

# 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

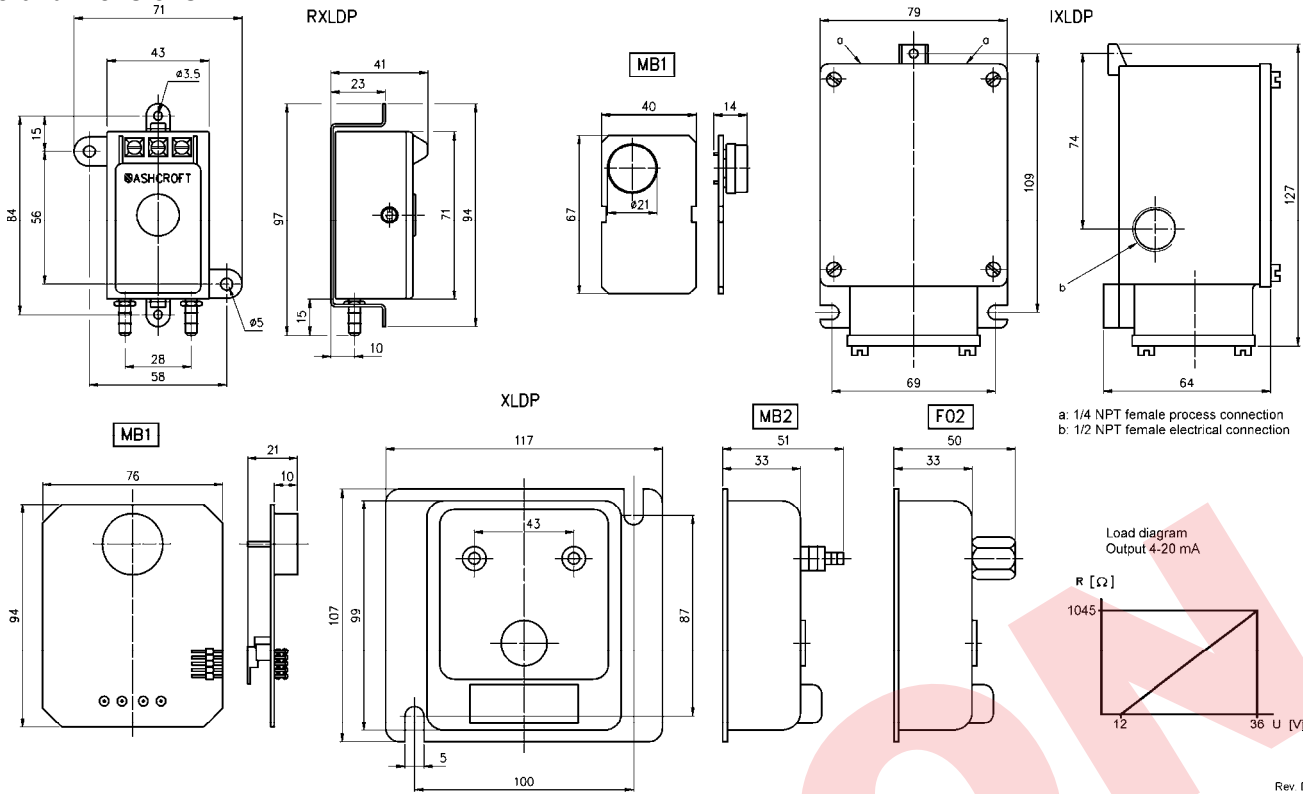
Lab/Clean room monitoring  
Leak detection  
Laminar flow

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 <sup>1)</sup> 250 <sup>2)</sup> 500 <sup>2)</sup>		
bidirectional in mbar	±0,125 ±0,25 ±0,5 ±1,25 ±2,5 ±5 ±12,5 ±25 ±50 ±62,5 <sup>1)</sup> ±125 ±250 <sup>2)</sup>		
	<sup>1)</sup> not for IXLdP, <sup>2)</sup> only IXLdP		
Overpressure in bar	1/3,5/7	0,7/1,7/1,7	0,7/1,7/1,7
Proof, differential/burst single side/static	Differential gauge, vacuum and compound		
Pressure type			
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 <sub>B</sub> - 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 <sup>-4</sup> 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. 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



## Order information

Type	Accuracy	Process connection	Output signal	Electrical connection	Range in mbar	Options
(IX) IXLDP	(3) 0,25 % (5) 0,50 %	(F02) 1/4 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	<b>Unidirectional</b> (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 <sup>1)</sup> (250MB) 0/ 250 <sup>2)</sup> (500MB) 0/ 500 <sup>2)</sup>	(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) 1/4 NPT female (MB1) No case or connection (MB2) 1/4" barbed (MB8) 1/8" barbed	(42) 4-20 mA (15) 1-5 VDC (16) 1-6 VDC		<b>Bidirectional</b> (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 <sup>1)</sup> (125MBL) ±125 <sup>2)</sup> (250MBL) ±250 <sup>2)</sup>	
(RX) RXLDP	(7) 1,0 %	(MB1) No case or connection (MB2) 1/4" 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		<sup>1)</sup> not for IXLdP <sup>2)</sup> only for IXLdP kPa, mmH <sub>2</sub> O, Pa or in. H <sub>2</sub> O 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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