



**BOURDON**  
The Original by Baumer



### Main Features

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

### Applications

- Power generation safety equipment
- Pressurized chambers control
- Liquid level control

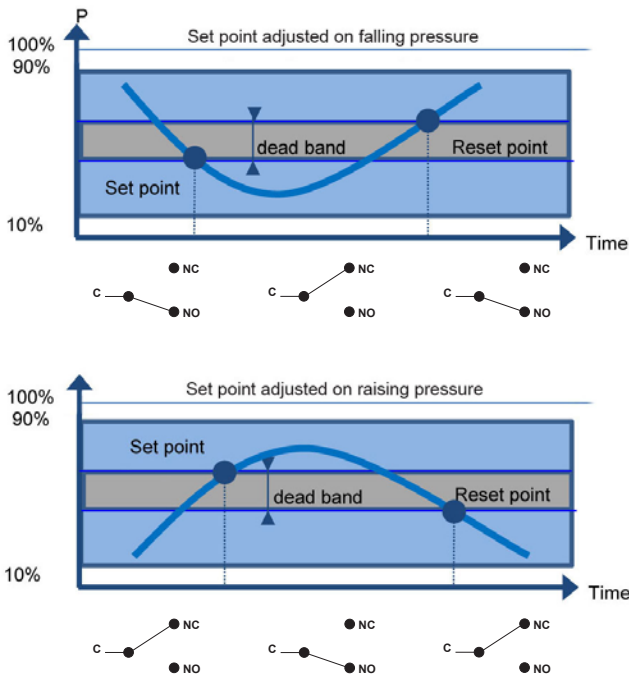
### Technical Data

Pressure range	-50 mbar ... 0 to 60 ... 600 bar	Explosion proof housing	Aluminium epoxy painted Captive stainless steel screws
Temperatures	Pressure range codes 101 to 153	Mounting	3 back lugs for wall mounting
	Medium : -15 ... + 150°C	Ground connection	Via internal terminal block
	Ambient : -20 ... + 70°C (T5) -20 ... + 60°C (T6)	Electrical connection	Terminal block with metallic cable gland for Ø 7 to 12 mm standard
	Storage : -40 ... + 70°C	Electrical function	See ordering code details in page 5
Repeatability	Pressure range codes 200 to 602	Adjustment	2 external adjustment screws on top of the case for set point and dead band
	Medium : -50 ... + 200°C	ATEX	<u>Type examination certificate</u> LCIE 03 ATEX 6231X EN 60079-0 : 2009 EN 60079-1 : 2007 EN 60079-31 : 2009
	Ambient : -25 ... + 60°C (T6)	<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 <u>T° ambient</u> -20°C to +60°C (T6 or T80°C) or -20°C to +70°C (T5 or T95°C)	
	Storage : -40 ... + 70°C		
CE conformity	Low Voltage Directive LVD 2006/95/EC Pressure Equipment Directive PED 97/23/EC ATEX Directive 94/9/EC		
Protection rating	IP 66 (EN 60529)		
Process Connection	Stainless steel 1.4404 (316L)		
Sensing element	Pressure range codes 101 to 153		
	Flanges : Stainless steel 1.4404 (316L) Diaphragm : Viton®		
	Pressure range codes 200 to 209		
	Bellow : Stainless steel 1.4404 or 1.4432 (316L)		
Scale	Pressure range codes 600 to 602		
	Piston : Nickel plated steel		
Scale	Internal. Accuracy on reading ± 5% FS		

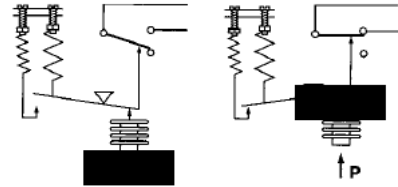
### Options

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
Lead seal of the adjustment screws	Code 8990

