Low differential pressure transducers

Models IXLdP, XLdP, RXLdP

Capacitive sensor with micro machined silicon diaphragm
Accuracy 0,25 %; 0,5 % and 1 % F.S.

Features

- Enclosures to meet environment
- High overpressure limits
- Extreme high resolution
- Excellent long term stability
- High shock and vibration resistance
- Very low pressure ranges

Ranges

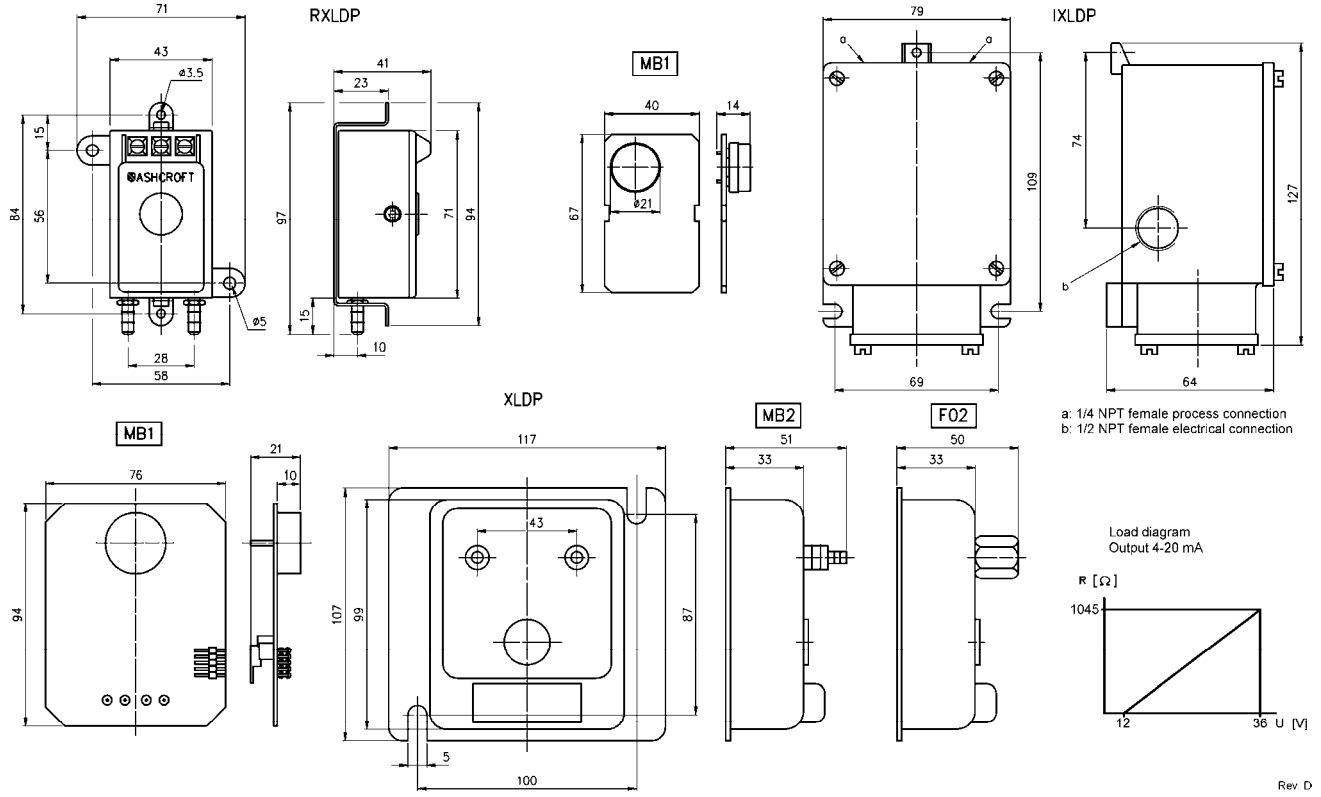
0 ... 0,25 mbar up to 0 ... 500 mbar
±0/0,125 mbar up to ±0/250 mbar

Applications

Lab/Clean room monitoring
Leak detection
Laminar flow
Furnace draft measurement
Medical diagnostic equipment
Over air flow control

