

Thermistor motor prot. relay Standard evaluation unit
 17.5 mm enclosure Screw terminals 1 NO contact, 1 NC
 contact US = 24 V AC/DC Auto RESET Suitable for
 bimetal switches 2 LEDs (READY/TRIPPED) Galvanic
 separation



Figure similar

Article number		
Product brand name		SIRIUS
Product category		SIRIUS 3RN2 thermistor motor protection
Product designation		Thermistor motor protection relay
Product type designation		3RN2

General technical data

Display version LED		Yes
Power loss [W] for rated value of the current		
• at AC in hot operating state	W	0.6
• at DC in hot operating state	W	0.4
Insulation voltage		
• for overvoltage category III according to IEC 60664		
— with degree of pollution 3 rated value	V	300
Degree of pollution		3
Surge voltage resistance rated value	kV	4
Protection class IP		IP20
Shock resistance		

<ul style="list-style-type: none"> • acc. to IEC 60068-2-27 		11g / 15 ms
Vibration resistance		
<ul style="list-style-type: none"> • acc. to IEC 60068-2-6 		10 ... 55 Hz: 0.35 mm
Mechanical service life (switching cycles)		
<ul style="list-style-type: none"> • typical 		10 000 000
Electrical endurance (switching cycles)		
<ul style="list-style-type: none"> • at AC-15 at 230 V typical 		100 000
Thermal current of the switching element with contacts maximum	A	5
Equipment marking		
<ul style="list-style-type: none"> • acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 		K
<ul style="list-style-type: none"> • acc. to DIN EN 61346-2 		K
<ul style="list-style-type: none"> • acc. to DIN EN 81346-2 		K

Control circuit/ Control		
Type of voltage of the control supply voltage		AC/DC
Control supply voltage at AC		
<ul style="list-style-type: none"> • at 50 Hz rated value 	V	24 ... 24
<ul style="list-style-type: none"> • at 60 Hz rated value 	V	24 ... 24
Control supply voltage at DC		
<ul style="list-style-type: none"> • rated value 	V	24 ... 24
Operating range factor control supply voltage rated value at DC		
<ul style="list-style-type: none"> • initial value 		0.85
<ul style="list-style-type: none"> • Full-scale value 		1.1
Operating range factor control supply voltage rated value at AC at 50 Hz		
<ul style="list-style-type: none"> • initial value 		0.85
<ul style="list-style-type: none"> • Full-scale value 		1.1
Operating range factor control supply voltage rated value at AC at 60 Hz		
<ul style="list-style-type: none"> • initial value 		0.85
<ul style="list-style-type: none"> • Full-scale value 		1.1
Inrush current peak		
<ul style="list-style-type: none"> • at 24 V 	A	1.8
Duration of inrush current peak		
<ul style="list-style-type: none"> • at 24 V 	ms	2

Measuring circuit		
Buffering time in the event of power failure minimum	ms	40
Precision		
Relative metering precision	%	9

Auxiliary circuit		
Material of switching contacts		AgSnO ₂
Number of NC contacts		1
• for auxiliary contacts		
Number of NO contacts		1
• for auxiliary contacts		
Number of CO contacts		0
• for auxiliary contacts		
Operating current of auxiliary contacts at DC-13		
• at 24 V	A	1
• at 125 V	A	0.2
• at 250 V	A	0.1

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

Outputs		
Ampacity of the output relay at AC-15		
• at 250 V at 50/60 Hz	A	3
Ampacity of the output relay at DC-13		
• at 24 V	A	1
• at 125 V	A	0.2
Continuous current of the DIAZED fuse link of the output relay	A	6

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
Galvanic isolation		
• between entrance and outlet		Yes
• between the outputs		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		
<ul style="list-style-type: none"> • solid • finely stranded with core end processing • at AWG conductors solid 		1x (0.5 ... 4.0 mm ²), 2x (0.5 ... 2.5 mm ²) 1x (0.5 ... 4 mm ²), 2x (0.5 ... 1.5 mm ²) 1x (20 ... 12), 2x (20 ... 14)
Connectable conductor cross-section		
<ul style="list-style-type: none"> • solid • finely stranded with core end processing 	mm ² mm ²	0.5 ... 4 0.5 ... 4
AWG number as coded connectable conductor cross section		
<ul style="list-style-type: none"> • solid • stranded 		20 ... 12 20 ... 12
Tightening torque		
<ul style="list-style-type: none"> • with screw-type terminals 	N·m	0.6 ... 0.8

Installation/ mounting/ dimensions

Mounting position		any
Mounting type		screw and snap-on mounting onto 35 mm standard mounting rail
Height	mm	100
Width	mm	17.5
Depth	mm	90
Required spacing		
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side 	mm mm mm mm mm mm mm mm mm mm mm mm mm mm mm	0 0 0 0 0 0 0 0 0 0 0 0 0 0

Ambient conditions

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

Certificates/approvals

General Product Approval	EMC	For use in hazardous locations	Declaration of Conformity
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Test Certificates	Marine / Shipping	other
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[Type Test Certificates/Test Report](#)



[Confirmation](#)

[Environmental Confirmations](#)

