

# Monitoring Relays

## 3RN1 Thermistor Motor Protection



For PTC sensors

### Selection and ordering data

#### Thermistor motor protection relays for PTC thermistors (Type A PTCs)

- Monostable version with closed-circuit principle, triggers in the event of control supply voltage failure

- PTB01 ATEX approval, see Catalog LV 1 T.
- 3RN10 13-.BW01: bistable version, does not trigger in the event of control supply voltage failure
- All units except for 24 V AC/DC feature electrical isolation

RESET	Contacts	Rated control supply voltage $U_s$ 50/60 Hz	DT	Screw-type connection	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.			
				Order No.	Price per PU			kg			
<b>Compact signal evaluation units, width 22.5 mm, 1 LED</b>											
Terminal A1 is jumpered with the root of the changeover contact											
Auto	1 CO	AC/DC 24 AC 110 AC 230	A A A	<b>3RN10 00-1AB00</b> <b>3RN10 00-1AG00</b> <b>3RN10 00-1AM00</b>	1 1 1	1 unit 1 unit 1 unit	101 101 101	0.114 0.157 0.156			
<b>Standard evaluation units, width 22.5 mm, 2 LEDs</b>											
	Auto	1 NO + 1 NC	AC/DC 24	A	<b>3RN10 10-1CB00</b>	1	1 unit	101	0.134		
			AC 110	A	<b>3RN10 10-1CG00</b>	1	1 unit	101	0.174		
			AC 230	A	<b>3RN10 10-1CM00</b>	1	1 unit	101	0.175		
			AC/DC 24 ... 240	A	<b>3RN10 10-1CW00</b>	1	1 unit	101	0.146		
3RN10 13-1BB00	Auto	2 CO	AC/DC 24	A	<b>3RN10 10-1BB00</b>	1	1 unit	101	0.162		
			AC 110	A	<b>3RN10 10-1BG00</b>	1	1 unit	101	0.213		
			DC 230	A	<b>3RN10 10-1BM00</b>	1	1 unit	101	0.213		
			AC/DC 24	B	<b>3RN10 10-1GB00</b>	1	1 unit	101	0.154		
	Manual/ remote <sup>1)</sup>	1 NO + 1 NC	AC/DC 24	▶	<b>3RN10 11-1CB00</b>	1	1 unit	101	0.147		
			AC 110 / 230	▶	<b>3RN10 11-1CK00</b>	1	1 unit	101	0.188		
			Short-circuit detection for sensor circuit		AC/DC 24	A	<b>3RN10 11-1BB00</b>	1	1 unit	101	0.163
					AC 110	B	<b>3RN10 11-1BG00</b>	1	1 unit	101	0.214
		AC 230	A	<b>3RN10 11-1BM00</b>	1	1 unit	101	0.212			
		2 CO, gold-plated	AC/DC 24	B	<b>3RN10 11-1GB00</b>	1	1 unit	101	0.165		
3RN10 13-1BW01	Manual/ Auto/ Remote	1 NO + 1 NC	AC/DC 24	▶	<b>3RN10 12-1CB00</b>	1	1 unit	101	0.148		
			AC 110 / 230	▶	<b>3RN10 12-1CK00</b>	1	1 unit	101	0.188		
			Non-volatile <sup>2)</sup>		AC/DC 24	B	<b>3RN10 12-1BB00</b>	1	1 unit	101	0.164
					AC 110	B	<b>3RN10 12-1BG00</b>	1	1 unit	101	0.214
		AC 230	A	<b>3RN10 12-1BM00</b>	1	1 unit	101	0.216			
		2 CO, gold-plated	AC/DC 24	B	<b>3RN10 12-1GB00</b>	1	1 unit	101	0.155		
		Non-volatile <sup>2)</sup> ; short-circuit and open-circuit detection and indication in sensor circuit; wide-range voltage with screw connection with safe isolation			AC/DC 24	▶	<b>3RN10 13-1BB00</b>	1	1 unit	101	0.160
		2 CO	AC/DC 24	▶	<b>3RN10 13-1BW10</b>	1	1 unit	101	0.172		
		2 CO, gold-plated	AC/DC 24 ... 240	B	<b>3RN10 13-1GW10</b>	1	1 unit	101	0.168		
<b>Evaluation units for 2 sensor circuits, warning and switching off, width 22.5 mm, 3 LEDs</b>											
Manual/ Auto/ Remote	Test/RESET button, non-volatile <sup>2)</sup> 1 NO + 1 CO	AC/DC 24 ... 240	▶	<b>3RN10 22-1DW00</b>	1	1 unit	101	0.173			
<b>Evaluation units for 6 sensor circuits, multiple motor protection, width 45 mm, 8 LEDs</b>											
Manual/ Auto/ Remote	Test/RESET button, non-volatile <sup>2)</sup> 1 NO + 1 NC	AC/DC 24 ... 240	▶	<b>3RN10 62-1CW00</b>	1	1 unit	101	0.296			
<b>Bistable evaluation units, width 22.5 mm</b>											
Manual/ Auto/ Remote	Test/RESET button, non-volatile <sup>2)</sup> Short-circuit and open-circuit detection and indication in sensor circuit 2 CO	AC/DC 24 ... 240	A	<b>3RN10 13-1BW01</b>	1	1 unit	101	0.169			