Technical specifications	IXLdP	XLdP	RXLdP
Measuring principle	Differential Si-glass/aluminum capacitor with single crystal silicon diaphragm		
Range unidirectional in mbar	0,25 0,5 1,0 2,5	5 10 25 50 100	125 [1] 250 [2] 500 [2]
bidirectional in mbar	±0,125 ±0,25 ±0,5 ±1,25	±2,5 ±5 ±12,5 ±25 ±50	±62,5 [1] ±125 ±250 [2]
	[1] not for IXLdP, [2] only IXLdP		
Overpressure in bar			
Proof, differential/burst single side/static	1/3,5/7	0,7/1,7/1,7	0,7/1,7/1,7
Pressure type	Differential gauge, vacuum and compound		
Process connection	¼ NPT female	¼" or 1/8" barbed, ¼ NPT female	¼" or 1/8" barbed
Medium	Clean and dry air, non conducting and non corrosive gases		
Material			
Pressure connection	Stainless steel, others on request		
Sensor	Silicon, aluminum, glass		
Case	Stainless steel 300		Stainless steel/lexan
Power supply, reversed polarity protected	12 ... 36 VDC	12 ...36 VDC 13 ...36 VDC for 4-20 mA	12 ... 36 VDC
Output signal	4-20 mA (2-wire) 1-5/6 VDC (3-wire) 0-5 VDC (3-wire) ±2,5 VDC (3-wire) ±5 VDC (3-wire)	4-20 mA (2-wire) 1-5/6 VDC (3-wire)	4-20 mA (2-wire) 1-5/6 VDC (3-wire) 0-5 VDC (3-wire) 0-10 VDC (3-wire)
Maximum loop resistance for 4 ... 20 mA	≤ (U_B - 12 V) / 0,022 A		
Supply current	Max. 3 mA for VDC output, 20 mA for 4 ... 20 mA output signal		
Accuracy according DIN 16 086 (terminal point)	0,25 % or 0,5 %	0,25 % or 0,5 %	1,0 %
Repeatability	0,03 % for 0,25 % accuracy; 0,05 % for 0,5 % accuracy and 0,1 % for 1,0 % accuracy		
Electrical resolution	1 x 10^{-4} F.S.		
Response time (10 ... 90 %)	250 ms (others on request)		250 ms
Warm up time	1 s	10 s	15 s
Permissible			
Operation temperature	-30 ... 80 °C	-30 ... 70 °C	
Storage temperature	-40 ... 80 °C		
Compensated temperature	-18 ... 70 °C	0 ... 57 °C	4 ... 50 °C
Temperature influence (Ref. 20 °C in compensated range for zero and span)	±0,18 % / 10 K for 0,25 % acc. ±0,36 % / 10 K for 0,5 % acc.	±0,3 % / 10 K	±0,45 % / 10 K
Vibration influence (temporary)	< 0,2 % F.S. for 1 g and 10 … 130 Hz	< 0,05 % F.S. for 5 g and 0 … 60 Hz	< 0,2 % F.S. for 1 g and 10 … 130 Hz
Electrical connection	½ NPT female	Terminal strip	Terminal strip
Protection according EN 60 529/IEC 529	NEMA 4X, IP65, Optional intrinsically safe acc. FM	NEMA 2 IP40	NEMA 1 IP40
Mounting position error (Zero adjustable)	≥ 2,5 mbar < 0,1 % F.S. ≥ 0,6 mbar < 0,5 % F.S. ≥ 0,25 mbar < 0,8 % F.S.	≥ 1,27 mbar < 0,1 % F.S. ≥ 0,64 mbar < 0,25 % F.S. ≥ 0,25 mbar < 0,5 % F.S.	≥ 1,27 mbar < 0,1 % F.S. < 1,27 mbar < 0,25 % F.S.
Adjustments	Zero and span ±10 % F.S.		Zero ±5 % F.S., span ±3 % F.S.
Weight in kg	0,7	0,4	0,13
Options	Indicators, 5:1 turndown (IXLdP), variable damping		

General dimensions in mm



Order information

Type	Accuracy	Process connection	Output signal	Electrical connection	Range in mbar	Options
(IX) IXLDP	**(3)** 0,25 % **(5)** 0,50 %	**(F02)** ¼ NPT female **(MB1)** No case or connection	**(42)** 4-20 mA **(15)** 1-5 VDC **(16)** 1-6 VDC **(05)** 0-5 VDC **(25)** ±2,5 VDC **(50)** ±5 VDC	**(ST)** Screw terminal	**Unidirectional** **(P25MB)** 0/ 0,25 **(P5MB)** 0/ 0,5 **(1MB)** 0/ 1,0 **(2P5MB)** 0/ 2,5 **(5MB)** 0/ 5 **(10MB)** 0/ 10 **(25MB)** 0/ 25 **(50MB)** 0/ 50 **(100MB)** 0/ 100 **(125MB)** 0/ 125 [1] **(250MB)** 0/ 250 [2] **(500MB)** 0/ 500 [2] **Bidirectional** **(P13MBL)** ±0,125 **(P25MBL)** ±0,25 **(P5MBL)** ±0,5 **(1P3MBL)** ±1,25 **(2P5MBL)** ±2,5 **(5MBL)** ±5,0 **(13MBL)** ±12,50 **(25MBL)** ±25 **(50MBL)** ±50 **(63MBL)** ±62,50 [1] **(125MBL)** ±125 [2] **(250MBL)** ±250 [2] [1] not for IXLdP [2] only for IXLdP kPa, mmH_2O, Pa or in. H_2O on request	**(NH)** Tagging wired **(FM)** Explosion proof Factory Mutual (only IXLdP) **(X1)** Fast response time (5-10 ms)
(XL) XLDP	**(3)** 0,25 % **(5)** 0,50 %	**(F02)** ¼ NPT female **(MB1)** No case or connection **(MB2)** ¼" barbed **(MB8)** 1/8" barbed	**(42)** 4-20 mA **(15)** 1-5 VDC **(16)** 1-6 VDC			
(RX) RXLDP	**(7)** 1,0 %	**(MB1)** No case or connection **(MB2)** ¼" barbed **(MB8)** 1/8" barbed	**(42)** 4-20 mA **(15)** 1-5 VDC **(16)** 1-6 VDC **(05)** 0-5 VDC **(10)** 0-10 VDC others on request			

Order example

Type	Accuracy	Process connection	Output signal	Electrical connection	Range	Options
XL	3	MB2	42	ST	P25MBL	NH

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