

RP2E

Compact pressure switch explosion proof

RP2-##.###/

Overview

- Excellent repeatability
- Dead band adjustment for regulation
- Fix dead band for control
- Resistant to accidental overpressure
- Explosion proof Hazardous areas 1, 2, 21, 22



Picture similar



Technical data

Housing

Protection rating (EN60529)	IP66
Case material	Grey painted, Aluminum
Mounting	Wall mounting, 2 x M6 x 16 screws
Scale	Internal graduated scale
Weight	1800 g

Performance

Min. pressure range	0 ... 1 bar
Max. pressure range	0 ... 100 bar
Repeatability	± 1 % FS , (constant cycle)

Temperature

Ambient temperature	-20°C ... +70°C (T5) -20°C ... +60°C (T6)
Storage temperature	-40°C ... +70°C

Temperature

Media temperature	-40°C ... +150°C
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Wetted parts

Process connection material	Stainless steel 1.4404 / AISI 316L
Diaphragm	Stainless steel 1.4404 / AISI 316L

Electrical data

Electrical connection	Via internal terminal block with cable gland 3/4 NPT (ATEX/IECEx certified) for Ø 7 to 12 mm
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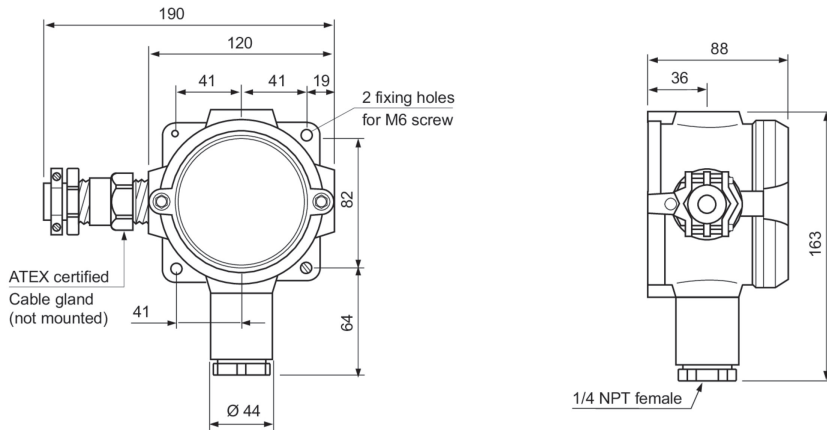
Approval / Conformities

ATEX/IECEx Certificate	LCIE 02 ATEX 6219X IECEx LCIE 15.0059X
ATEX/IECEx	ATEX directive 2014/34/UE Ex II 2 G Further information can be found in the ATEX approval

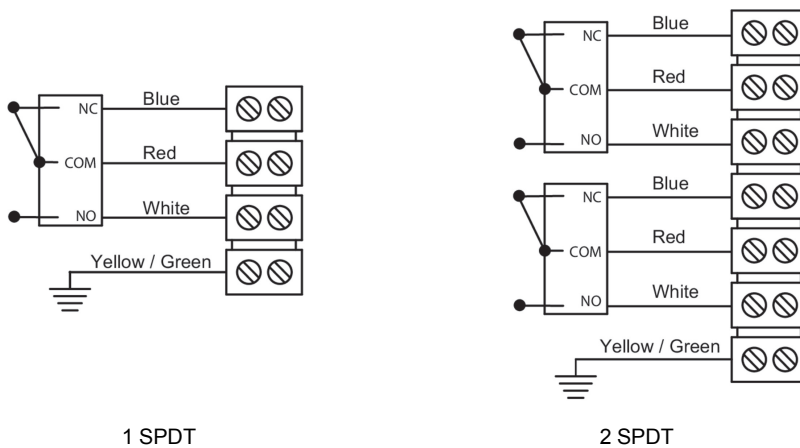
Remarks

- 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.

Dimensional drawings (mm)



Electrical connection



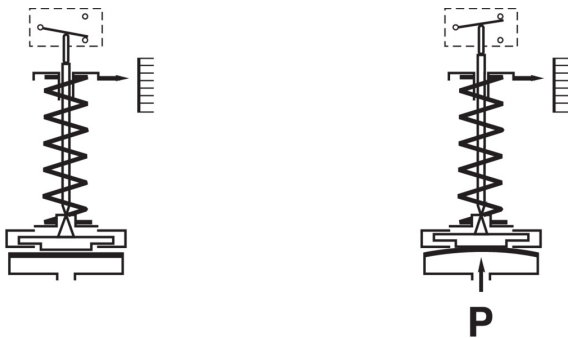
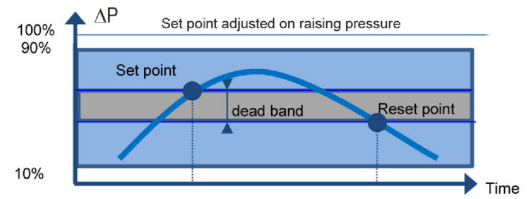
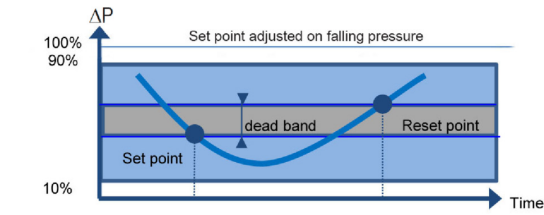
-20°C ≤ Ta ≤ +70°C	Dust IP6x	Gases
	T° surface	Class
Ta = 60°C	80°C	T6
Ta = 70°C	95°C	T5

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 piston. 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
- Dead band value (as needed) when using an adjustable dead band switch (not for RP2Y)

