SIEMENS

Data sheet

3RN2013-1GW30



Thermistor motor prot. relay Standard evaluation unit 22.5 mm enclosure Screw terminals 2 CO contacts, hard gold-plated US = 24-240 V AC/DC Manual/Auto/Remote RESET with ATEX certification 2 LEDs (READY/TRIPPED) Protective separation Test/Reset button Open-circuit monitoring Short-circuit monitoring Non-volatile

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	1.7	
 at DC in hot operating state 	W	1.7	
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	6	
maximum permissible voltage for safe isolation			
 between auxiliary and auxiliary circuit 	V	300	

 between control and auxiliary circuit 	V	300
Protection class IP		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
Thermal current of the switching element with contacts maximum	А	5
Equipment marking	-	
acc. to DIN 40719 extended according to IEC		к
204-2 acc. to IEC 750		
• acc. to DIN EN 61346-2		κ
• acc. to DIN EN 81346-2		к
Control circuit/ Control		
Type of voltage of the control supply voltage		AC/DC
Control supply voltage at AC		24 242
• at 50 Hz rated value	V	24 240
at 60 Hz rated value	V	24 240
Control supply voltage at DC	. <i>,</i> ,	a. a.a
• rated value	V	24 240
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	А	0.7
• at 240 V	А	12

• at 24 V ms • at 240 V ms 0.25

0.2

Measuring circuit		
Buffering time in the event of power failure minimum	ms	40
Precision		
Relative metering precision	%	2
Auxiliary circuit		
Material of switching contacts		AgSnO2-HTV
Number of NC contacts		
 for auxiliary contacts 		0
Number of NO contacts	-	
 for auxiliary contacts 		0
Number of CO contacts	-	
 for auxiliary contacts 		2
Operating current of auxiliary contacts at DC-13	_	
• at 24 V	А	1
• at 125 V	А	0.2
● at 250 V	А	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	А	3
Ampacity of the output relay at DC-13		
• at 24 V	А	1
● at 125 V	А	0.2
Continuous current of the DIAZED fuse link of the	А	6
output relay		
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		1 kV (line to line)
61000-4-5 Electrostatic discharge acc. to IEC 61000-4-2		6 kV contact discharge / 8 kV air discharge
-		
Galvanic isolation Design of the electrical isolation		Protective separation
Galvanic isolation		
between entrance and outlet		Yes
between the outputs		Yes
 between the voltage supply and other circuits 		Yes
- between the voltage supply and other circuits		

Safety related data				
Safety Integrity Level (SIL) acc. to IEC 61508		1		
Performance level (PL) acc. to EN ISO 13849-1	_	C		
Category acc. to EN ISO 13849-1		1		
Safe failure fraction (SFF)	%	74		
Average diagnostic coverage level (DCavg)	%	18		
Failure rate [FIT]	-			
 at rate of recognizable hazardous failures (λdd) 	1/h	0.00000068		
 at rate of non-recognizable hazardous failures (λdu) 	1/h	0.0000031		
PFHD with high demand rate acc. to EN 62061	1/h	0.0000038		
PFDavg with low demand rate acc. to IEC 61508	_	0.0041		
MTTFd	У	303		
Hardware fault tolerance acc. to IEC 61508		0		
T1 value for proof test interval or service life acc. to IEC 61508	у З			
Connections/Terminals	_			
Product function		Vee		
 removable terminal for auxiliary and control circuit 		Yes		
Type of electrical connection		screw-type terminals		
Type of connectable conductor cross-sections				
• solid		1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)		
 finely stranded with core end processing 		1x (0.5 4 mm²), 2x (0.5 1.5 mm²)		
 at AWG conductors solid 		1x (20 12), 2x (20 14)		
Connectable conductor cross-section				
• solid	mm²	0.5 4		
 finely stranded with core end processing 	mm²	0.5 4		
AWG number as coded connectable conductor cross section	-			
• solid		20 12		
• stranded		20 12		
Tightening torque				
• with screw-type terminals	N∙m	0.6 0.8		
nstallation/ mounting/ dimensions				
Mounting position		any		
Mounting type		screw and snap-on mounting onto 35 mm standard mounting rail		
Height	mm	100		
Width	mm	22.5		
Depth	mm	90		
e with side-by-side mounting				

— forwards	mm	0		
— Backwards	mm	0		
— upwards	mm	0		
— downwards	mm	0		
— at the side	mm	0		
 for grounded parts 				
— forwards	mm	0		
— Backwards	mm	0		
— upwards	mm	0		
— at the side	mm	0		
— downwards	mm	0		
• for live parts				
— forwards	mm	0		
— Backwards	mm	0		
— upwards	mm	0		
— downwards	mm	0		
— at the side	mm	0		
Ambient conditions				
Installation altitude at height above sea level				
• maximum	m	2 000		
Ambient temperature				
 during operation 	°C	-25 +60		
 during storage 	°C	-40 +85		
during transport	°C	-40 +85		
Relative humidity				
• during operation	%	70		
Explosion protection category for dust		[Ex t] [Ex p]		

Certificates/approvals

General Produc	t Approval		EMC	For use in hazardous locations	Declaration of Conformity
CSA		EHC	C-Tick	РТВ	EG-Konf.
Test	Marine / Ship	oping		other	
Certificates					
<u>Type Test</u> Certificates/Test Report	Lloyd's Register		C DNV-GL	Confirmation	

Further information

Information- and Downloadcenter (Catalogs, Brochures,...) http://www.siemens.com/industrial-controls/catalogs

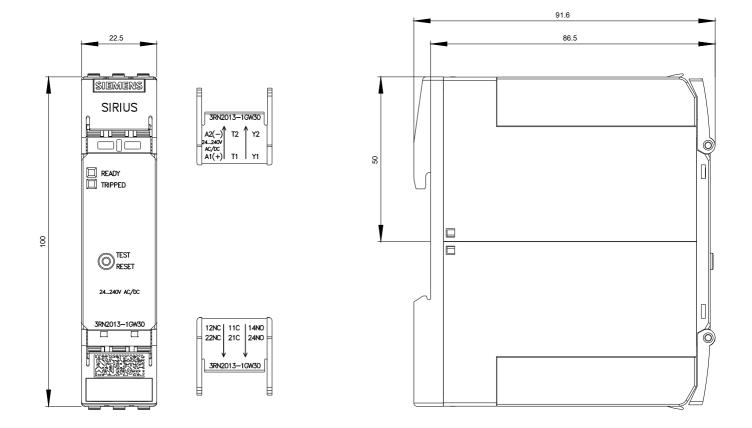
Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RN2013-1GW30

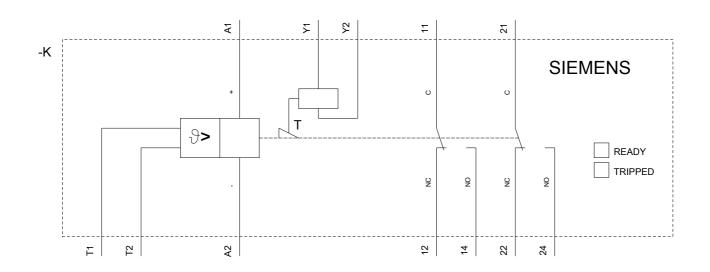
Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RN2013-1GW30

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RN2013-1GW30

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RN2013-1GW30&lang=en





last modified:

09/25/2017