

Technical specifications

Type	Compact units		Standard devices			Multi-function units	Warning + tripping	Multiple motor protection
	3RN10 00	3RN10 10	3RN10 11	3RN10 12	3RN10 13	3RN10 22	3RN10 62	
General data								
Width	mm	22.5						45
Number of connectable sensor circuits		1					2	6
Response in the event of control voltage failure		1)						
Manual RESET		No		Yes				
Automatic RESET		Yes		No		Yes		
Remote RESET		No		Yes ²⁾		Yes		
TEST pushbutton		No		Yes				
Short-circuit detection for sensor circuit		No		Yes (for 2 CO units)		Yes	No	
Short-circuit and open-circuit indication		No				Yes ³⁾		No
Warning and disconnection in one unit		No					Yes	No
Tripping units								
Rated insulation voltage U_i (degree of pollution 3)	V	300						
Permissible ambient temperature	°C	-25 ... +60						
Permissible storage temperature	°C	-40 ... +80						
EMC tests		EN 61000-6-2, EN 61000-6-4						
Degree of protection acc. to EN 60529 / VDE 0470-1		IP20						
Connection type		Screw terminals						
• Terminal screw		M3 (for standard screw driver size 2 and Pozidriv 2)						
• Solid	mm ²	1 x (0.5 ... 4)/2 x (0.5 ... 2.5)						
• Finely stranded with end sleeve	mm ²	1 x (0.5 ... 2.5)/2 x (0.5 ... 1.5)						
• AWG cables	AWG	2 x (20 ... 14)						
• Tightening torque	Nm	0.8 ... 1.2						
Connection type		Spring-loaded terminals						
• Solid	mm ²	2 x (0.25 ... 1.5)						
• Finely stranded with end sleeves acc. to DIN 46228	mm ²	2 x (0.25 ... 1.5)						
• Finely stranded	mm ²	2 x (0.25 ... 1.5)						
• AWG cables	AWG	2 x (24 ... 16)						
Sensor circuit								
Measuring circuit load at $R_F \leq 1.5 \text{ mW}$		≤ 5						
Voltage in sensor circuit at $R_F \leq 1.5 \text{ mW}$	V	≤ 2						
Response temperature (depends on sensor)	°C	60 ... 180						
Coupling time (depends on sensor)	s	About 5						
Summation PTC resistance R_F (per sensor loop)	kΩ	≤ 1.5						
Response value	kΩ	3.4 ... 3.8						
Return value	kΩ	1.5 ... 1.65						
Response tolerance	°C	± 6						

1) See Catalog LV 1, Selection and ordering data.

2) Remote RESET possible by disconnecting control voltage.

3) Open circuits are only indicated by monostable versions (3RN10 13-...0).

Monitoring Relays

3RN1 Thermistor Motor Protection

For PTC sensors

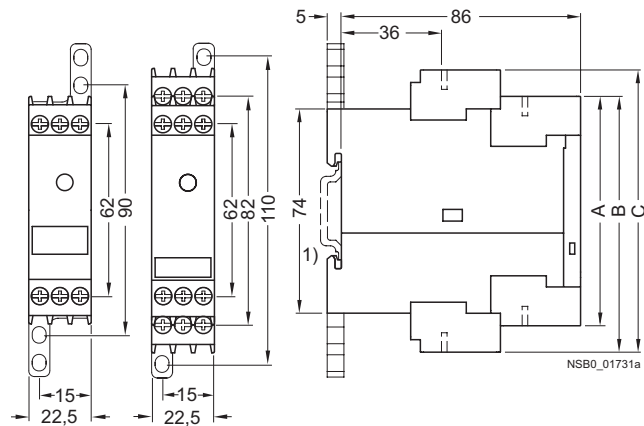
Type	Compact units	Standard devices				Multi-function units	Warning + tripping	Multiple motor protection
	3RN10 00	3RN10 10	3RN10 11	3RN10 12	3RN10 13	3RN10 22	3RN10 62	
Control circuit								
Rated control supply voltage U_s	1)							
Operating range	0.85 ... 1.1 x U_s							
• 110/230 V AC	0.85 ... 1.1 x U_s							
• 24 ... 240 V	0.85 ... 1.1 x U_s							
• 24 V AC/DC	0.85 ... 1.2 x U_s for DC operation, 0.85 ... 1.1 x U_s for AC operation							
Rated power	W	< 2						
• AC/DC								
Max. mains buffering time	ms	50						
Auxiliary circuit								
Continuous thermal current current I_{th}	A	5						
Rated operational current I_e	A	3						
• AC-15 240 V	A	1						
• DC-13 24 V	A	6 ²⁾						
DIAZED fuse	A							
CSA and UL rated data, control circuit								
Rated control voltage 50/60 Hz	V	300						
• AC	V	300						
• DC	V							
Switching capacity	R 300/B 300							
Safe isolation up to 300 V	--				3RN10 13-1BW10, 3RN10 13-1GW10		--	
Acc. to DIN 60947-1								

1) See Catalog LV 1, Selection and ordering data.

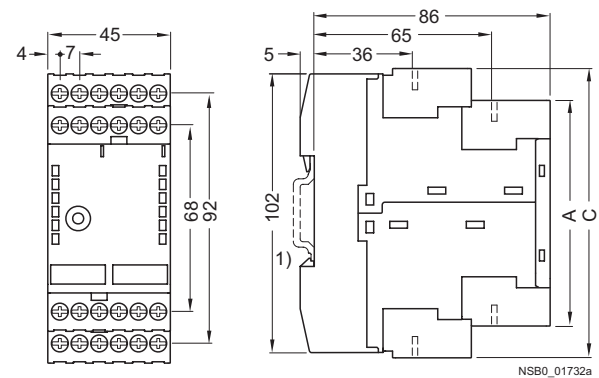
2) $I_n > 1$ kA weld-free according to EN 60947-5-1.

Dimensional drawings

3RN1 with 1 ... 2 sensor circuits



3RN10 62



Type	3RN10 00	3RN10 10-C	3RN10 10-B 3RN10 10-G 3RN10 11 3RN10 12 3RN10 13 3RN10 22
	A	B	C

Removable terminal

Screw-type terminal	83	92	102
Spring-loaded terminal	84	94	103

1) For standard mounting rail according to EN 60715.

Type	3RN10 62	
	A	C

Removable terminal

Screw-type terminal	83	106
Spring-loaded terminal	84	108

1) For standard mounting rail according to EN 60715.