## 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

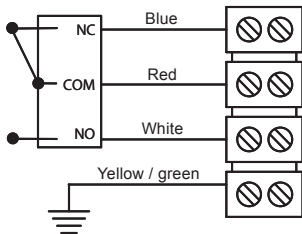
### Customer specific factory adjustment (option SETP)

The following specifications have to be given with the order:

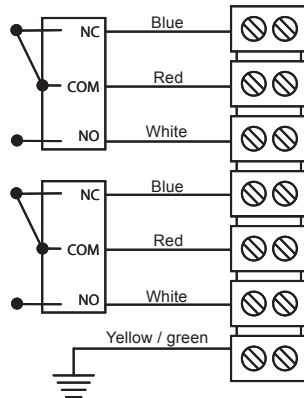
- Setpoint value
- Adjustment on falling or raising pressure
- Deadband value when using an adjustable dead band switch

## Electrical connections

### 1 SPDT



### 2 SPDT



### Hazardous areas : 1, 2, 21, 22

-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**

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.

## Micro switches characteristics

Switch code	N (T)	A (B)	M (K)	C (W)	E (F)	D (V)
Type	Tropicalized	Standard	Gold contact	Hermetic	Ultra sensitive	Ultra sensitive Hermetic
6 Vdc	0.1 ... 8 A	0.4 ... 15 A	10 ... 50 mA	5 mA ... 4 A	0.4 ... 1 A	0.4 ... 4 A
12 Vdc	0.1 ... 8 A	0.4 ... 15 A	10 ... 50 mA	5 mA ... 4 A	0.4 ... 1 A	0.4 ... 4 A
24 Vdc	0.1 ... 8 A	0.4 ... 6 A	10 ... 50 mA	5 mA ... 4 A	0.4 ... 1 A	0.4 ... 4 A
30 Vdc	0.1 ... 8 A	0.4 ... 6 A	10 ... 50 mA	5 mA ... 3 A	0.4 ... 1 A	0.4 ... 2 A
48 Vdc	0.1 ... 8 A	0.4 ... 6 A	10 ... 50 mA	5 mA ... 3 A	N/A	N/A
110 Vdc	N/A	0.1 ... 0.5 A	10 ... 50 mA	5 mA ... 1 A	N/A	N/A
220 Vdc	N/A	0.1 ... 0.25 A	10 ... 50 mA	5 mA ... 0.5 A	N/A	N/A
115 Vac	0.1 ... 10 A	0.4 ... 15 A	10 ... 50 mA	50 mA ... 3 A	0.4 ... 10 A	N/A
250 Vac	0.1 ... 5 A	0.2 ... 15 A	10 ... 10 mA	50 mA ... 2.5 A	0.2 ... 10 A	N/A
Dielectric rigidity between contacts and ground	2000 V	2000 V	2000 V	1500 V	2000 V	1000 V

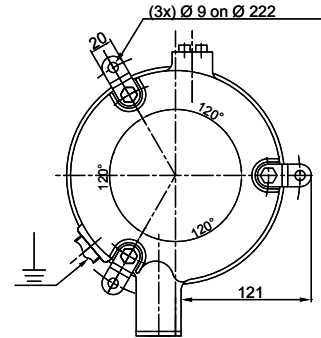
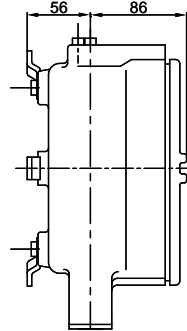
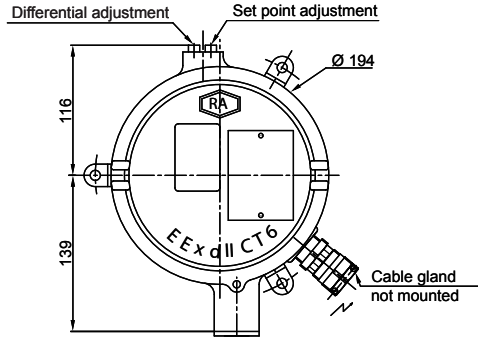
## Adjustable ranges

