



BOURDON
The Original by Baumer



Main Features

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

Applications

- Pneumatic appliances
- Power generation safety equipment
- Water treatment
- Valve and compressor control

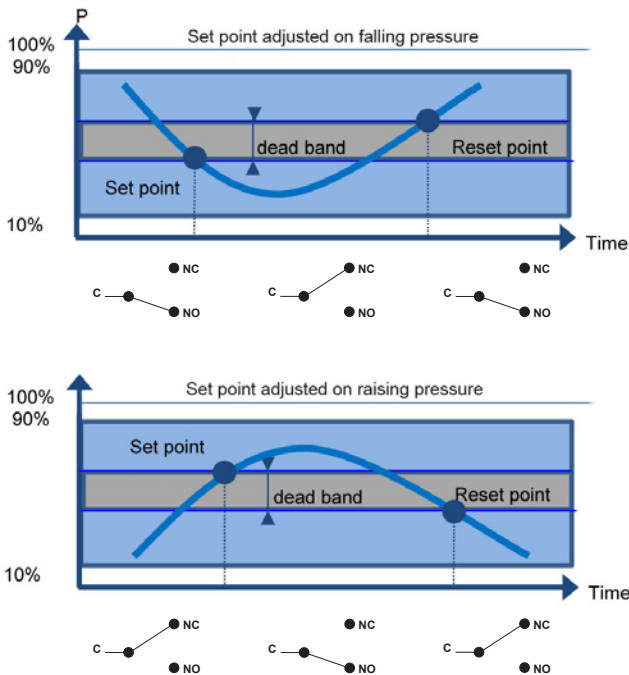
Technical Data

Pressure range	0 ... 1 bar to 0 ... 100 bar	Electrical connection	Via internal terminal block with cable gland 3/4 NPT (ATEX certified) for cable Ø 7 to 12 mm
Temperature	Process : -40 ... +150°C Ambient : -20 ... +70°C (T5) -20 ... +60°C (T6) Storage : -40 ... +70°C	Electrical function	See ordering code details on page 4
Repeatability	± 1% F.S. @ constant pressure cycle	Adjustment	Internal adjustment possible for set point and dead band
CE conformity	Low Voltage Directive LVD 2006/95/EC Pressure Equipment Directive PED 97/23/EC ATEX Directive 94/9/EC	ATEX	<u>Type examination certificate</u> LCIE 02 ATEX 6219X EN 60079-0 : 2009 EN 60079-1 : 2007 EN 60079-31 : 2009
Protection rating	IP 66 (EN 60529)	<u>Marking</u>	CE 0081 Ex II 2 G D Ex d IIC T6 or T5 Gb Ex t IIIC IIC T80°C or T95°C Db IP6X
Process Connection	Stainless steel 1.4404 (316L)		
Diaphragm	Stainless steel 1.4404 (316L)		
Scale	Internal graduated scale		
Weight	1.8 kg		
Housing	Grey painted aluminium housing Explosion proof		
Mounting	2 x M6x16 screws		
Ground connection	Via internal or external terminal block		

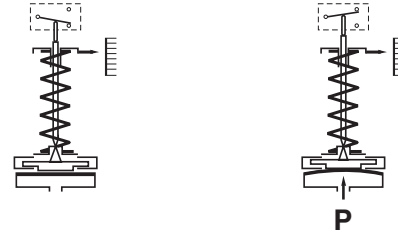
Options

Customer specific set point adjustment	Code SETP
Oxygen application	Code 0765
Mounting on 2" pipe	Code 0407
Stainless steel tag plate and wire	Code 9941

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 when using an adjustable dead band switch

Adjustable ranges

Scale	P. Max permanent	P. Max accidental	Code	Micro-switch dead band ¹⁾							
				Adjustable dead band		Fixed dead band					
				R		L		M - N - 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

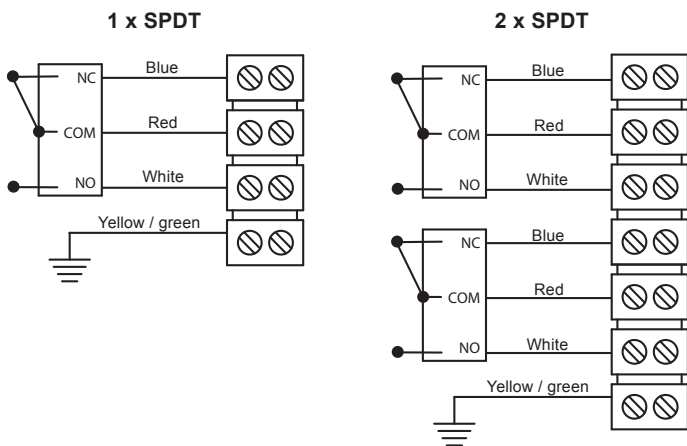
¹⁾ The value of the dead band is depending on the value of the set point.

