

RIB400

DIGITAL PRESSURE SWITCH

PRESSURE

RIELS® INSTRUMENTS

Electronic Pressure Switch
Switching output (PNP / NPN) configurable
Mass production, automated calibration

Features

- Measuring ranges from 50mbar to 600bar
- Gauge pressure, Absolute pressure
- Accuracy: $\pm 0.5\%$ FSO(Typ.)
- Switching output (PNP / NPN) configurable
- Configurable analogue output
- 4 digits (-1999 ... 9999) display

Application

- Pneumatic
- Hydraulic power unit
- Mechanical engineering
- Vacuum technology
- Filter monitoring



Technical data

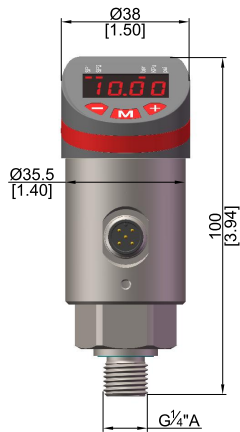
Performance	
Accuracy*	$\pm 0.5\%$ FS@25°C(Typ.)
Operating temperature range	-20 to 85°C
Ambient temperature range	-20 to 70°C
Overpressure	150%FS
Vibration	10 g RMS(20 to 2000Hz)
Shock	100 g(11ms)
Cycles	10×10^5
Long term stability	$\pm 0.3\%$ FS

Electrical @25°C	
Output signal	Analog signal 4...20 mA / 1...5 VDC / 0...10 VDC
	Switch type PNP / NPN normally close (NC) or normally open (NO)
	communication IO-Link / RS485
Power supply	12...30 VDC
Current drain	max.40mA,24 VDC
Response time	0.01...2 S
Load resistance	<500Ω
EMC Test	IEC61000-4-2/IEC61000-4-3
Reverse polarity protection	No damage – no function

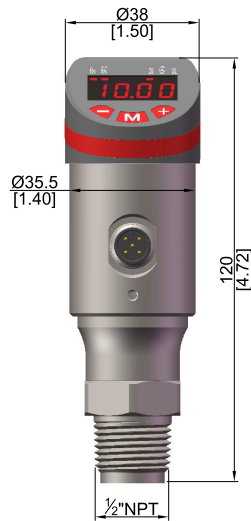
Physical Specifications	
Housing	SUS304 stainless steel
Diaphragm	SUS316L stainless steel
Oil Filling	Silicone oil
Protection	IP66
Sealing	NBR / FKM
Weight	~300g (without cable)

Dimensions in mm [in]

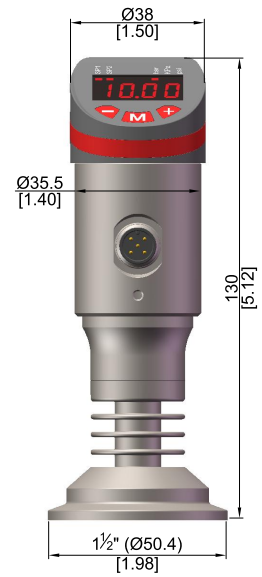
Thread pressure port



Flush pressure port



Tri-Clamp pressure port



Electrical connections

Circular connector M12x1(5-pin)	2 x switching output	2 x switching output+4...20mA	1 x switching output+4...20mA+IO-Link	2 x switching output+4...20mA+IO-Link	RS485
	4-wire	5-wire	4-wire	5-wire	4-wire
PIN1/brown	Supply+	Supply+	Supply+	Supply+	Supply+
PIN2/white	Switching S2	Switching S2	4...20mA	Switching S2	RS485 A
PIN3/blue	Supply-	Supply-	Supply-	Supply-	Supply-
PIN4/black	Switching S1	Switching S1	Switching S1 IO-Link	Switching S1 IO-Link	RS485 B
PIN5/gray	-	4...20mA	-	4...20mA	-



Range code

Code	Nominal pressure [bar]	Gauge	Sealed gauge	Absolute
00	0...0.05	✓		
01	0...0.1	✓		
02	0...0.2	✓		
03	0...0.35	✓		✓
04	0...0.7	✓		✓
05	0...1	✓		✓
06	0...1.6	✓		✓
07	0...2.5	✓		✓
08	0...4	✓		✓
09	0...5	✓		✓
10	0...10	✓		✓
11	0...16	✓	✓	✓
12	0...25	✓	✓	✓
13	0...40		✓	✓
14	0...60		✓	✓
15	0...100		✓	✓
16	0...160		✓	✓
17	0...250		✓	✓
18	0...400		✓	✓



Code	Nominal pressure [bar]	Gauge	Sealed gauge	Absolute
19	0...600		✓	✓
20	-0.1...+0.1	✓		
21	-0.2...+0.2	✓		
22	-0.5...+0.5	✓		
23	-1...0	✓		
24	0...-1	✓		
25	-1...+1	✓		
26	-1...+1.6	✓		
27	-1...+2.5	✓		
28	-1...+4	✓		
29	-1...+6	✓		
30	-1...+9	✓		
31	-1...+10	✓		
32	-1...+16	✓		
33	-1...+25	✓		
34	0.8...2	✓		✓

Ordering code

Model	Range	Type	Output	Electrical Connection
RIB400	Code ²⁾	G Gauge	S1 2 x switching output(PNP)	E1 Circular connector M12x1(5-pin)/IP66
		A Absolute	S2 2 x switching output(NPN)	
			S3 2 x switching output(PNP)+4...20mA	
			S4 2 x switching output(NPN)+4...20mA	
			S5 1 x switching output(PNP)+4...20mA+IO-Link	
			S6 1 x switching output(NPN)+4...20mA+IO-Link	
			S7 2 x switching output(PNP)+4...20mA+IO-Link	
			S8 2 x switching output(NPN)+4...20mA+IO-Link	
			S9 RS485	

Pressure Port			Accuracy		Label	
01	G¼ A male	16	R½ male	A2	0.25%FS	S Standard
02	G½ A male	17	M12x1.5 male	A3	0.5%FS(Standard)	N Neutral packing
03	G¾ A male	18	M14x1.5 male			C Custom label
04	G¼ B male	19	M20x1.5 male			
05	G½ B male	20	G¼ female			
06	G½ B male	21	¼NPT female			
07	G¾ B male	22	G½ flush diaphragm			
08	7/16-20UNF with 74° taper	23	G1 flush diaphragm			
09	7/16-20UNF with 90° taper	24	½NPT flush diaphragm			
10	¼NPT male	25	PT½ flush diaphragm			
11	¼NPT male	26	Tri-Clamp 1-½" flush diaphragm			
12	½NPT male	27	Tri-Clamp 2" flush diaphragm			
13	PT¼ male	99	Custom			
14	PT½ male					
15	R¼ male					

²⁾ The pressure unit can be selected from psi, bar, kPa.

Accessory [Optional]		
Description	Version	Order number
Circular connector M12x1, 5-pin, straight 	With 2 m PVC cable	M125S2PV
	With 5 m PVC cable	M125S5PV
	With 10 m PVC cable	M125S10PV
	With 2 m PUR cable	M125S2PU
	With 5 m PUR cable	M125S5PU
	With 10 m PUR cable	M125S10PU
Circular connector M12 x 1, 5-pin, angled 	With 2 m PVC cable	M125A2PV
	With 5 m PVC cable	M125A5PV
	With 10 m PVC cable	M125A10PV
	With 2 m PUR cable	M125A2PU
	With 5 m PUR cable	M125A5PU
	With 10 m PUR cable	M125A10PU