

RPPE3

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	-50 ... 0 mbar
Max. pressure range	0 ... 400 mbar
Repeatability	$\pm 1\%$ FS

Temperature: Pressure range codes 101 to 153

Ambient temperature	-20°C ... +70°C (T5) -20°C ... +60°C (T6)
Storage temperature	-40°C ... +40°C ,Code 40
Media temperature	-15°C ... +150°C

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.

Wetted parts

Process connection material	Stainless steel 1.4404 / AISI 316L
Diaphragm	FKM (Viton)

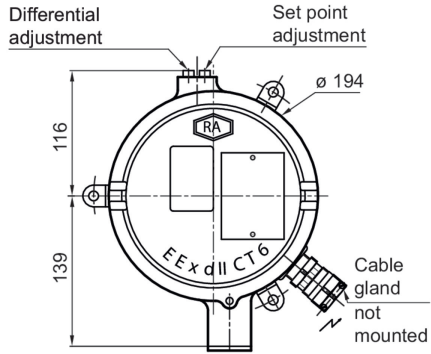
Electrical data

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

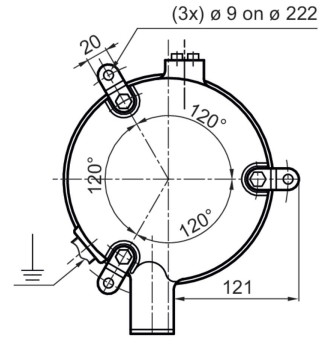
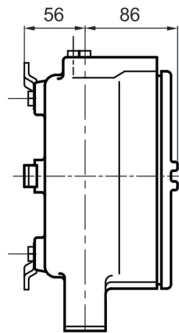
Approval / Conformities

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

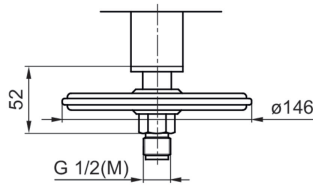
Dimensional drawings (mm)



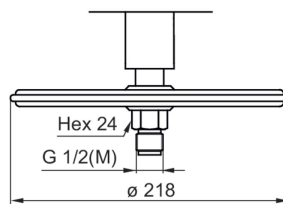
Weight: 4.4 kg



Weight: 4.4 kg

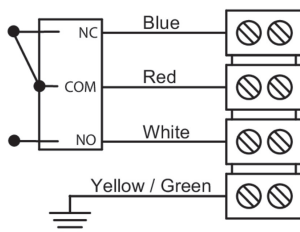


Pressure range codes: 151 - 152 - 153
Weight: 1 kg

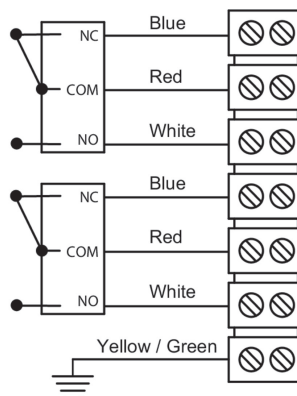


Pressure range codes: 101 - 102 - 103 - 104
Weight: 1.8 kg

Electrical connection



1 SPDT



2 SPDT

Electrical connection

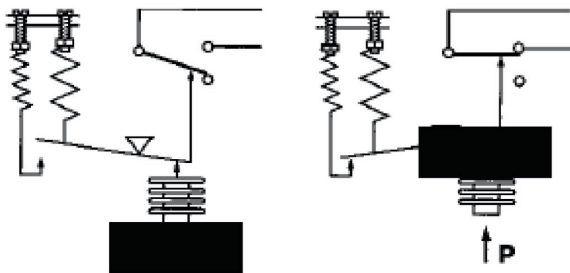
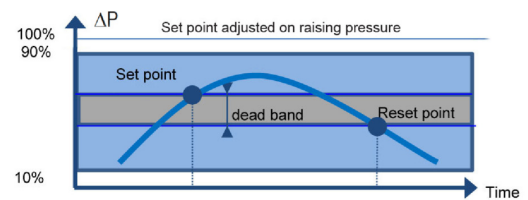
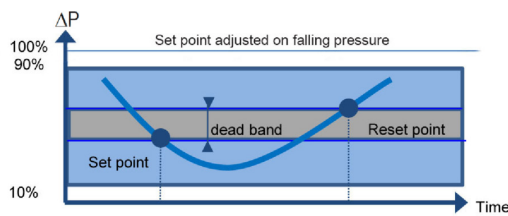
$-20^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$	Dust IP6x	Gases
	T° surface	Class
Ta = 60°C	80°C	T6
Ta = 70°C	95°C	T5

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

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Adjustable ranges

Scale	P. Max accidental	Code	Micro-switch dead band ^{*)}									
			Adjustable dead band				Fixed dead band					
mbar	bar		A (B*)		M (K*)		C (W*)		E (F*)		D (V*)	
			10%	90%	10%	90%	10%	90%	10%	90%	10%	90%
mbar												
-50 ... 0	0.15	101	3 - 37	3.8 - 37	9.8 - 37	11.3 - 37	0.75	0.75	3.8	4.5		
-2 ... 10	0.15	102	1.5 - 8	1.8 - 8	6.8 - 8	6.8 - 8	0.45	0.45	2.3	2.3		
-5 ... 50	0.15	103	1.8 - 22	3 - 22	7.5 - 22	11 - 22	0.6	0.6	2.3	3.8		
-8 ... 100	0.15	104	2.3 - 37	3 - 37	7.5 - 37	15 - 37	0.75	0.75	3	3.8		
-200 ... 0	1	151	9 - 120	12 - 120	23 - 120	23 - 120	3	4.5	11.3	15		
0 ... 200	1	152	9 - 120	12 - 120	23 - 120	23 - 120	3	4.5	11.3	15		
0 ... 400	1	153	23 - 220	30 - 220	45 - 220	53 - 220	6	9	27	37		

(*) 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	-	3	#	#	.	###	/
Product	RPPE							
Sensing element	Diaphragm, Viton® (max.400mbar)			3				
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	
Process connection								
G 1/2								3
1/2 NPT								6
1/4 NPT F								8
Pressure range								
-50 ... 0 mbar								101
-2 ... 10 mbar								102
-5 ... 50 mbar								103
-8 ... 100 mbar								104
-200 ... 0 mbar								151
0 ... 200 mbar								152
0 ... 400 mbar								153
0 ... 1000 mbar								154

Ordering example

	RPPE	-	3	A	3	.	101	
Product	RPPE							
Sensing element	Diaphragm, Viton® (max.400mbar)				3			
Type of Microswitch	1xSPDT, Standard						A	
Process connection	G 1/2							3
Pressure range	-50 ... 0 mbar							101

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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		