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Adjustable ranges

Scale	P. Max permanent	P. Max accidental	Code	Micro-switch dead band ¹⁾							
				Adjustable dead band				Fixed dead band			
				R		L		M - P		U (2xSPDT)	
				10%	90%	10%	90%	10%	90%	10%	90%
bar	bar	bar		mbar	mbar	mbar	mbar	mbar	mbar	mbar	mbar
0 ... 1	10	50	41	N/A	N/A	30	60	120	330	150	300
0 ... 1.6			42	100 - 200	200 - 550	35	70	150	390	175	350
0 ... 2.5			43	125 - 230	250 - 700	40	80	180	480	200	400
0 ... 4			44	150 - 290	320 - 900	45	90	210	540	225	450
0 ... 6			45	190 - 350	420 - 1200	50	100	240	630	250	500
0 ... 10			46	260 - 500	600 - 1800	55	110	300	750	275	550
0 ... 4	40	100	51	500 - 1000	1250 - 2000	110	200	600	1320	550	1000
0 ... 6			52	550 - 1100	1350 - 2200	110	235	750	1620	550	1175
0 ... 10			53	650 - 1300	1500 - 2600	120	270	840	2010	600	1350
0 ... 16			54	800 - 1600	1700 - 3100	130	305	960	2370	650	1525
0 ... 25			55	1000 - 2000	2000 - 3900	140	340	1050	2730	700	1700
0 ... 40			56	1400 - 2800	2600 - 5200	150	380	1140	3150	750	1900
0 ... 10	100	200	61	1000 - 2000	3000 - 6000	200	500	1500	3600	1000	2500
0 ... 16			62	1150 - 2300	3500 - 7000	280	700	2100	3960	1400	3500
0 ... 25			63	1350 - 2700	4200 - 8400	360	900	2700	5500	1800	4500
0 ... 40			64	1700 - 3400	5350 - 10700	440	1100	3300	7350	2200	5500
0 ... 60			65	2100 - 4200	6900 - 13800	520	1300	3900	9600	2600	6500
0 ... 100			66	3000 - 6000	10000-20000	600	1500	4500	13200	3000	7500

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	R	L	M	P	U
Type	Adjustable Dead band	Fixed dead band			
		Standard	Gold contact	Ultra sensitive	Double
6 Vdc	0.4 ... 10 A	N/A	10 ... 50 mA	0.4 ... 4 A	0.4 ... 10 A
12 Vdc	0.4 ... 10 A	N/A	10 ... 50 mA	0.4 ... 4 A	0.4 ... 10 A
24 Vdc	0.4 ... 5 A	N/A	10 ... 50 mA	0.4 ... 4 A	0.4 ... 6 A
30 Vdc	0.4 ... 5 A	N/A	10 ... 50 mA	0.4 ... 2 A	0.4 ... 6 A
48 Vdc	0.4 ... 5 A	N/A	10 ... 50 mA	N/A	0.4 ... 6 A
110 Vdc	0.2 ... 0.5 A	N/A	10 ... 50 mA	N/A	0.4 ... 0.5 A
220 Vdc	0.1 ... 0.25 A	N/A	10 ... 50 mA	N/A	0.1 ... 0.25 A
115 Vac	0.4 ... 10 A	0.4 ... 10 A	10 ... 50 mA	N/A	0.4 ... 10 A
250 Vac	0.2 ... 10 A	0.2 ... 10 A	N/A	N/A	0.2 ... 10 A
Dielectric rigidity between contacts and ground	2000 V	2000 V	2000 V	1000 V	2000 V

Ordering reference

Ordering key - Configuration possibilities see website

	RP2	-	E	#	.	#	##
Product	RP2						
ATEX			E				
ATEX II 2 G D Ex d IIC T6 or T5 Gb Ex tb IIIC T80°C or T95°C Db T°amb:-20°C to +60°C (T6 or T80°C) or -20°C to +70°C (T5 or T95°C) HAZARDOUS AREA:1,2,21,22							
Type of Microswitch							
1xSPDT Standard change-over simultaneous						L	
1 gold contact changeover switch						U	
1 hermetically ultra sensitive changeover switch						M	
1xSPDT adjust. Dead band						P	
						R	
Process connection							
G 1/2							3
1/2 NPT							6
1/4 NPT F							8
1/2 NPT F							N
Pressure range (bar)							
0 +1 bar sp. up to 10bar							41
0 +1.6 bar sp. up to 10bar							42
0 +2.5 bar sp. up to 10bar							43
0 +4.0 bar sp. up to 10bar							44
0 +6.0 bar sp. up to 10bar							45
0 +10 bar sp. up to 10bar							46
0 +4 bar sp. up to 40bar							51
0 +6 bar sp. up to 40bar							52
0 +10 bar sp. up to 40bar							53
0 +16 bar sp. up to 40bar							54
0 +25 bar sp. up to 40bar							55
0 +40 bar sp. up to 40bar							56
0 +10 bar sp. up to 100bar							61
0 +16 bar sp. up to 100bar							62
0 +25 bar sp. up to 100bar							63
0 +40 bar sp. up to 100bar							64
0 +60 bar sp. up to 100bar							65
0 +100 bar sp. up to 100bar							66

Ordering example

	RP2	-	E	M	.	3	41
Product	RP2						
ATEX			E				
ATEX II 2 G D Ex d IIC T6 or T5 Gb Ex tb IIIC T80°C or T95°C Db T°amb:-20°C to +60°C (T6 or T80°C) or -20°C to +70°C (T5 or T95°C) HAZARDOUS AREA:1,2,21,22							

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Ordering reference

Ordering example

RP2 - E M . 3 41

Type of Microswitch

1 gold contact changeover switch

M

Process connection

G 1/2

3

Pressure range (bar)

0 +1 bar sp. up to 10bar

41

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