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 switches characteristics

Switch code	R	L	M	N	P	U
Type	Adjustable Dead band	Fixed dead band				
		Standard	Gold contact	Tropicalized	Ultra sensitive	Double
6 Vdc	0.4 ... 20 A	N/A	10 ... 50 mA	0.1 ... 8 A	0.4 ... 4 A	0.4 ... 15 A
12 Vdc	0.4 ... 20 A	N/A	10 ... 50 mA	0.1 ... 8 A	0.4 ... 4 A	0.4 ... 15 A
24 Vdc	0.4 ... 5 A	N/A	10 ... 50 mA	0.1 ... 8 A	0.4 ... 4 A	0.4 ... 6 A
30 Vdc	0.4 ... 5 A	N/A	10 ... 50 mA	0.1 ... 8 A	0.4 ... 2 A	0.4 ... 6 A
48 Vdc	0.4 ... 5 A	N/A	10 ... 50 mA	0.1 ... 8 A	N/A	0.4 ... 6 A
110 Vdc	0.2 ... 0.5 A	N/A	10 ... 50 mA	N/A	N/A	0.4 ... 0.5 A
220 Vdc	0.1 ... 0.25 A	N/A	10 ... 50 mA	N/A	N/A	0.1 ... 0.25 A
115 Vac	0.4 ... 20 A	0.4 ... 15 A	10 ... 50 mA	0.1 ... 10 A	N/A	0.4 ... 15 A
250 Vac	0.2 ... 20 A	0.2 ... 15 A	N/A	0.1 ... 10 A	N/A	0.2 ... 15 A
Dielectric rigidity between contacts and ground	2000 V	2000 V	2000 V	2000 V	1000 V	2000 V

Electrical connections



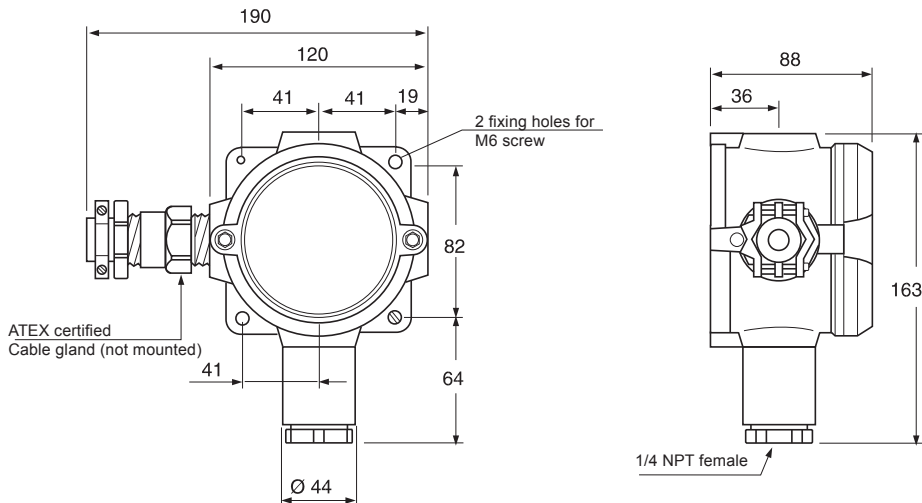
Hazardous areas : zone 1, 2, 21, 22

$-20^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$	Dust IP65	Gases
	T° surface	Class
$T_a = 60^{\circ}\text{C}$	80°C	T6
$T_a = 70^{\circ}\text{C}$	95°C	T5

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

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.

Dimensions (mm)



Ordering details RP2E

	RP2	-		.		xx	/
Model	RP2	-		.		xx	/
Compact pressure switch							
Approvals							
ATEX Explosion proof						E	
Type of micro switches							
1 SPDT standard change over switch							L
1 SPDT gold contact change over switch							M
1 SPDT tropicalized change over switch							N
1 SPDT hermetically ultra sensitive change over switch							P
1 SPDT change over switch with adjustable dead band							R
2 SPDT double change over switch							U
Process connection							
G1/2 male (standard)							3
1/2 NPT male							6
1/4 NPT female							8
1/2 NPT female							N
Pressure range (bar)							
Over pressure max. (bar)							
0 ... 1			10				41
0 ... 1.6			10				42
0 ... 2.5			10				43
0 ... 4			10				44
0 ... 6			10				45
0 ... 10			10				46
0 ... 4			40				51
0 ... 6			40				52
0 ... 10			40				53
0 ... 16			40				54
0 ... 25			40				55
0 ... 40			40				56
0 ... 10			100				61
0 ... 16			100				62
0 ... 25			100				63
0 ... 40			100				64
0 ... 60			100				65
0 ... 100			100				66

Options to be added behind the / (see example below)

Ordering example with options

