

RTAA3

Industrial temperature switch, direct mounting

RT-###.###.E00EJ

Overview

- Excellent repeatability
- Dead band adjustment for regulation
- Fix dead band for control



Picture similar

Technical data

Housing

Protection rating (EN 60529)	IP66
Cover	Blue painted, zamak Captive stainless steel screws
Case material	Black painted, zamak Captive stainless steel screws
Mounting	Direct mounting Wall mounting bracket
Scale	Internal, accuracy on reading $\pm 5\%$ FS
Bulb	Stainless steel 1.4404 / AISI 316L Stainless steel 1.4435 / AISI 316L

Performance

Min. temperature range	$-46^{\circ}\text{C} \dots +0^{\circ}\text{C}$
Max. temperature range	$+40^{\circ}\text{C} \dots +120^{\circ}\text{C}$
Repeatability	$\pm 1\%$ FS

Temperature

Ambient temperature	$-30^{\circ}\text{C} \dots +55^{\circ}\text{C}$
Storage temperature	$-40^{\circ}\text{C} \dots +40^{\circ}\text{C}$, Code 300 $-40^{\circ}\text{C} \dots +55^{\circ}\text{C}$, other codes
Media temperature	$-46 \dots +120^{\circ}\text{C}$, depends on the scale

Wetted parts

Process connection material	Copper alloy
-----------------------------	--------------

Electrical data

Electrical connection	Via internal terminal block with plastic cable gland for $\varnothing 7$ to 10.5 mm
CE conformity	Low Voltage Directive 2014/35/UE
Ground connection	Via internal terminal block
Adjustment	2 external adjustment screws on top of the case for set point and deadband

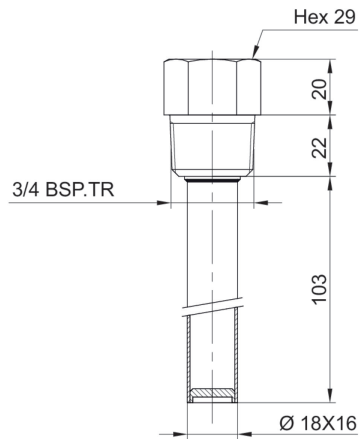
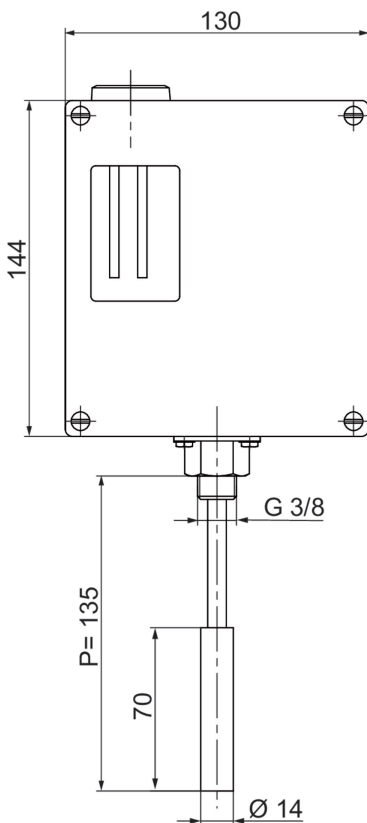
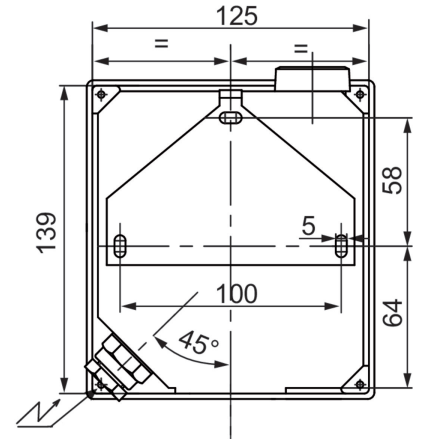
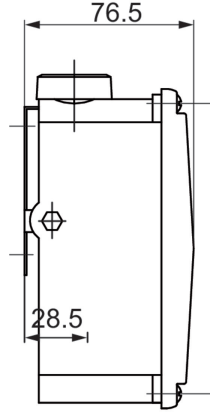
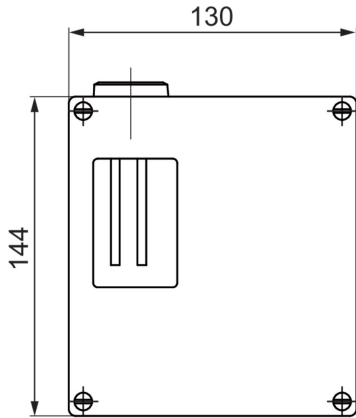
Weight

