

## RPPE7

Industrial pressure switch explosion proof

RPPE-###.###/

### Overview

- Excellent repeatability
- Dead band adjustment for regulation
- Fix dead band for control
- Explosion proof Hazardous area 0, 1, 2



Picture similar



### Technical data

#### Housing

Protection rating (EN60529)	IP66
Case material	Epoxy painted, Aluminium Captive stainless steel screws Type RA80 Explosion-proof and flame-proof
Mounting	Wall mounting, 3 back lugs
Scale	Internal, accuracy on reading $\pm 5\%$ FS

#### Performance

Min. pressure range	-1 ... 0 bar
Max. pressure range	60 ... 600 bar
Repeatability	$\pm 1\%$ FS

#### Temperature: Pressure range codes 200 to 602

Ambient temperature	-20°C ... +55°C (T6)
Storage temperature	-40°C ... +40°C ,Code 40
Media temperature	-50°C ... +200°C

#### Wetted parts

Piston	Nickel plated steel
Bellow	Stainless steel 1.4404 / AISI 316L Stainless steel 1.4432 / AISI 316L

#### Electrical data

Electrical connection	Via internal terminal block with metallic cable gland for $\varnothing 7$ to 12 mm
Ground connection	Via internal terminal block
Adjustment	2 external adjustment screws on top of the case for set point and deadband

#### Approval / Conformities

ATEX/IECEX Certificate	LCIE 03 ATEX 6231X (Type RA80) IECEX LCIE 15.0061X
ATEX/IECEX	ATEX directive 2014/34/UE Ex II 2 GD Ex d IIC T6 or T5 Gb Ex tb IIIC T80°C or T95°C Db Further information can be found in the ATEX approval

### Remarks

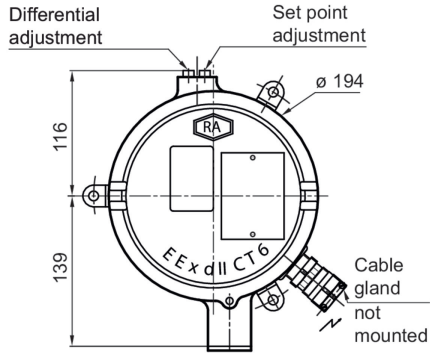
- These devices must be used as instruments that provide electrical information according to the value of the input variable. They are not intended to be used as a safety accessory. It is the responsibility of the user to check the compatibility of the device with its intended use.

# RPPE7

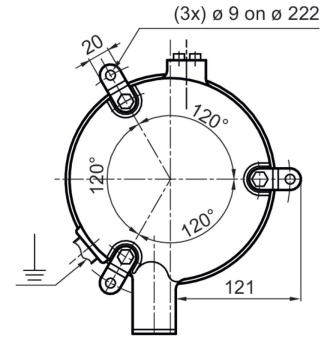
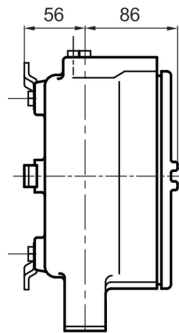
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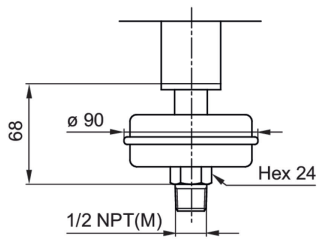
## Dimensional drawings (mm)



