

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

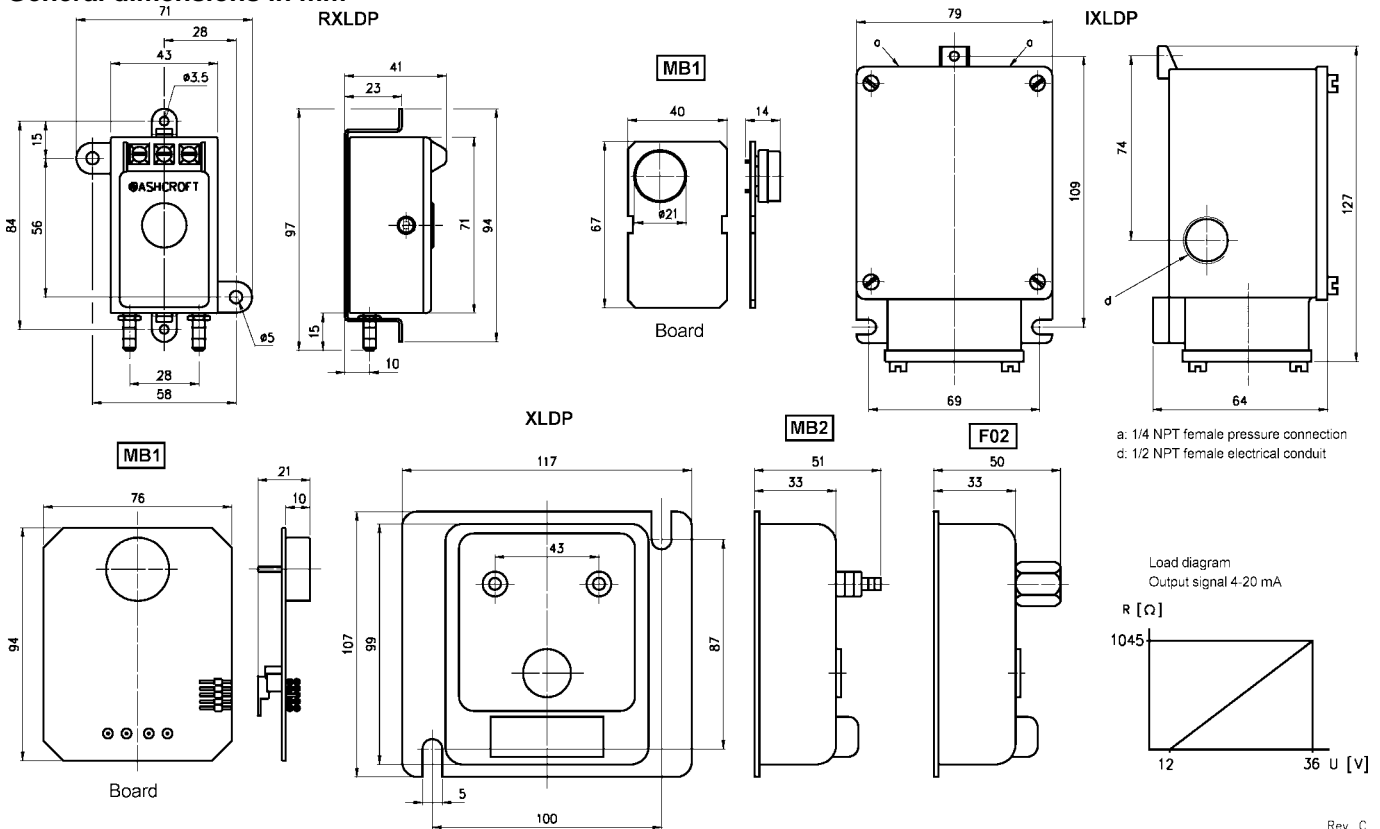


Ranges

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

Technical specifications	IXLdP	XLdP	RXLdP
Measuring principle	Differential Si-glass/aluminum capacitor with single crystal silicon diaphragm		
Range unidirectional [mbar]	0,25 0,5 1,0 2,5 5 10 25 50 100 125 ¹⁾ 250 ²⁾ 500 ²⁾		
bi-directional [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 [bar]			
Proof, differential/burst single side/static single side	1/3,5/7	0,7/1,7/1,7	0,35/1,7/1,7
Pressure type	Differential gauge, vacuum and compound		
Process connection	¼ or ½ NPT female	¼", 1/8" barbed, ¼ NPT female	¼", 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	300 series stainless steel		Stainless steel/lexan
Power supply, reversed polarity protected	12 ... 36 VDC	12 ...36 VDC, 13 ...36 VDC _(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) / 0,22 A	≤ (U _B - 13 V) / 0,22 A	≤ (U _B - 12 V) / 0,22 A
Supply current	max. 3 mA for VDC output, 20 mA for 4 ... 20 mA output signal		
Accuracy according DIN 16 086	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	1x 10 ⁻⁴ F.S.		
Response time (10 ... 90%)	250 ms (others on request)		250 ms
Warm up time	1 sec	10 sec	15 sec
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	Terminals
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./g ≥ 0,6 mbar < 0,5% F.S./g ≥ 0,25 mbar < 0,8% F.S./g Zero and span ± 10% F.S.	≥ 1,27 mbar < 0,1% F.S./g ≥ 0,64 mbar < 0,25% F.S./g ≥ 0,25 mbar < 0,5% F.S./g	≥ 1,27 mbar < 0,1% F.S./g < 1,27 mbar < 0,25% F.S./g
Adjustments	Zero ± 5% F.S., span ± 3% F.S.		
Weight [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	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⁾ Bi-directional (P13MBL) ± 0,125 (P25MBL) ± 0,25 (P5MBL) ± 0,5 (1P3MBL) ± 1,25 (2P5MBL) ± 2,5 (5MBL) ± 5,0 (13MBL) ± 12,5 (25MBL) ± 25 (50MBL) ± 50 (630MBL) ± 62,5 ¹⁾ (125MBL) ± 125 ²⁾ (250MBL) ± 250 ²⁾	(NH) Tagging wired (FM) Explosion proof Factory Mutual (only IXLdP)
(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			
(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

kPa, mmH₂O, Pa or inH₂O on request

¹⁾ Not for IXLdP
²⁾ Only for IXLdP

How to order

Type	Accuracy	Process connection	Signal output	Electrical connection	Range	Option
XL	3	MB2	42	ST	P25MBL	NH