



Thermistor motor protection relay Compact evaluation unit 17.5 mm enclosure Spring-type 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>display version LED</b>	Yes
<b>power loss [W] for rated value of the current</b>	
• at AC in hot operating state	0.4 W
• at DC in hot operating state	0.4 W
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
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
<b>reference code acc. to IEC 81346-2</b>	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 at DC</b>	
• rated value	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 AC at 50 Hz</b>	
• initial value	0.85
• full-scale value	1.1
<b>operating range factor control supply voltage rated</b>	

<b>value at AC at 60 Hz</b>	
• initial value	0.85
• full-scale value	1.1
<b>inrush current peak</b>	
• at 24 V	1.8 A
<b>duration of inrush current peak</b>	
• at 24 V	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
number of CO contacts for auxiliary contacts	0
<b>Main circuit</b>	
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>Outputs</b>	
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>	
• at 24 V	1 A
• at 125 V	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>	
• 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)
<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>	
• between input and output	Yes
• between the outputs	Yes
• between the voltage supply and other circuits	No
<b>Connections/ Terminals</b>	
product function removable terminal for auxiliary and control circuit	Yes
<b>type of electrical connection</b>	Push-in terminal
• for auxiliary and control circuit	spring-loaded terminals (push-in)
<b>type of connectable conductor cross-sections</b>	
• solid	0.5 ... 4 mm <sup>2</sup>
• finely stranded with core end processing	0.5 ... 2.5 mm <sup>2</sup>
• finely stranded without core end processing	0.5 ... 4 mm <sup>2</sup>
• at AWG cables solid	20 ... 12
• at AWG cables stranded	20 ... 12
• connectable conductor cross-section solid	0.5 ... 4 mm <sup>2</sup>
• connectable conductor cross-section finely stranded with core end processing	0.5 ... 2.5 mm <sup>2</sup>
• connectable conductor cross-section finely stranded without core end processing	0.5 ... 4 mm <sup>2</sup>
• AWG number as coded connectable conductor cross section solid	20 ... 12
• AWG number as coded connectable conductor cross section stranded	20 ... 12

Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail
height	100 mm
width	17.5 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
• ambient temperature during storage	-40 ... +85 °C
• ambient temperature during transport	-40 ... +85 °C
relative humidity during operation	70 %

#### Certificates/ approvals

General Product Approval	EMC	Declaration of Conformity
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[Miscellaneous](#)

Declaration of Conformity	Test Certificates	Marine / Shipping	other
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[Type Test  
Certificates/Test  
Report](#)



[Confirmation](#)

#### Railway

[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=3RN2010-2CA30>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RN2010-2CA30>

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

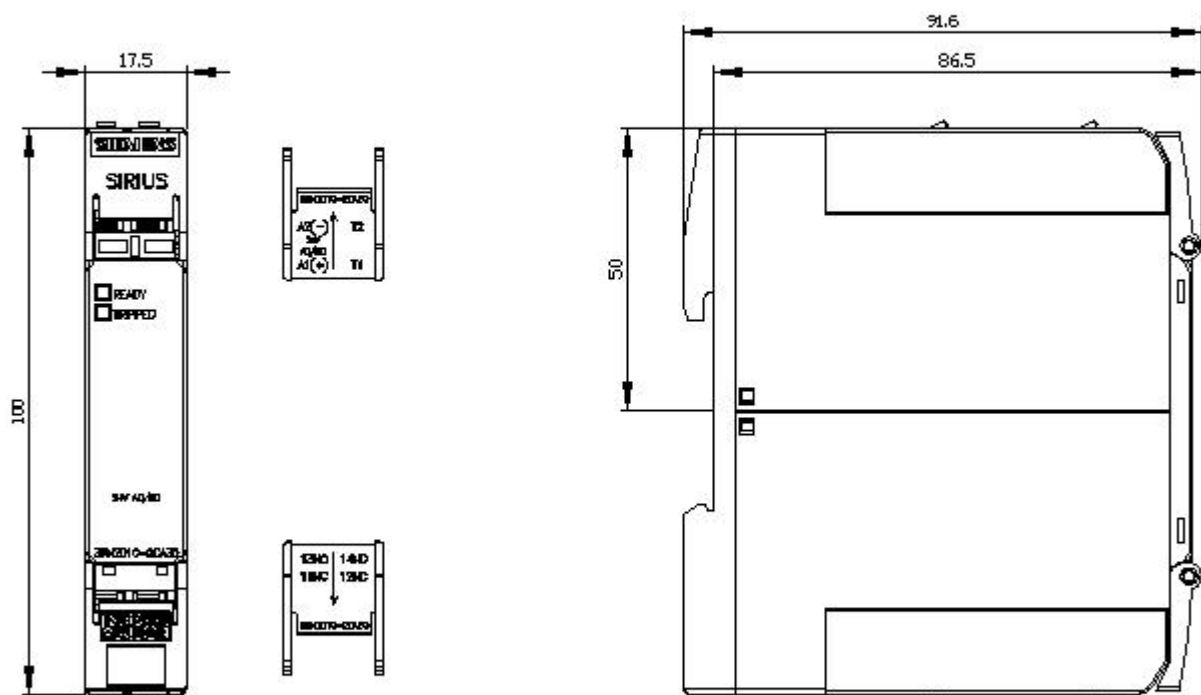
<https://support.industry.siemens.com/cs/ww/en/ps/3RN2010-2CA30>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RN2010-2CA30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RN2010-2CA30&lang=en)

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RN2010-2CA30/manual>





4

READY

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5/15/2020 