Weight: 4.4 kg

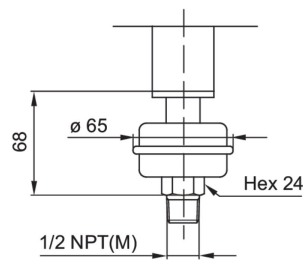


Weight: 4.4 kg



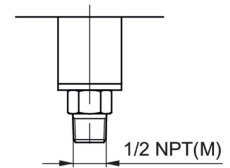
Pressure range codes: 200 - 202 - 203

Weight: 0.5 kg



Pressure range codes: 201

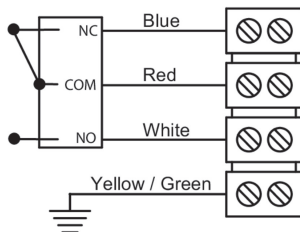
Weight: 0.4 kg



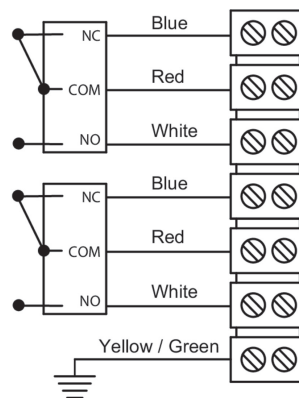
Pressure range codes: 204 - 205 - 206 - 207  
- 208 - 209 - 600 - 601 - 602

Weight: 0.2 kg

## Electrical connection



1 SPDT



2 SPDT

### Electrical connection

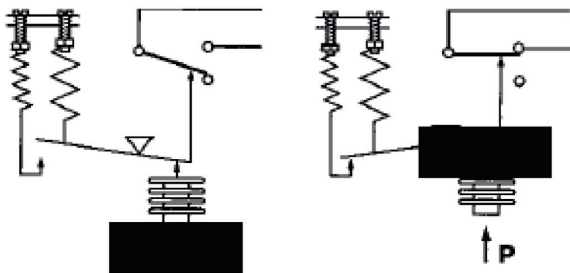
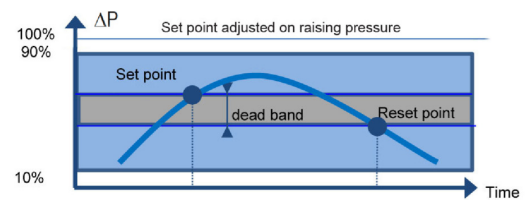
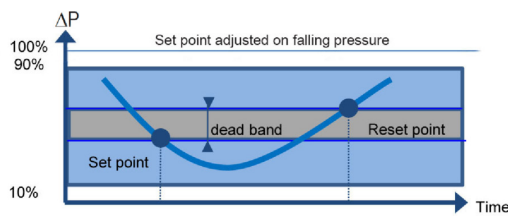
-20°C ≤ Ta ≤ +70°C	Dust IP6x	Gases
	T° surface	Class
Ta = 60°C	80°C	T6
Ta = 70°C	95°C	T5

**Important : Maximum power dissipation in the case must not exceed 5 W**

Hazardous areas: zone 1, 2, 21, 22

All necessary measures must be taken by the user, to avoid the calorific transfer from the fluid to the apparatus head increasing the head's temperature to such that it reaches the self-ignition temperature of the gas in which it is used.

### Principle



A 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 pressure.

Customer specific factory adjustment (option SETP)

The following specifications have to be given with the order:

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

## Adjustable ranges

Scale	P. Max accidental	Code	Micro-switch dead band <sup>*)</sup>									
			Adjustable dead band				Fixed dead band					
			A (B*)		M (K*)		C (W*)		E (F*)		D (V*)	
			10%	90%	10%	90%	10%	90%	10%	90%		
bar	bar	Code	mbar									
-1 ... 0	1.5	200	37 - 375	53 - 375	120 - 375	142 - 375	7.5	9	45	63		
-1 ... 2.5	7	201	120 - 1800	150 - 1800	225 - 1800	300 - 1800	33	37	144	180		
0 ... 0.2	1.5	202	22 - 150	30 - 150	90 - 150	97 - 100	6	7.5	27	36		
0.05 ... 1	1.5	203	30 - 600	37 - 600	120 - 600	142 - 600	6	7.5	36	45		
0.5 ... 10	30	204	300 - 4500	375 - 4500	975 - 4500	1275 - 4500	67	75	360	450		
3.5 ... 25	30	205	900 - 7500	1800 - 7500	1125 - 7500	1950 - 7500	90	150	1080	2160		
bar	bar	Code	bar									
5 ... 50	65	206	1.5 - 15	3 - 15	3.7 - 15	4.5 - 15	0.225	0.3	2.2	3.7		
5 ... 100	220	207	3.7 - 22	4.5 - 22	8.2 - 22	9.7 - 22	1.050	1.350	4.5	5.2		
20 ... 150	220	208	3.7 - 22	5.2 - 22	8.2 - 22	9.7 - 22	1.050	1.500	4.5	6.7		
-1 ... 3.5	30	209	0.22 - 2.2	0.3 - 2.2	0.97 - 2.2	1.27 - 2.2	0.067	0.075	0.3	0.37		
25 ... 175	800	600	30 - 120	45 - 120	45 - 120	47 - 120	22	22	36	54		
30 ... 350	800	601	30 - 150	45 - 150	45 - 150	47 - 150	24	24	36	54		
60 ... 600	800	602	30 - 180	45 - 180	45 - 180	47 - 180	24	24	36	54		

