SIEMENS

Data sheet 3RN2012-2BW30



thermistor motor protection relay standard evaluation unit 22.5 mm enclosure spring-loaded terminal 2 changeover contacts Us = 24 V-240 V AC/DC manual/auto/remote RESET with ATEX approval 2 LEDs (ready/tripped) electrical isolation test/RESET button wire-break monitoring short-circuit monitoring non-volatile

product brand name	SIRIUS
product category	SIRIUS 3RN2 thermistor motor protection
product designation	Thermistor motor protection relay
design of the product	Standard evaluation unit with ATEX approval, open-circuit and short-circuit detection in the sensor circuit, non-volatile
product type designation	3RN2
General technical data	
product function	thermistor motor protection
display version LED	Yes
power loss [W] for rated value of the current	
 at AC in hot operating state 	1.7 W
at DC in hot operating state	1.7 W
insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value	300 V
degree of pollution	3
surge voltage resistance rated value	4 kV
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 24 V typical	100 000
at 230 V typical	100 000
thermal current of the switching element with contacts maximum	5 A
reference code according to IEC 81346-2	К
Substance Prohibitance (Date)	05/28/2009
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1
Weight	0.173 kg
Product Function	
product function	
• error memory	Yes
 dynamic open-circuit detection 	Yes
 external reset 	Yes
• auto-RESET	Yes
manual RESET	Yes
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 at DC rated value	24 240 V
operating range factor control supply voltage rated value at DC	
initial value	0.85
	0.85
• full-scale value	1.1
operating range factor control supply voltage rated value at AC at 50 Hz	
• initial value	0.85
full-scale value	1.1
operating range factor control supply voltage rated value at	
AC at 60 Hz	
• initial value	0.85
• full-scale value	1.1
inrush current peak	
• at 24 V	0.7 A
• at 240 V	12 A
duration of inrush current peak	
• at 24 V	0.25 ms
• at 240 V	0.2 ms
Measuring circuit	
buffering time in the event of power failure minimum	40 ms
Precision	
relative metering precision	2 %
Auxiliary circuit	
material of switching contacts	AgSnO2
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	0
number of CO contacts for auxiliary contacts	2
operational current of auxiliary contacts at AC-15 maximum	3 A
operational current of auxiliary contacts at DC-13	37
• at 24 V	1.A
● at 24 V	
	0.2 A
• at 125 V	0.2 A
• at 125 V • at 250 V	0.2 A 0.1 A
at 125 V at 250 V Main circuit	0.1 A
at 125 V at 250 V Main circuit operating frequency rated value	0.1 A 50 60 Hz
at 125 V at 250 V Main circuit operating frequency rated value ampacity of the output relay at AC-15 at 250 V at 50/60 Hz	0.1 A
at 125 V at 250 V Main circuit operating frequency rated value ampacity of the output relay at AC-15 at 250 V at 50/60 Hz ampacity of the output relay at DC-13	0.1 A 50 60 Hz 3 A
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mounting position fastening method screw and snap-on mounting onto 35 mm DIN rail height vidth 22.5 mm depth 90 mm required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side — for grounded parts — forwards — upwards — upwards — o mm • for grounded parts — forwards — upwards — o mm — at the side — o mm • for grounded parts — forwards — upwards — o mm • for grounded parts — forwards — o mm • backwards — upwards — o mm • of mm — at the side — downwards • o mm • for live parts — forwards — backwards — upwards — o mm • for live parts — forwards — backwards — upwards — o mm — at the side — downwards — o mm — at the side — downwards — o mm — at the side — o mm — at the side — o mm — o mm — at the side — o mm	 stranded 	20 12
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 — downwards 0 mm • for grounded parts — forwards 0 mm — backwards 0 mm • for grounded parts — forwards 0 mm — backwards 0 mm • backwards 0 mm — backwards 0 mm — backwards 0 mm — upwards 0 mm — at the side 0 mm — of mm — at the side 0 mm — downwards 0 mm • for live parts — forwards 0 mm — backwards 0 mm — backwards 0 mm • for live parts — forwards 0 mm — backwards 0 mm — at the side 0 mm — ownwards 0 mm — at the side 0 mm	Installation/ mounting/ dimensions	
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required spacing with side-by-side mounting — forwards	mounting position fastening method	screw and snap-on mounting onto 35 mm DIN rail
with side-by-side mounting — forwards	mounting position fastening method height	screw and snap-on mounting onto 35 mm DIN rail 100 mm
	mounting position fastening method height width	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm
	mounting position fastening method height width depth	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm
backwards 0 mm upwards 0 mm downwards 0 mm at the side 0 mm for grounded parts forwards 0 mm backwards 0 mm backwards 0 mm upwards 0 mm at the side 0 mm at the side 0 mm downwards 0 mm for live parts forwards 0 mm backwards 0 mm upwards 0 mm upwards 0 mm downwards 0 mm at the side 0 mm at the side 0 mm at the side 0 mm	mounting position fastening method height width depth required spacing	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm
 — upwards — downwards — at the side ● for grounded parts — forwards — backwards — upwards — at the side — downwards ● for live parts — forwards — forwards — o mm — downwards — forwards — forwards — forwards — downwards — o mm — backwards — upwards — o mm — downwards — o mm — at the side O mm — at the side O mm Ambient conditions	mounting position fastening method height width depth required spacing • with side-by-side mounting	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm
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- at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards • for live parts - forwards - backwards - upwards - backwards - upwards - upwards - upwards - upwards - downwards - downwards - downwards - at the side - downwards - downwards - at the side - downwards - mywards - downwards - downwards - at the side - mywards -	mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm 0 mm
for grounded parts — forwards — backwards — upwards — at the side — downwards — for live parts — forwards — backwards — upwards — o mm — backwards — upwards — upwards — upwards — upwards — at the side — o mm — at the side — o mm — at the side — o mm Ambient conditions	mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm 0 mm 0 mm
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 upwards 0 mm downwards 0 mm downwards 0 mm at the side 0 mm at the side 0 mm	mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm
 — backwards — upwards — at the side — downwards ● for live parts — forwards — backwards — upwards — upwards — downwards — at the side Ambient conditions O mm </td <td>mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side</td> <td>screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm</td>	mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm
 — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — upwards — downwards — at the side Ambient conditions 0 mm 0 mm 0 mm 	mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm
 — at the side — downwards ● for live parts — forwards — backwards — upwards — upwards — downwards — at the side O mm O mm O mm O mm O mm 	mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm
 — downwards ● for live parts — forwards — backwards — upwards — downwards — downwards — at the side O mm O mm O mm Ambient conditions	mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — backwards	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm
● for live parts — forwards — backwards — upwards — upwards — downwards — at the side Ambient conditions 0 mm 0 mm 0 mm	mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — a the side • for grounded parts — forwards — backwards — upwards	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm 0 mm
— forwards 0 mm — backwards 0 mm — upwards 0 mm — downwards 0 mm — at the side 0 mm Ambient conditions	mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — at the side - to required parts — to req	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm 0 mm
 backwards upwards downwards at the side 0 mm 0 mm 0 mm Ambient conditions	mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — at the side • for grounded parts — forwards — backwards — backwards — backwards — backwards — upwards — at the side — downwards	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm 0 mm
 upwards downwards at the side 0 mm 0 mm Ambient conditions	mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — at the side • for grounded parts — forwards — backwards — upwards — backwards — upwards — at the side — downwards • for live parts	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm 0 mm
- downwards 0 mm - at the side 0 mm Ambient conditions	mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — at the side • for grounded parts — forwards — backwards — upwards — at the side — downwards — at the side — downwards • for live parts — forwards	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm 0 mm
— at the side 0 mm Ambient conditions	mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — at the side • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 m
Ambient conditions	mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — backwards — to grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — backwards — upwards • for live parts — forwards — backwards — upwards	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 m
	mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — backwards — upwards — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — downwards • for lowerds — backwards — backwards — backwards — backwards — backwards — downwards	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 m
installation altitude at height above sea level maximum 2 000 m	mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — backwards — obackwards — backwards — the side — downwards — at the side — downwards • for live parts — forwards — backwards — upwards — downwards • for live parts — forwards — backwards — upwards — backwards — upwards — backwards — at the side	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 m
	mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — backwards — the side — downwards — at the side — downwards — at the side — downwards — at the side — downwards • for live parts — forwards — backwards — upwards — downwards — the side — downwards — backwards — upwards — at the side — downwards — at the side Ambient conditions	screw and snap-on mounting onto 35 mm DIN rail 100 mm 22.5 mm 90 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 m