1) The unit can be reset with the RESET button or by disconnecting the control supply voltage.

2) For more information on protection against voltage failure, see Catalog LV 1 T.


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For PTC sensors

## Thermistor motor protection relays for PTC thermistors (Type A PTCs)

- Monostable version with closed-circuit principle, triggers in the event of control supply voltage failure

- PTB01 ATEX approval, see Catalog LV 1 T.
- 3RN10 13-.BW01: bistable version, does not trigger in the event of control supply voltage failure
- All units except for 24 V AC/DC feature electrical isolation

RESET	Contacts	Rated control supply voltage $U_s$ 50/60 Hz	DT	Spring-loaded terminal	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.	
				Order No.	Price per PU			kg	
<b>Compact signal evaluation units, width 22.5 mm, 1 LED</b>									
Terminal A1 is jumpered with the root of the changeover contact									
Auto	1 CO	AC/DC 24	A	<b>3RN10 00-2AB00</b>	1	1 unit	101	0.104	
		AC 110	B	<b>3RN10 00-2AG00</b>	1	1 unit	101	0.153	
		AC 230	B	<b>3RN10 00-2AM00</b>	1	1 unit	101	0.153	
<b>Standard evaluation units, width 22.5 mm, 2 LEDs</b>									
 3RN10 12-2CK00	Auto	1 NO + 1 NC	AC/DC 24	A	<b>3RN10 10-2CB00</b>	1	1 unit	101	0.116
			AC 110	B	<b>3RN10 10-2CG00</b>	1	1 unit	101	0.153
			AC 230	A	<b>3RN10 10-2CM00</b>	1	1 unit	101	0.159
			AC/DC 24 ... 240	A	<b>3RN10 10-2CW00</b>	1	1 unit	101	0.127
		2 CO	AC/DC 24	C	<b>3RN10 10-2BB00</b>	1	1 unit	101	0.137
			AC 110 ...	C	<b>3RN10 10-2BG00</b>	1	1 unit	101	0.139
			AC 230	C	<b>3RN10 10-2BM00</b>	1	1 unit	101	0.190
		2 CO, gold-plated	AC/DC 24	C	<b>3RN10 10-2GB00</b>	1	1 unit	101	0.139
	Manual/remote <sup>1)</sup>	1 NO + 1 NC	AC/DC 24	▶ A	<b>3RN10 11-2CB00</b>	1	1 unit	101	0.125
			AC 110 / 230	A	<b>3RN10 11-2CK00</b>	1	1 unit	101	0.164
	Short-circuit detection for sensor circuit								
	Manual/remote <sup>1)</sup>	2 CO	AC/DC 24	C	<b>3RN10 11-2BB00</b>	1	1 unit	101	0.138
			AC 110	C	<b>3RN10 11-2BG00</b>	1	1 unit	101	0.190
			AC 230	B	<b>3RN10 11-2BM00</b>	1	1 unit	101	0.192
		2 CO, gold-plated	AC/DC 24	C	<b>3RN10 11-2GB00</b>	1	1 unit	101	0.154
	Non-volatile <sup>2)</sup>								
	Manual/Auto/Remote	1 NO + 1 NC	AC/DC 24	A	<b>3RN10 12-2CB00</b>	1	1 unit	101	0.125
			AC 110 / 230	B	<b>3RN10 12-2CK00</b>	1	1 unit	101	0.161