(\*) When using 2 microswitches deadband lower values should be x1.5

1) The value of the deadband is depending on the value of the set point. This table contains the deadband values for set point adjustment at 10% and 90% of the selected scale. For adjustable deadband the lower value corresponds to the deadband spring totally released and the higher corresponds to the deadband spring fully tensed. For other set points the deadband 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)	D (V)
Type	Standard	Gold contact	Hermetic	Ultra sensitive	Ultra sensitive Hermetic
6 Vdc	0.4 ... 10 A	10 ... 50 mA	5 mA ... 4 A	0.4 ... 1 A	0.4 ... 4 A
12 Vdc	0.4 ... 10 A	10 ... 50 mA	5 mA ... 4 A	0.4 ... 1 A	0.4 ... 4 A
24 Vdc	0.4 ... 6 A	10 ... 50 mA	5 mA ... 4 A	0.4 ... 1 A	0.4 ... 4 A
30 Vdc	0.4 ... 6 A	10 ... 50 mA	5 mA ... 3 A	0.4 ... 1 A	0.4 ... 2 A
48 Vdc	0.4 ... 6 A	10 ... 50 mA	5 mA ... 3 A	N/A	N/A
110 Vdc	0.1 ... 0.5 A	10 ... 50 mA	5 mA ... 1 A	N/A	N/A
220 Vdc	0.1 ... 0.25 A	10 ... 50 mA	5 mA ... 0.5 A	N/A	N/A
115 Vac	0.4 ... 10 A	10 ... 50 mA	50 mA ... 3 A	0.4 ... 10 A	N/A
250 Vac	0.2 ... 10 A	N/A	50 mA ... 2.5 A	0.2 ... 10 A	N/A
Dielectric rigidity between contacts and ground	2000 V	2000 V	1500 V	2000 V	1000 V

### Ordering reference

Ordering key - Configuration possibilities see website

	RPPE	-	7	#	#	.	###
<b>Product</b>	RPPE						
<b>Sensing element</b>	Bellow or Piston		7				
<b>Type of Microswitch</b>	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			
<b>Process connection</b>	G 1/2						3
	1/2 NPT						6
	1/4 NPT F						8
<b>Pressure range</b>	-1 ... 0 bar						200
	-1 ... 2.5 bar						201
	0 ... 0.2 bar						202
	0,05 ... 1 bar						203
	0,5 ... 10 bar						204
	3,5 ... 25 bar						205
	5 ... 50 bar						206
	5 ... 100 bar						207
	20 ... 150 bar						208
	-1 ... 3,5 bar						209
	0,2 ... 4 bar						210
	25 ... 175 bar						600
	30 ... 350 bar						601
	60 ... 600 bar						602

### Ordering example

	RPPE	-	7	A	3	.	200	/	SETP
<b>Product</b>	RPPE								
<b>Sensing element</b>	Bellow or Piston		7						
<b>Type of Microswitch</b>	1xSPDT, Standard			A					
<b>Process connection</b>	G 1/2				3				
<b>Pressure range</b>	-1 ... 0 bar						200		
<b>Adjustment</b>	Setpoint factory adjusted								SETP

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### Options

Setpoint factory adjusted	SETP	2.1 Certificate	Q001
For oxygen applications	0765	2.2 Certificate	Q002
Mounting on 2 pipe	0407	3.1 Material certificate	Q003
stainless steel label wired*	9941	3.1 Certif. setpoints adjust.	Q011
Setpoint adjust. lead sealed	8990		