

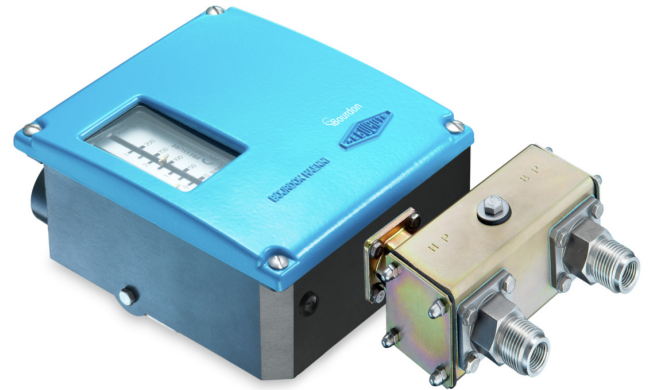
RDN8

Differential pressure switch

RDN-###.###/

Overview

- Excellent repeatability
- Dead band adjustment for regulation
- Fix dead band for control



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	G1/2" 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 ... +40°C ,Code 40
Media temperature	-50°C ... +200°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

Bellow	Stainless steel 1.4404 / AISI 316L Stainless steel 1.4432 / AISI 316L
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Sensing / Input

Min. measuring range	0.05 ... 0.5 bar
Max. measuring range	2.5 ... 30 bar

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.

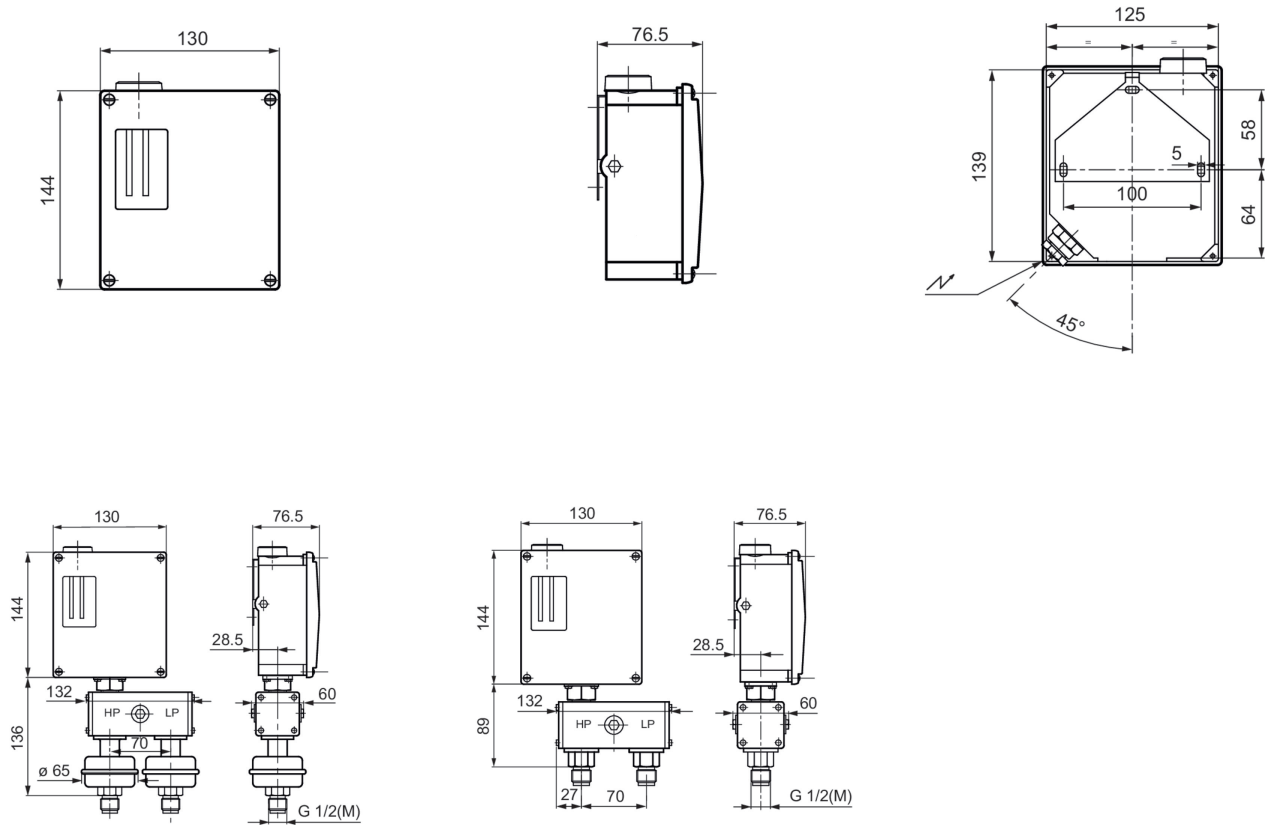
Electrical data

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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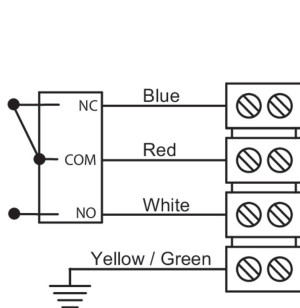
Dimensional drawings (mm)



