

Monitoring Relays

3RS10, 3RS11 Temperature Monitoring Relays

Relays, digitally adjustable for up to 3 sensors

Technical specifications

Type	3RS10 41	
General data		
Width	mm	45
Operating range	V	0.85 ... 1.1 x U _s
Rated power	W/VA	< 4 / 7
Auxiliary circuit		
Contacts	1 CO + 1 CO + 1 NO	
Rated operational currents I _e		
• AC-15 at 230 V, 50 Hz	A	3
• DC-13 at:		
- 24 V	A	1
- 240 V	A	0.1
DIAZED fuse		
• gL/gG operational class	A	4
Electrical endurance AC-15 at 3A	A	100000
Mechanical endurance	30 x 10 ⁶	
Mechanical operating cycles		
Tripping units		
Measuring accuracy at 20°C ambient temperature (T20)	< ±2 K, ±1 digit	
Deviations due to ambient temperature in % of measuring range	%	0.05 per K deviation from T20
Measuring cycle	ms	500
Hysteresis settings for temperature 1	1 ... 99 Kelvin, for both values	
Adjustable delay time	s	0 ... 999
Sensor circuit		
Typical sensor circuits		
• PT100	mA	Typically 1
• PT1000/KTY83/KTY84/NTC	mA	Typically 0.2
Open-circuit detection	Yes ¹⁾	
Short-circuit detection	Yes	
3-wire conductor connection	Yes ²⁾	
Enclosures		
Environmental influences		
• Permissible ambient temperature	°C	-25 ... +60
• Permissible storage temperature	°C	-40 ... 80
• Permissible mounting positions	Any	
Degree of protection acc. to EN 60529	Terminals: IP20; Cover: IP40	
Rated insulation voltage U _i (degree of pollution 3)	V AC	300
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, solid or stranded	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, solid or stranded	AWG	2 x (24 ... 16)
Vibration resistance acc. to IEC 60068-2-6	5 ... 26 Hz: 0.75 mm	
Shock resistance acc. to IEC 60068-2-27	12 shocks (half-sine 15 g/11 ms)	

1) Not for NTC B57227-K333-A1 (100 °C: 1.8 k; 25 °C: 32.762 k).

2) 2-wire connection of resistance sensors with wire bridge between T2 and T3.