ambient temperature -25 ... +60 °C during operation • during storage -40 ... +85 °C during transport -40 ... +85 °C relative humidity during operation maximum 70 % explosion protection category for dust [Ex t] [Ex p] [Ex e] [Ex d] [Ex px] explosion protection category for gas

Approvals Certificates

General Product Approval















For use in hazardous locations

Test Certificates

Maritime application



Miscellaneous

Type Test Certificates/Test Report







other

Environment



Confirmation

Environmental Confirmations

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

Information for data generation and storage

https://support.industry.siemens.com/cs/ww/en/view/109995012

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=3RN2012-2BW30

Cax online generator

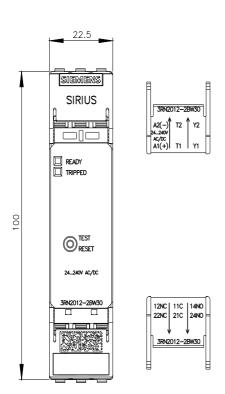
 $\underline{\text{https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RN2012-2BW30}$

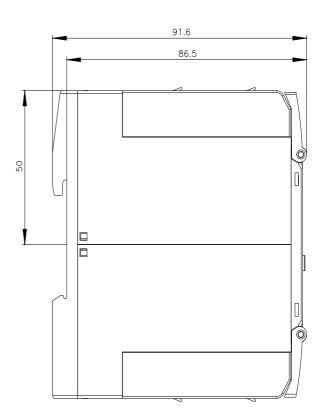
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

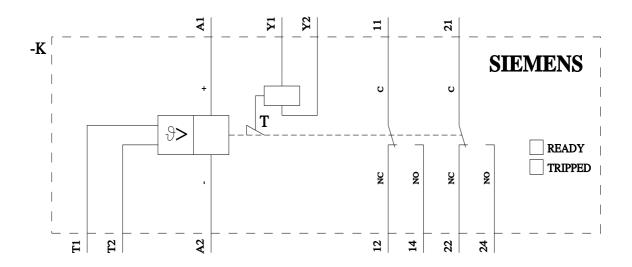
https://support.industry.siemens.com/cs/ww/en/ps/3RN2012-2BW30

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RN2012-2BW30&lang=en







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