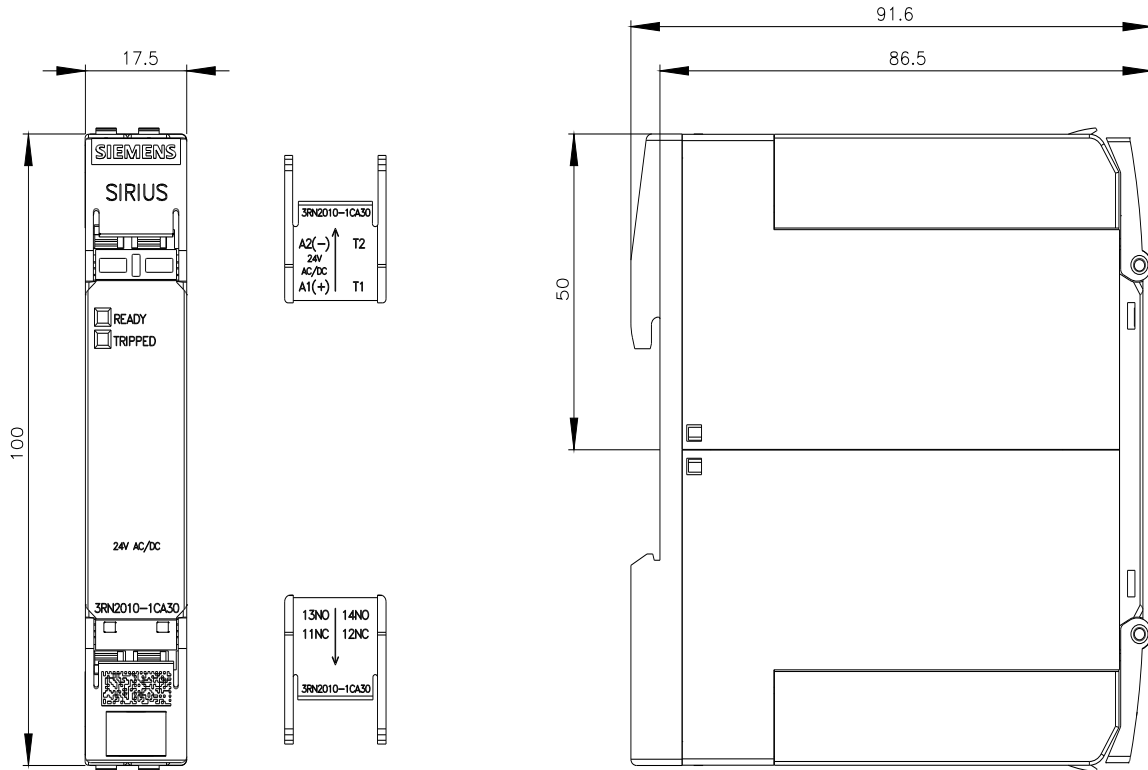
<https://support.industry.siemens.com/cs/ww/en/ps/3RN2010-1CA30>

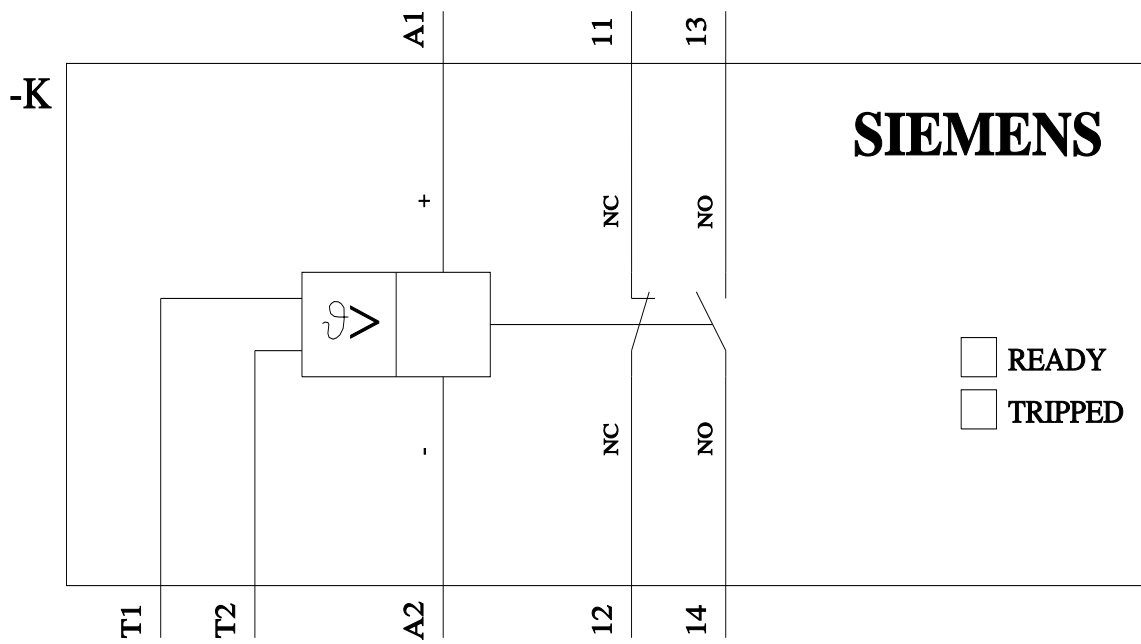
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RN2010-1CA30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RN2010-1CA30&lang=en)

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RN2010-1CA30/manual>





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