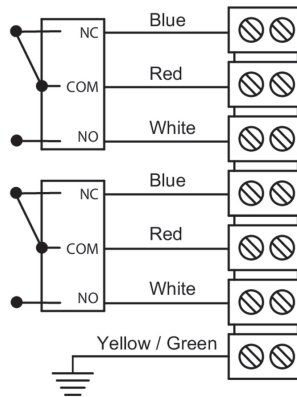
Pressure range codes: 211 - 221
Weight: 3 kg

Pressure range codes: 214 - 224 - 234 - 235
- 245 - 246 - 256 - 257 - 258
Weight: 3 kg

Electrical connection

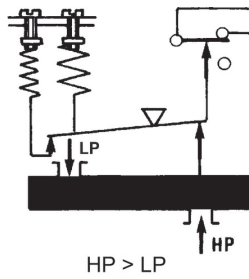
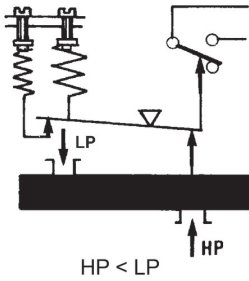
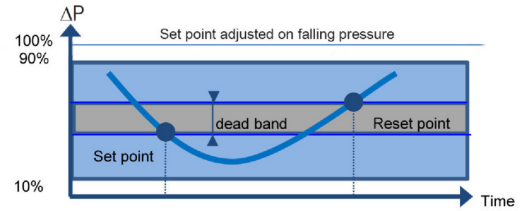
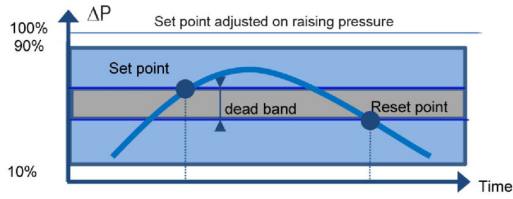


1 SPDT



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

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%		
bar				bar				mbar		bar			
0.05... 0.5	0.5	7	211	0.09 - 0.3	0.1 - 0.3	0.15 - 0.4	0.2 - 0.4	25	30	0.11	0.12		
0.05... 1	1	7	221	0.09 - 0.3	0.1 - 0.3	0.15 - 0.4	0.22 - 0.4	25	30	0.11	0.12		
0.15... 0.5	0.5	20	214	0.14 - 0.5	0.18 - 0.5	N/A	N/A	55	60	0.17	0.22		
0.15... 1	1	20	224	0.2 - 0.6	0.25 - 0.6	N/A	N/A	55	60	0.17	0.24		
0.15... 4	4	20	234	0.21 - 1.5	0.27 - 1.5	0.65 - 2	0.8 - 2	55	65	0.17	0.3		
0.8... 4	4	30	235	0.7 - 2.5	1.1 - 2.5	0.75 - 2.5	1.1 - 2.5	70	100	0.84	1.35		
0.8... 10	10	30	245	0.7 - 2.5	1.1 - 2.5	0.75 - 2.5	1.1 - 2.5	70	100	0.84	1.35		
1.5... 10	10	65	246	1.2 - 5	2.5 - 5	2.5 - 6	3.5 - 6	180	240	1.45	3		
1.5... 20	20	65	256	1.2 - 5	2.5 - 5	2.5 - 6	3.5 - 6	180	240	1.45	3		
2.5... 20	20	220	257	2.5 - 20	3.5 - 20	6 - 20	7 - 20	800	1000	3	4.2		
2.5... 30	30	220	258	3 - 30	4 - 20	6 - 20	7 - 20	850	1000	3.5	4.8		

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

(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	-	8	#	#	.	###
Product	RDN						
Measuring element	Bellow or piston, st. steel		8				
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 1/2						3
	1/2 NPT						6
	1/4 NPT F						8
Pressure range	0.05 ... 0.5 bar						211
	0.05 ... 1 bar						221
	0.15 ... 0.5 bar						214
	0.15 ... 1 bar						224
	0.15 ... 4 bar						234
	0.8 ... 4 bar						235
	0.8 ... 10 bar						245
	1.5 ... 10 bar						246
	1.5 ... 20 bar						256
	2.5 ... 20 bar						257
	2.5 ... 30 bar						258

Ordering example

	RDN	-	8	A	3	.	211	/	0765
Product	RDN								
Measuring element	Bellow or piston, st. steel		8						
Type of Microswitch	1xSPDT, Standard			A					
Process connection	G 1/2						3		
Pressure range	0.05 ... 0.5 bar						211		

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Ordering reference

Ordering example

RDN - 8 A 3 . 211 / 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		