

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

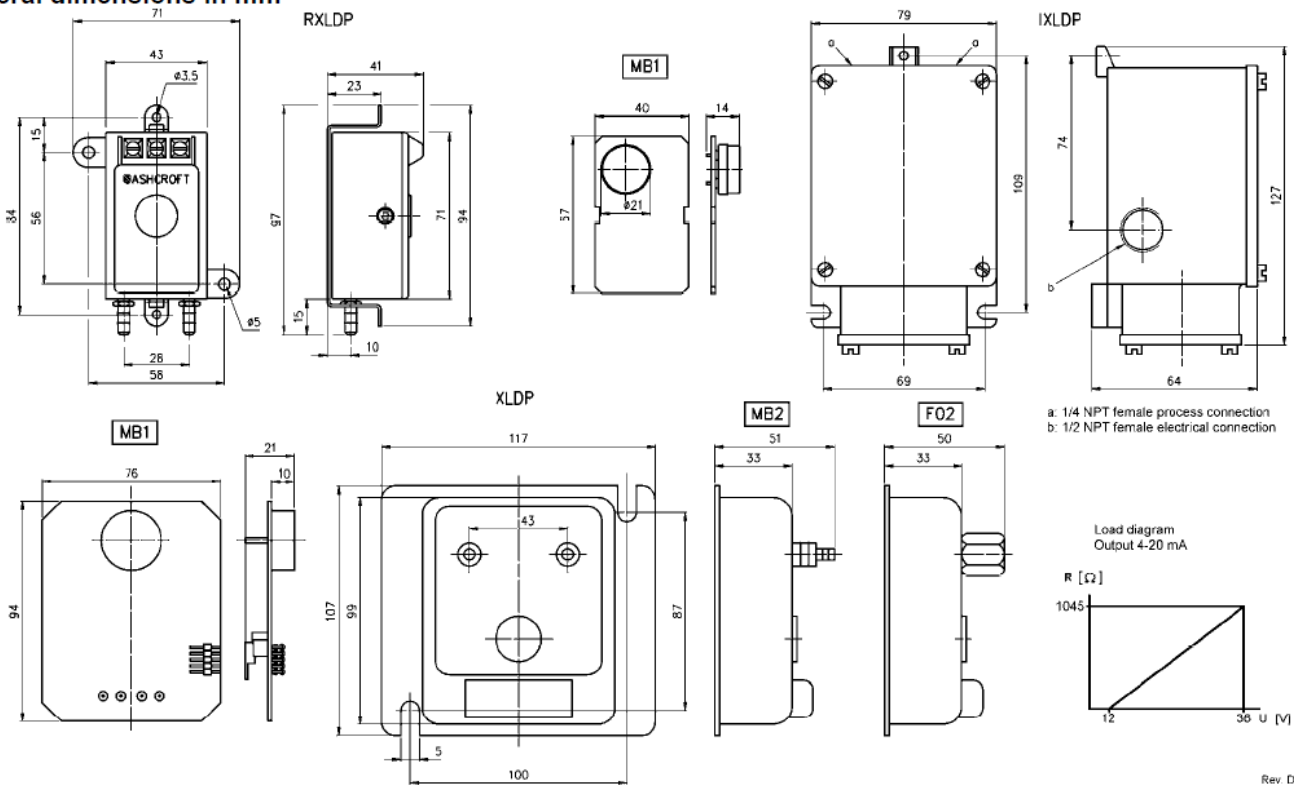
Lab/Clean room monitoring
Leak detection
Laminar flow

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 bidirectional in mbar	0,25 0,5 1,0 2,5 5 10 25 50 100 125 ¹⁾ 250 ²⁾ 500 ²⁾ ±0,125 ±0,25 ±0,5 ±1,25 ±2,5 ±5 ±12,5 ±25 ±50 ±62,5 ¹⁾ ±125 ±250 ²⁾ <small>¹⁾ not for IXLdP, ²⁾ only IXLdP</small>		
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 Medium Material	¼ NPT female Clean and dry air, non conducting and non corrosive gases	¼" or 1/8" barbed, ¼ NPT female	¼" or 1/8" barbed
Pressure connection Sensor Case	Stainless steel, others on request Silicon, aluminum, glass 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 Supply current	≤ (U _B - 12 V) / 0,022 A Max. 3 mA for VDC output, 20 mA for 4 ... 20 mA output signal		
Accuracy according DIN 16 086 (terminal point) Repeatability Electrical resolution Response time (10 ... 90 %) Warm up time	0,25 % or 0,5 % 0,03 % for 0,25 % accuracy; 0,05 % for 0,5 % accuracy and 0,1 % for 1,0 % accuracy 1 x 10 ⁻⁴ F.S. 250 ms (others on request) 1 s	0,25 % or 0,5 % 10 s	1,0 % 250 ms 15 s
Permissible Operation temperature Storage temperature	-30 ... 80 °C -40 ... 80 °C	-30 ... 70 °C	
Compensated temperature Temperature influence (Ref. 20 °C in compensated range for zero and span) Vibration influence (temporary)	-18 ... 70 °C ±0,18 % / 10 K for 0,25 % acc. ±0,36 % / 10 K for 0,5 % acc. < 0,2 % F.S. for 1 g and 10 ... 130 Hz	0 ... 57 °C ±0,3 % / 10 K < 0,05 % F.S. for 5 g and 0 ... 60 Hz	4 ... 50 °C ±0,45 % / 10 K < 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. Zero and span ±10 % 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 ±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



Rev D

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⁾	(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		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⁾	
(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		¹⁾ not for IXLdP ²⁾ only for IXLdP kPa, mmH ₂ O, Pa or in. H ₂ O on request	

Order example

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