

## Low pressure differential transducer model DXLdp

Capacitance SiGlas™ sensor with micromachined ultra-thin single crystal diaphragm  
Accuracy 0,25 %; 0,5 % and 1 % F.S.

### Features

- DIN rail mount
- High overpressure limits
- Extreme high resolution
- Excellent long term stability
- Optional SpoolCal™ process actuator valve
- Optional Status-LED and front access test jacks
- Optional 2:1 turndown

### Ranges

0 ... 0,25 mbar up to 0 ... 125 mbar dp  
±0/0,125 mbar up to ±0/62,5 mbar dp

### Applications

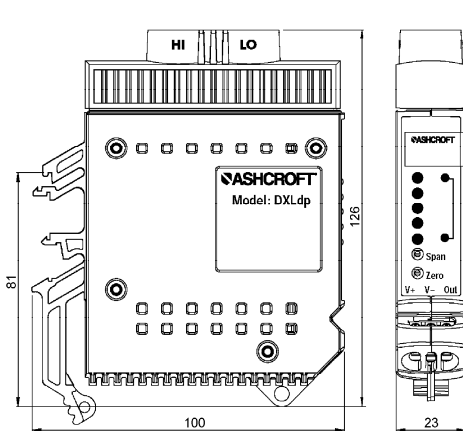
Clean room monitoring  
Low speed flow measurement  
Filter monitoring  
Calibration of low pressure instruments



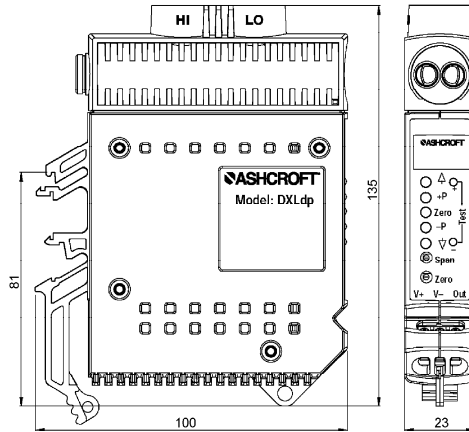
Technical specification	DXLdp
Measuring principle	Differential Si-glass/aluminum capacitor with single crystal silicon diaphragm
Ranges unidirectional [mbar]	0,25 0,5 1,0 2,5 5 10 25 50 100 125
bidirectional [mbar]	±0,125 ±0,25 ±0,5 ±1,25 ±2,5 ±5 ±12,5 ±25 ±50 ±62,5
Turn down	Optional 2:1
Overpressure	
Proof pressure [bar]	0,7
Burst pressure [bar]	1,7
Static pressure [bar]	1,7
Pressure type	Differential, gauge, vacuum and compound
Process connection	1/8 NPT female, according to ANSI/ASME B1.20.1, optional SpoolCal™ process valve actuator (provides in-place calibration, monitoring, zero adjustment), others on request
Medium	Clean and dry air, non conducting and non corrosive gases
Material	
Process connection	Brass
Sensor element	Silicon, aluminum, glass
Case	Polycarbonate, glass filled (UL94-V-1)
Power supply, reverse polarity protected	12 ... 36 VDC
Output signal	4-20 mA (2-wire) 1-5/6 VDC (3-wire) 0-5/10 VDC (3-wire)
Max. loop resistance for 4-20 mA	≤ (U <sub>B</sub> - 12 V) / 0,022 A
Supply current	max. 10 mA for VDC output, max. 20 mA for 4-20 output signal
Optical process diagnostics	Optional 5 coloured status-LED, indicating zero pressure, in range and out of range
Accuracy according to DIN 16 086	0,25 %; 0,5 % or 1,0 % F.S. (terminal point)
Repeatability	0,03 % for 0,25 % accuracy; 0,05 % for 0,5 % accuracy; 0,1 % for 1,0 % accuracy
Electrical resolution	1 x 10 <sup>-4</sup> F.S.
Long term stability	≤ 0,5 % F.S./year
Response time (10 ... 90 %)	250 ms (10 ms or 1 s on request)
Warm-up time	15 sec
Permissible	
Operation temperature	-29 ... 70 °C
Storage temperature	-40 ... 82 °C
Compensated temperature range	2 ... 57 °C
Temperature influence	±0,36 % / 10 K (ref. 20 °C)
Mounting position error (zero adjustable)	≤ 0,1 % for p ≥ 1,25 mbar, ≤ 0,25 % for p < 1,25 mbar
Adjustments	Zero ±5 % F.S., Span ±3 % F.S., front accessible
CE-mark/EMC	Compliant to EN 61326, Annex A (1997)
Electrical connection	Terminals
Test jacks	Optional front access test jacks on-line for data access without disturbing wiring
Mounting	DIN rail types EN 50022, EN 50035 and 50045
Protection according EN 60 529/IEC 529	IP40
Weight [kg]	0,16

All specifications are subject to change without notice.

## General dimensions [mm]



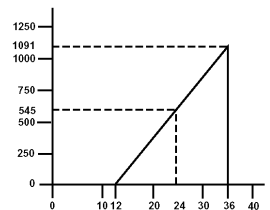
DXLdp dimension for basic unit



DXLdp dimension with SpoolCal and LED options

### Load Limitations 4-20mA Output

Loop Resistance (Ω)



### Option (DL):

LED for quick process diagnostics:

- zero pressure                      center amber LED
- in range ±                         adjacent green LED's
- out of range ±                    adjacent red LED's

Includes: front access test jacks on-line for data access without disturbing wiring

### Option (21):

2:1 turn down, 0,25 % accuracy is maintained on initialized range.

### Option (PV):

SpoolCal™ process valve actuator provides in-place system calibration without disturbing process tubes. From Off position the removable SpoolCal™ actuator tool provides the following functions:

- A 90 degree clockwise rotation puts the DXLdp in the CAL mode isolating it from the process and allowing direct external pressure input.
- A 90 degree counter clockwise rotation puts the DXLdp in the MONITOR mode to tee the process pressure to the DXLdp sensor and out, providing external measurement or recording capabilities.

## Order information

Type	Accuracy	Process connection	Output signal	Electrical connection	Ranges in mbar	Options
DX DXLdp	(3) 0,25 %	(F01) 1/8 NPT female	(42) 4-20 mA	(ST) Terminals 16-24AWG	<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  <b>Bi-directional</b> (P13MBL) ±0,125 (P25MBL) ±0,25 (P5MBL) ±0,5 (1P3MBL) ±1,25 (2P5MBL) ±2,5 (5MBL) ±5 (13MBL) ±12,5 (25MBL) ±25 (50MBL) ±50 (63MBL) ±62,5	(NH) Tagging wired  (DL) Status LED and front access test jacks  (NL) Front access test jacks (no status LED)  (PV) SpoolCal™ process valve actuator  (21) Turndown 2:1  (X1) Fast response time (10 ms)  (X2) Slow response time (1 s)  (RH) Calibration report for 1 %, (as standard with 0,5 % and 0,25%)
	(5) 0,5 %		(15) 1-5 VDC			
	(7) 1,0 %		(16) 1-6 VDC  (05) 0-5 VDC  (10) 0-10 VDC			
					ranges in Pa, kPa, mmH <sub>2</sub> O or in. H <sub>2</sub> O on request	

## How to order

Type	Accuracy	Process connection	Output signal	Electrical connection	Range	Option
DX	3	F01	42	ST	1MB	DL=PV

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