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?mlfb=3RN2010-1CA30>

Cax online generator

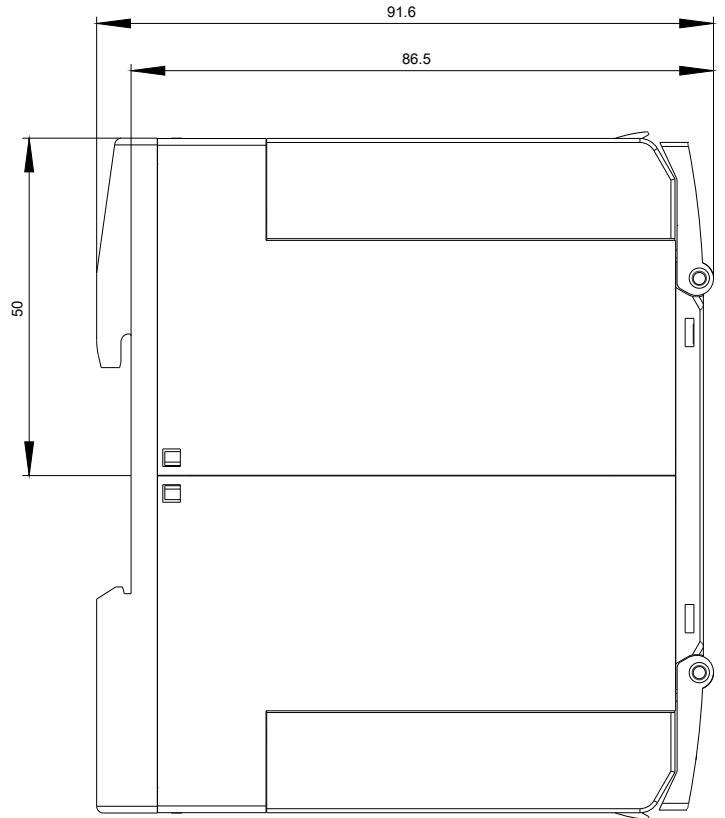
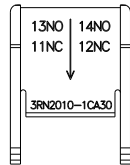
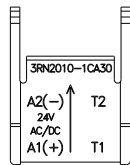
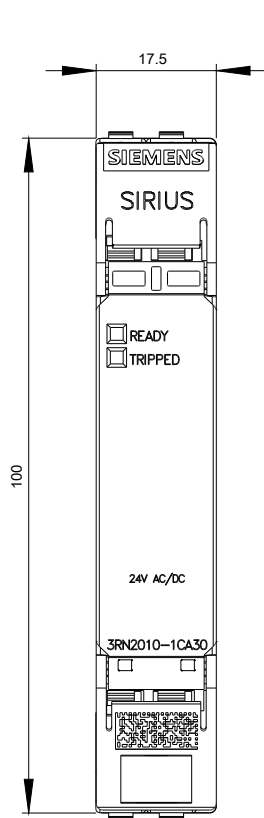
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RN2010-1CA30>

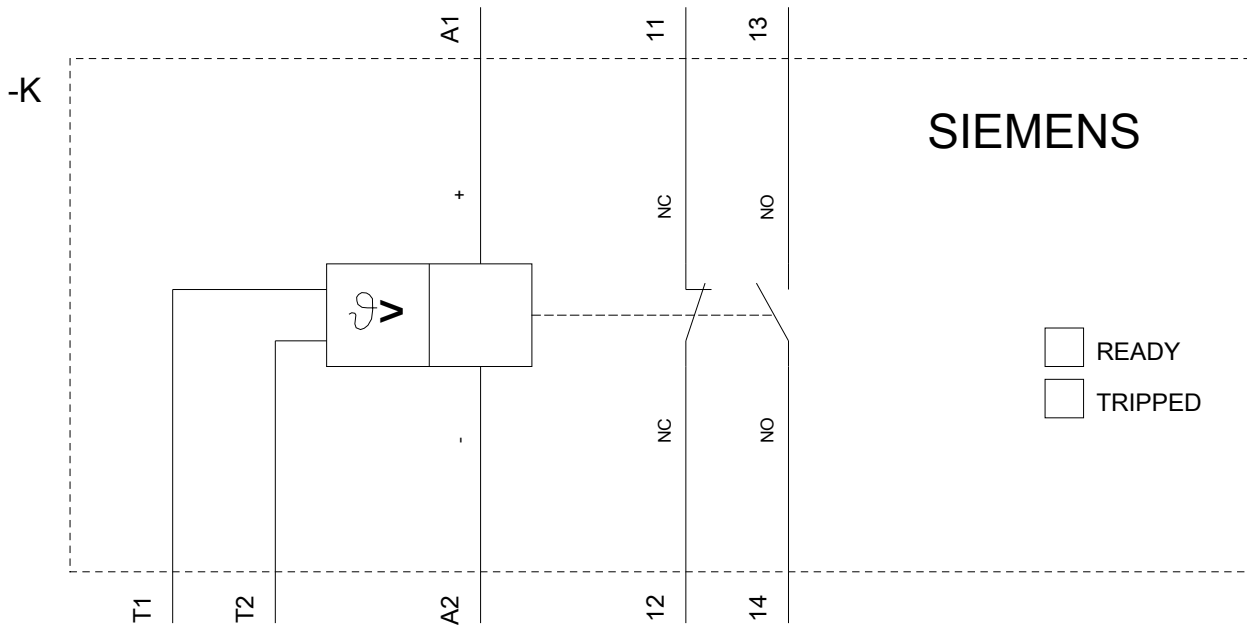
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<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





last modified:

09/25/2017