	Non-volatile <sup>2)</sup> ; short-circuit detection in sensor circuit								
	Manual/Auto/Remote	2 CO	AC/DC 24	C	<b>3RN10 12-2BB00</b>	1	1 unit	101	0.130
			AC 110	C	<b>3RN10 12-2BG00</b>	1	1 unit	101	0.130
			AC 230	C	<b>3RN10 12-2BM00</b>	1	1 unit	101	0.181
		2 CO, gold-plated	AC/DC 24	C	<b>3RN10 12-2GB00</b>	1	1 unit	101	0.140
	Non-volatile <sup>2)</sup> ; short-circuit and open-circuit detection and indication in sensor circuit; wide-range voltage with screw connection with safe isolation								
Manual/Auto/Remote	2 CO	AC/DC 24	A	<b>3RN10 13-2BB00</b>	1	1 unit	101	0.140	
		AC/DC 24 ... 240	▶ A	<b>3RN10 13-2BW00</b>	1	1 unit	101	0.151	
	2 CO, gold-plated	AC/DC 24 ... 240	C	<b>3RN10 13-2GW00</b>	1	1 unit	101	0.143	
<b>Evaluation units for 2 sensor circuits, warning and switching off, width 22.5 mm, 3 LEDs</b>									
Test/RESET button, non-volatile <sup>2)</sup>									
Manual/Auto/Remote	1 NO + 1 CO	AC/DC 24 ... 240	B	<b>3RN10 22-2DW00</b>	1	1 unit	101	0.147	
<b>Evaluation units for 6 sensor circuits, multiple motor protection, width 45 mm, 8 LEDs</b>									
Test/RESET button, non-volatile <sup>2)</sup>									
Manual/Auto/Remote	1 NO + 1 NC	AC/DC 24 ... 240	B	<b>3RN10 62-2CW00</b>	1	1 unit	101	0.251	
<b>Bistable evaluation units, width 22.5 mm</b>									
Test/RESET button, non-volatile <sup>2)</sup>									
Short-circuit and open-circuit detection and indication in sensor circuit									
Manual/Auto/Remote	2 CO	AC/DC 24 ... 240	B	<b>3RN10 13-2BW01</b>	1	1 unit	101	0.139	

1) The unit can be reset with the RESET button or by disconnecting the control supply voltage.


2) For more information on protection against voltage failure, see Catalog LV 1 T.

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### Accessories

Version	For type	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
<b>Push-in lugs for screw mounting</b>								
	For each thermistor motor protection device, 2 units are required. 1 pack contains 10 units for 5 devices	3RN1	▶	<b>3RP19 03</b>	1	10 units	101	0.002
<b>Blank labeling plates</b>								
	Blank labeling plates, 20 mm x 7 mm, pastel turquoise <sup>1)</sup>		C	<b>3RT19 00-1SB20</b>	100	340 units	101	22.000

1) Computer labeling system for individual labeling of device labeling plates available from: murrplastik Systemtechnik GmbH.