SIEMENS

Data sheet 3RN2010-1BW30



Thermistor motor protection relay Standard evaluation unit 22.5 mm enclosure screw terminal 2 change-over contacts US = 24 V-240 V AC/DC Auto-reset suitable for bimetallic switch 2 LEDs (READY/TRIPPED) galvanic isolation

product brand name	SIRIUS
product category	SIRIUS 3RN2 thermistor motor protection
product designation	Thermistor motor protection relay
design of the product	Standard evaluation unit, suitable for bimetallic switch
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 	1.4 W
 at DC in hot operating state 	1.4 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 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
Weight	0.22 kg
Product Function	
product function	
• error memory	No
 dynamic open-circuit detection 	No
 external reset 	No
auto-RESET	Yes
manual RESET	No
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
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	0.6 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	9 %
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 DC-13	
• at 24 V	1 A
• at 125 V	0.2 A
• at 250 V	0.1 A
Main circuit	TO 0011
operating frequency rated value	50 60 Hz
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	1 A
at 24 V at 125 V	0.2 A
continuous current of the DIAZED fuse link of the output	6 A
relay	
Electromagnetic compatibility	
conducted interference	
 due to burst according to IEC 61000-4-4 	2 kV (power ports) / 1 kV (signal ports)
due to conductor-earth surge according to IEC 61000-4-5	2 kV (line to ground)
due to conductor-conductor surge according to IEC	1 kV (line to line)
61000-4-5	CIA/ contest discharge (OIA/ -i- dib
electrostatic discharge according to IEC 61000-4-2 Galvanic isolation	6 kV contact discharge / 8 kV air discharge
	galvania isolation
design of the electrical isolation galvanic isolation	galvanic isolation
between input and output	Yes
between the outputs	Yes
between the outputs between the voltage supply and other circuits	Yes
Connections/ Terminals	
	Yes
product component removable terminal for auxiliary and control circuit	Yes
product component removable terminal for auxiliary and	Yes screw terminal
product component removable terminal for auxiliary and control circuit	
product component removable terminal for auxiliary and control circuit type of electrical connection	screw terminal
product component removable terminal for auxiliary and control circuit type of electrical connection • for auxiliary and control circuit	screw terminal screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)
product component removable terminal for auxiliary and control circuit type of electrical connection • for auxiliary and control circuit type of connectable conductor cross-sections	screw terminal screw-type terminals
product component removable terminal for auxiliary and control circuit type of electrical connection • for auxiliary and control circuit type of connectable conductor cross-sections • solid	screw terminal screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)
product component removable terminal for auxiliary and control circuit type of electrical connection • for auxiliary and control circuit type of connectable conductor cross-sections • solid • finely stranded with core end processing	screw terminal screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²)
product component removable terminal for auxiliary and control circuit type of electrical connection	screw terminal screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²)

AWG number as coded connectable conductor cross section	
• solid	20 12
 stranded 	20 12
tightening torque with screw-type terminals	0.6 0.8 N·m
nstallation/ mounting/ dimensions	
mounting position	any
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
— 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
during storage	-40 +85 °C
during transport	-40 +85 °C
relative humidity during operation maximum	70 %
Approvals Certificates	

General Product Approval







Confirmation





EMV Test Certificates Marine / Shipping other



Type Test Certificates/Test Report







Confirmation

Environment

Environmental Confirmations 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?mlfb=3RN2010-1BW30

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RN2010-1BW30

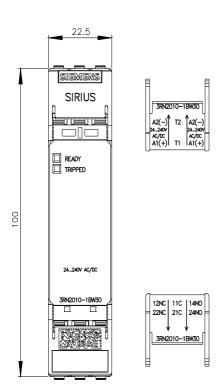
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

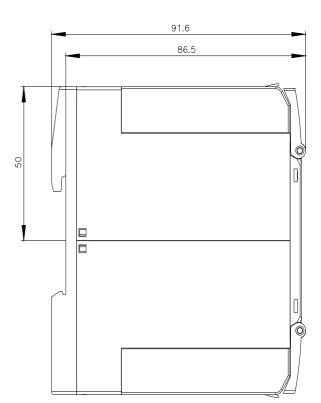
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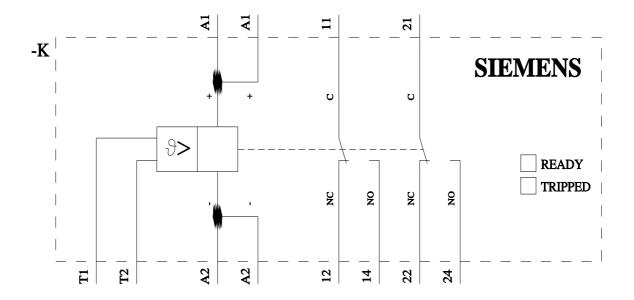
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RN2010-1BW30&lang=en

Characteristic: Derating

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