

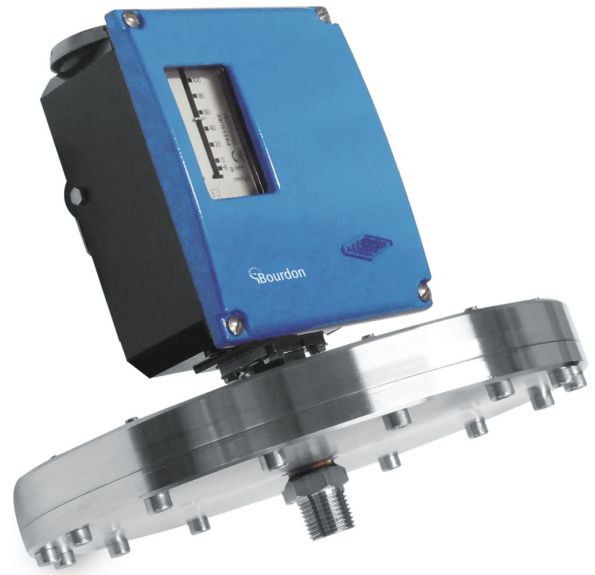
RDN5

Differential pressure switch for high static pressure

RDN-###.###/

Overview

- Excellent repeatability
- Dead band adjustment for regulation
- Fix dead band for control
- High static pressure up to 80 bar



Picture similar

Technical data

Housing

Protection rating (EN60529)	IP66
Cover	Blue painted, zamak Captive stainless steel screws
Case material	Black painted, zamak
Mounting	Wall mounting bracket
Scale	Internal, accuracy on reading $\pm 5\%$ FS

Process

Process connection	G1/4" female, only for codes 161,162,163 G1/2" 1/4" NPT female 1/2" NPT
Process connection material	Stainless steel 1.4404 / AISI 316L

Temperature

Ambient temperature	-25°C ... +55°C
Storage temperature	-40°C ... +70°C
Media temperature	-15°C ... +100°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

Flange	Stainless steel 1.4404 / AISI 316L
Diaphragm	NBR for pressure ranges 111 to 131 FKM (Viton®) for pressure ranges 156 to 163

Sensing / Input

Min. measuring range	2 ... 10 mbar
Max. measuring range	10 ... 2000 mbar

Performance

Repeatability	$\pm 1\%$ FS
Adjustment	2 external adjustment screws on top of the case for set point and deadband When set point adjustment is required it is necessary to know the static pressure, as it has an influence on the set point.

Electrical data

Ground connection	Via internal terminal block
Electrical connection	Via internal terminal block with plastic cable gland for $\varnothing 7$ to 10.5 mm

Approval / Conformities

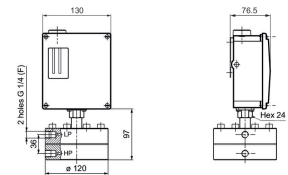
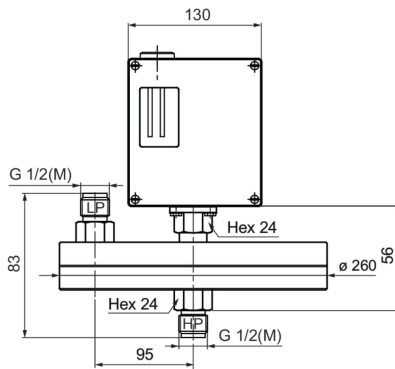
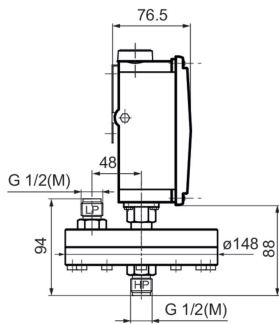
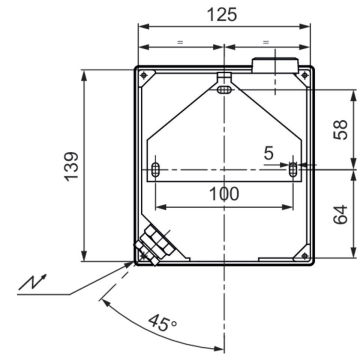
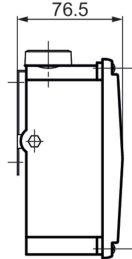
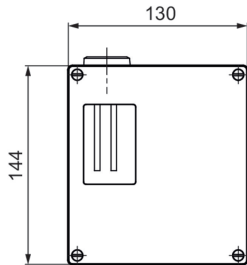
CE conformity	Low Voltage Directive 2014/35/UE
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Dimensional drawings (mm)

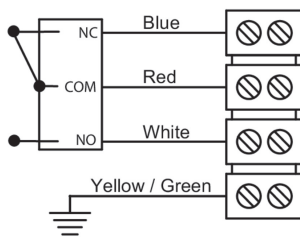


Pressure range codes: 161 - 162 - 163
Weight: 7 kg

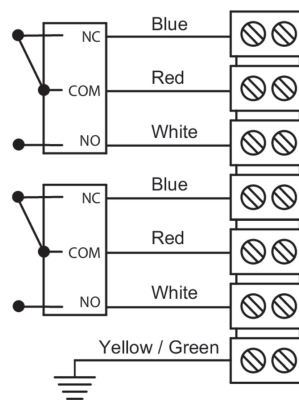
Pressure range codes: 156 - 157 - 158
Weight: 10 kg