Scale	P. Max accidental	Code	Micro-switch dead band <sup>1)</sup>										
			Adjustable dead band						Fixed dead band				
			N (T*)		A (B*)	M (K*)		C (W*)		E (F*)		D (V*)	
			10%	90%	10%	90%	10%	90%	10%	90%	10%	90%	
mbar	bar		mbar										
-50 ... 0	0.15	<b>101</b>	3 - 37	3.8 - 37	9.8 - 37	11.3 - 37	0.75	0.75	3.8	4.5			
-2 ... 10	0.15	<b>102</b>	1.5 - 8	1.8 - 8	6.8 - 8	6.8 - 8	0.45	0.45	2.3	2.3			
-5 ... 50	0.15	<b>103</b>	1.8 - 22	3 - 22	7.5 - 22	11 - 22	0.6	0.6	2.3	3.8			
-8 ... 100	0.15	<b>104</b>	2.3 - 37	3 - 37	7.5 - 37	15 - 37	0.75	0.75	3	3.8			
-200 ... 0	1	<b>151</b>	9 - 120	12 - 120	23 - 120	23 - 120	3	4.5	11.3	15			
0 ... 200	1	<b>152</b>	9 - 120	12 - 120	23 - 120	23 - 120	3	4.5	11.3	15			
0 ... 400	1	<b>153</b>	23 - 220	30 - 220	45 - 220	53 - 220	6	9	27	37			
bar	bar	Code	mbar										
-1 ... 0	1.5	<b>200</b>	37 - 375	53 - 375	120 - 375	142 - 375	7.5	9	45	63			
-1 ... 2.5	7	<b>201</b>	120 - 1800	150 - 1800	225 - 1800	300 - 1800	33	37	144	180			
0 ... 0.2	1.5	<b>202</b>	22 - 150	30 - 150	90 - 150	97 - 100	6	7.5	27	36			
0.05 ... 1	1.5	<b>203</b>	30 - 600	37 - 600	120 - 600	142 - 600	6	7.5	36	45			
0.5 ... 10	30	<b>204</b>	300 - 4500	375 - 4500	975 - 4500	1275 - 4500	67	75	360	450			
3.5 ... 25	30	<b>205</b>	900 - 7500	1800 - 7500	1125 - 7500	1950 - 7500	90	150	1080	2160			
bar	bar	Code	bar										
5 ... 50	65	<b>206</b>	1.5 - 15	3 - 15	3.7 - 15	4.5 - 15	0.225	0.3	2.2	3.7			
5 ... 100	220	<b>207</b>	3.7 - 22	4.5 - 22	8.2 - 22	9.7 - 22	1.050	1.350	4.5	5.2			
20 ... 150	220	<b>208</b>	3.7 - 22	5.2 - 22	8.2 - 22	9.7 - 22	1.050	1.500	4.5	6.7			
-1 ... 3.5	30	<b>209</b>	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	<b>600</b>	30 - 120	45 - 120	45 - 120	47 - 120	22	22	36	54			
30 ... 350	800	<b>601</b>	30 - 150	45 - 150	45 - 150	47 - 150	24	24	36	54			
60 ... 600	800	<b>602</b>	30 - 180	45 - 180	45 - 180	47 - 180	24	24	36	54			

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

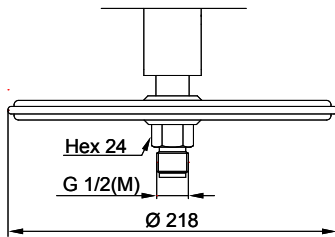
<sup>1)</sup> The value of the deadband is depending on the value of the set point. This table contains the deadband values for set point adjustment at 10% and 90% of the selected scale. For adjustable deadband the lower value corresponds to the deadband spring totally released and the higher corresponds 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%.