Temperature switch	2000 g
--------------------	--------

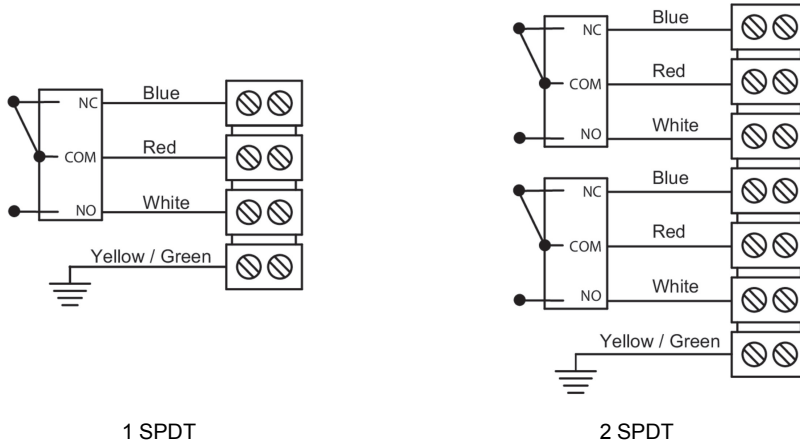
Remarks

- These devices must be used as instruments that provide electrical information according to the value of the input variable. They are not intended to be used as a safety accessory. It is the responsibility of the user to check the compatibility of the device with its intended use.

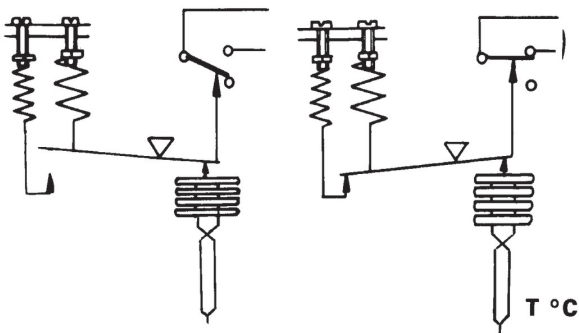
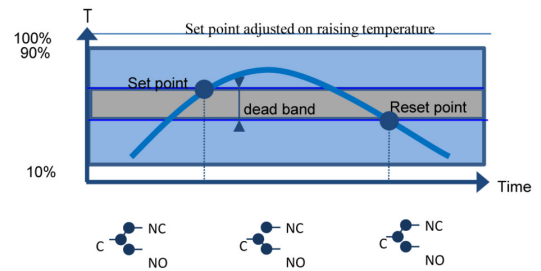
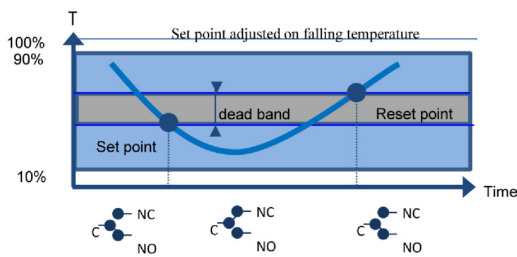
Dimensional drawings (mm)



Electrical connection



Principle



A vapour filled flexible sensing element actuates a microswitch by means of a lever. The set point is adjusted by means of a compressible spring installed in opposition.

Set point and reset point must be between 10% and 90% of the selected scale.

Standard factory adjustment

Setpoint at 50% of the scale on falling temperature.

Customer specific factory adjustment (option SETP)

The following specifications have to be given with the order:

- Setpoint value
- Adjustment on falling or raising temperature
- Dead band value (as needed) when using an adjustable dead band switch

RTAA3

Industrial temperature switch, direct mounting

RT-###.###.E00EJ

Adjustable ranges

Scale	T _{Max} accidental	Code	Micro-switch dead band ^{*)}										
			Adjustable dead band				Fixed dead band						
			A (B*)		M (K*)		C (W*)		E (F*)		H	D (V*)	J
			10%	90%	10%	90%	10%	90%	10%	90%	10%	90%	
°C													
-46 ... 0	40	300	4 - 9	2 - 9	8 - 12	4 - 12	1.5	0.8	5	2.5			
-20 ... 20	60	301	3 - 8	1.5 - 8	6 - 12	4 - 12	1	0.5	4	2			
0 ... 45	60	302	4 - 9	2 - 9	7 - 12	4 - 12	1.5	0.7	5	2.5			
40 ... 120	145	303	5 - 16	3 - 16	10 - 20	6 - 20	2	1.2	6	4			
20 ... 80	100	315	5 - 12	3 - 12	9 - 15	5 - 15	2	1	6	3			

(*) For version with 2 microswitches lower values of the dead band must be multiplied x 1.5

(1) The value of the dead band is depending on the value of the set point. This table contains the dead band values for set point adjustment at 10% and 90% of the selected scale. For adjustable dead band the lower value corresponds to the dead band spring totally released and the higher corresponds to the dead band spring fully tensed. For other set points the dead band value can be calculated by linear interpolation between the values at 10% and 90%.