Pressure range codes: 111 - 112 - 121 - 131
Weight: 6.4 kg

Electrical connection

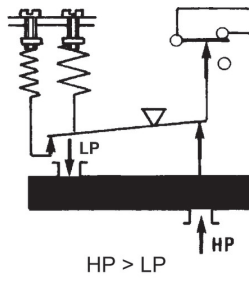
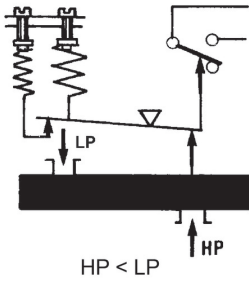
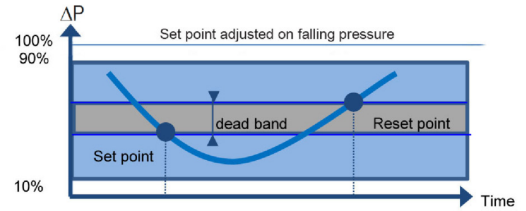
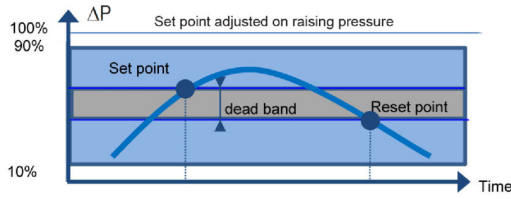


1 SPDT



2 SPDT

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
- Static pressure (except RDx6)
- Dead band value (as needed) when using an adjustable dead band switch

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Adjustable ranges

Scale	Max ΔP	Max P Static	Code	Micro-switch dead band °										
				Adjustable dead band				Fixed dead band						
				A (B*)		M (K*)		C(W*)		E(F*)		H	D (V*)	J
				10%	90%	10%	90%	10%	90%	10%	90%	10%	90%	
mbar	mbar	bar		mbar										
2 ... 10	10	0 to 5	111	1.2 - 10	1.6 - 10	4.5 - 10	4.5 - 10	0.3	0.4	1.5	2			
2 ... 20	50	0 to 5	112	1.7 - 20	2.2 - 20	5 - 20	5.5 - 20	0.4	0.5	2	3			
2 ... 50	50	0 to 5	121	1.7 - 30	2.2 - 30	5 - 30	5.5 - 30	0.4	0.5	2	3			
2 ... 100	100	0 to 5	131	1.7 - 40	2.5 - 40	5.5 - 40	10 - 40	0.5	0.7	2	3			
10 ... 200	200	5.5 to 50	156	8 - 80	10.5 - 80	35 - 80	45 - 80	2.5	3.4	10	13			
10 ... 400	400	5.5 to 50	157	15 - 150	20 - 150	40 - 150	50 - 150	4.5	6	18	24			
10 ... 1000	1000	5.5 to 50	158	18 - 150	22 - 150	40 - 150	60 - 150	5	7	22	26.5			
10 ... 700	700	5.5 to 80	161**	20 - 200	30 - 200	60 - 350	90 - 350	6	8	24	36			
10 ... 1500	1500	5.5 to 80	162**	20 - 300	30 - 300	60 - 350	100 - 350	6	8	24	36			
10 ... 2000	2000	5.5 to 80	163**	30 - 300	60 - 300	90 - 350	200 - 350	9	12	36	72			

(*) For version with 2 microswitches lower values of the dead band must be multiplied x 1.5

(**) G1/4 female only

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

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Ordering reference

Ordering key - Configuration possibilities see website

	RDN	-	5	#	#	.	###
Product	RDN						
Measuring element	Membran, Viton® od. NBR		5				
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
1xSPDT, manually, falling							H
1xSPDT, manually, rising							J
Pneumatic type, NO							Z
Pneumatic type, NC							Y
Process connection							
G 1/4 Internal Screw							H
G 1/2							3
1/2 NPT							6
1/4 NPT F							8
Pressure range							
2 ... 10 mbar							111
2 ... 20 mbar							112
2 ... 50 mbar							121
2 ... 100 mbar							131
10 ... 200 mbar							156
10 ... 400 mbar							157
10 ... 1000 mbar							158
10 ... 700 mbar							161
10 ... 1500 mbar							162
10 ... 2000 mbar							163

Ordering example

	RDN	-	5	A	H	.	161	/	0765
Product	RDN								
Measuring element	Membran, Viton® od. NBR		5						
Type of Microswitch	1xSPDT, Standard			A					
Process connection	G 1/4 Internal Screw				H				
Pressure range	10 ... 700 mbar						161		

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Ordering reference

Ordering example

RDN - 5 A H . 161 / 0765

Cleanliness

for oxygen applications
free of oil and grease

0765

Options

Setpoint factory adjusted	SETP	2298	2298
For oxygen applications	0765	2.1 Certificate	Q001
Mounting on 2 pipe	0407	2.2 Certificate	Q002
stainless steel label wired*	9941	3.1 Material certificate	Q003
Setpoint adjust. lead sealed	8990	3.1 Certif. setpoints adjust.	Q011
Souriau mobile plug	2249		