**Dimensions (mm)**

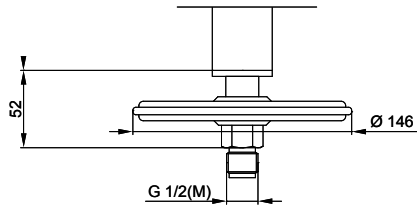


Weight of the housing : 3 kg

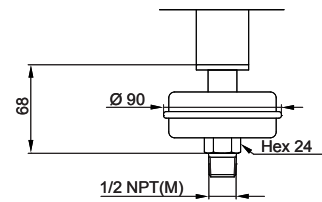
Pressure range code : 101 - 102 - 103 - 104  
Weight : 3 kg



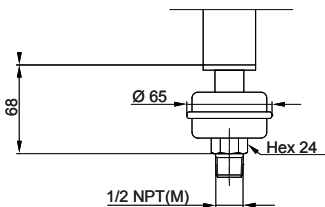
Pressure range code : 151 - 152 - 153  
Weight : 2.8 kg



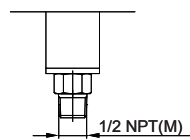
Pressure range code : 200 - 202 - 203  
Weight : 2.5 kg



Pressure range code : 201  
Weight : 2.4 kg



Pressure range code : 204 - 205 - 206 - 207 - 208 -  
209 - 600 - 601 - 602  
Weight : 2 kg



## Ordering details RPPE3 - RPPE7

	RP	PE	-			.	xxx	/
<b>Model</b>	RP							
Industrial pressure switch								
<b>Approvals</b>								
Explosion proof		PE						
			-					
<b>Sensing element</b>								
Diaphragm (Viton®, range 101 to 153)							3	
Below (stainless steel, range 200 to 209) or Piston (nickel plated steel, range 600 to 602)							7	
<b>Type of micro switches</b>								
								<b>Deadband</b>
1 SPDT standard changeover switch								Adjustable
2 SPDT standard changeover switch								Adjustable
1 SPDT hermetically changeover switch								Adjustable
2 SPDT hermetically changeover switch								Adjustable
1 SPDT ultra sensitive changeover switch								Fix
2 SPDT ultra sensitive changeover switch								Fix
1 SPDT hermetically, ultra sensitive changeover switch								Fix
2 SPDT hermetically, ultra sensitive changeover switch								Fix
1 SPDT gold contact changeover switch								Adjustable
2 SPDT gold contact changeover switch								Adjustable
1 SPDT tropicalized changeover switch								Adjustable
2 SPDT tropicalized changeover switch								Adjustable
<b>Process connection</b>								
G 1/2 male (standard)								3
1/2 NPT male								6
1/4 NPT female								8

Pressure range (mbar)	Pressure range (kPa)		
-50 ... 0	-5 ... 0	1)	101
-2 ... 10	-0.2 ... 1	1)	102
-5 ... 50	-0.5 ... 5	1)	103
-8 ... 100	-0.8 ... 10	1)	104
-200 ... 0	-20 ... 0	1)	151
0 ... 200	0 ... 20	1)	152
0 ... 400	0 ... 40	1)	153

Pressure range (bar)	Pressure range (kPa)		
-1 ... 0	-100 ... 0	2)	200
-1 ... 2.5	-100 ... 250	2)	201
0 ... 0.2	0 ... 20	2)	202
0.05 ... 1	5 ... 100	2)	203
0.5 ... 10	50 ... 1000	2)	204
3.5 ... 25	350 ... 2500	2)	205
5 ... 50	500 ... 5000	2)	206
5 ... 100	500 ... 10000	2)	207
20 ... 150	2000 ... 15000	2)	208
-1 ... 3.5	-100 ... 350	2)	209
25 ... 175	2500 ... 17500	2)	600
30 ... 350	3000 ... 35000	2)	601
60 ... 600	6000 ... 60000	2)	602

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

- 1) Only RPPE3
- 2) Only RPPE7

## Ordering example with options