Micro switch characteristics

Switch code	A (B)	M (K)	C (W)	E (F)	H	D (V)	J
Type	Standard	Gold contact	Hermetic	Ultra sensitive	Manual reset	Ultra sensitive Hermetic	Manual reset
6 Vdc	0.4 ... 10 A	10 ... 50 mA	5 mA ... 4 A	0.4 ... 1 A	N/A	0.4 ... 4 A	N/A
12 Vdc	0.4 ... 10 A	10 ... 50 mA	5 mA ... 4 A	0.4 ... 1 A	N/A	0.4 ... 4 A	N/A
24 Vdc	0.4 ... 6 A	10 ... 50 mA	5 mA ... 4 A	0.4 ... 1 A	0.1 ... 8 A	0.4 ... 4 A	0.1 ... 8 A
30 Vdc	0.4 ... 6 A	10 ... 50 mA	5 mA ... 3 A	0.4 ... 1 A	0.1 ... 8 A	0.4 ... 2 A	0.1 ... 8 A
48 Vdc	0.4 ... 6 A	10 ... 50 mA	5 mA ... 3 A	N/A	N/A	N/A	N/A
110 Vdc	0.1 ... 0.5 A	10 ... 50 mA	5 mA ... 1 A	N/A	N/A	N/A	N/A
220 Vdc	0.1 ... 0.25 A	10 ... 50 mA	5 mA ... 0.5 A	N/A	N/A	N/A	N/A
115 Vac	0.4 ... 10 A	10 ... 50 mA	50 mA ... 3 A	0.4 ... 10 A	0.1 ... 10 A	N/A	0.1 ... 10 A
250 Vac	0.2 ... 10 A	N/A	50 mA ... 2.5 A	0.2 ... 10 A	0.1 ... 5 A	N/A	0.1 ... 5 A
Dielectric rigidity between contacts and ground	2000 V	2000 V	1500 V	2000 V	2000 V	1000 V	2000 V

RTAA3

Industrial temperature switch, direct mounting

RT-###.###.E00EJ

Ordering reference

Ordering key - Configuration possibilities see website

	RT	-	A	A	#	.	###	.	E	0	0	E	J
Product	RT												
Type of design	industrial, copper alloy/StSt			A									
ATEX	Ohne ATEX			A									
Type of Microswitch	1xSPDT, Standard				A								
	simultaneous				B								
	1xSPDT, hermetically				C								
	simultaneous				W								
	1xSPDT, ultra sensitive				E								
	simultaneous				F								
	1xSPDT hermetic/ultra sensit.?				D								
	simultaneous				V								
	1 gold contact changeover switch				M								
	simultaneous				K								
	1xSPDT, manually, falling				H								
	1xSPDT, manually, rising				J								
Temperature range	-46 ...0°C						300						
	-20 ...20°C						301						
	0 ...45°C						302						
	40 ...120°C						303						
	20 ...80°C						315						
Type of design	without capillary								E				
Length of capillary	without capillary									0			
Immersion length	135 mm											0	
Bulb diameter	14 mm												E
Process connection	G 3/8												J

Ordering example

	RT	-	A	A	A	.	300	.	E	0	0	E	J	/	Q001
Product	RT														
Type of design	industrial, copper alloy/StSt			A											
ATEX	Ohne ATEX			A											
Type of Microswitch	1xSPDT, Standard				A										
Temperature range	-46 ...0°C						300								
Type of design	without capillary								E						

RTAA3

Industrial temperature switch, direct mounting

RT-###.###.E00EJ

Ordering reference

Ordering example

RT - A A A . 300 . E 0 0 E J / Q001

Length of capillary

without capillary

0

Immersion length

135 mm

0

Bulb diameter

14 mm

E

Process connection

G 3/8

J

/

Certificate

Declaration of compliance with the order 2.1 according to EN 10204

Options

Setpoint factory adjusted	SETP	Souriau mobile plug	2249
stainless steel label wired*	9941	2.1 Certificate	Q001
Setpoint adjust. lead sealed	8990	2.2 Certificate	Q002
for nuclear applications	0838	3.1 Material certificate	Q003
Souriau connection	2298	3.1 Certif. setpoints adjust.	Q011