

DXLdp Ultra-Low Differential Pressure Transmitter

FEATURES

- The exclusive patented Ashcroft® SpoolCal™ actuator provides in-place system calibration
- 2:1 range turndown (OPT.)
- Front access test jacks provide on-line signal reference without removing wiring
- LED range status indicators for instant troubleshooting information
- Si-Glas™ technology enables precise measurement and control of very low pressures

TYPICAL USES

- HVAC/R
- Bio-pharm
- Bio-tech
- Room pressurization and control
- Velocity pressure
- Critical environments
- Building energy management/comfort control systems



DXLdp
Pressure Transmitter



PERFORMANCE SPECIFICATIONS

Reference Temperature:	21 °C ±1 K (70 °F ±2 °F)
Accuracy Class:	±0,25 %, ±0,5 %, ±1,0 % of span (Terminal Point Method: includes non-linearity, hysteresis, non-repeatability, zero offset and span setting errors)
Stability:	≤ ±0,25 % of span/year at reference conditions
Media Compatibility:	Clean, dry and non-corrosive gas NOT FOR USE ON LIQUIDS
Standard Response Time:	250 ms

ENVIRONMENTAL SPECIFICATIONS

Limits Temperature:	Storage:	-40 °C to 82 °C (-40 °F to 180 °F)
	Operating:	-29 °C to 71 °C (-20 °F to 160 °F)
	Compensated:	2 °C to 57 °C (35 °F to 135 °F)
Thermal Coefficients:	Zero & Span: ±0,36 % of span /10 K From 21 °C (70 °F) reference temperature	
Humidity Effects:	No performance effect at 10-95 % R.H. noncondensing	
CE Marked:	Per DoC EMC Directive 2014/30/EU IEC/EN 61326-1:Edition 2.0 Industrial IEC/EN 61326-2-3:Edition 2.0 Annex BB Industrial RoHS: 2011/65/EU	

FUNCTIONAL SPECIFICATIONS

Pressure:	Max. Static (Line):	1,7 bar (25 psi)
	Proof:	1,0 bar (15 psid)
	Burst:	1,7 bar (25 psi)
	Mounting Position Effect:	Mounting Position Effect easily corrected with zero potentiometer
	≥ 1,3 mbar	0,1 % span/g
	< 1,3 mbar	0,25 % span/g

KEY BENEFITS

- Broad temperature capability
- DIN rail mount dramatically reduces installation and calibration costs
- CE standard with all outputs
- On-board voltage regulation allows use of lower cost, unregulated power supply
- SpoolCal™ process valve actuator provides in-place system calibration without disturbing process tubes

ELECTRICAL SPECIFICATIONS

Potentiometers:	Front accessible, non-interactive
	Zero: ±5 % F.S.
	Span: ±3 % F.S.
Supply Current:	<10 mA for Voltage
Warm-up Time:	5 seconds max. to meet stated specifications from initial Power-up
Output Signal:	Supply Voltage:
4-20 mA (2 wire)	12-36 Vdc
1-5 Vdc (3 wire)	12-36 Vdc
1-6 Vdc (3 wire)	12-36 Vdc
0-5 Vdc (3 wire)	12-36 Vdc
0-10 Vdc (3 wire)	12-36 Vdc
	Output signal is independent of power supply changes: 12-36 Vdc range without effect on output signal
Circuit Protection:	Reversed wiring protection

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PHYSICAL SPECIFICATIONS

Pressure Connections:	11/64 brass barbed fittings (male), 1/8 NPT Female brass
Electrical Connection:	Screw Termination
Optische Anzeige:	LED Betriebszustandsanzeige
Gewicht:	ca. 0,13 kg
Montageart:	DIN-Normschiene nach DIN EN50022, 35 und 45
Schutzart Gehäuse:	NEMA 1 / IP20

WETTED PARTS

Media:

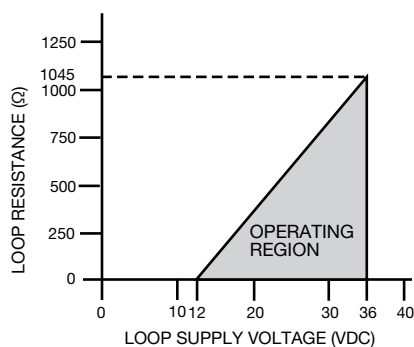
Clean, dry air/gases compatible with Aluminum, Titanium, PBT, Buna, Glass, Gold, Silicone Rubber, Silicon, Silicone RTV and Brass
NOT FOR USE ON LIQUIDS

NON-WETTED PARTS

Housing:

Glass-filled polycarbonate (UL94-V-1)

LOAD LIMITATIONS 4-20 mA OUTPUT ONLY



$$V_{\min} = 12 \text{ V} + [0,022 \text{ A}^{(1)} * R_L]$$

⁽¹⁾ Current includes a 10% safety factor

$$R_L = R_S + R_W$$

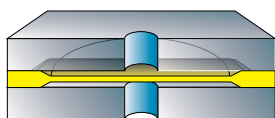
R_L = Loop Resistance in Ω [Ohm]

R_S = Sense Resistance in Ω [Ohm]

R_W = Wire Resistance in Ω [Ohm]

Featuring a highly reliable variable capacitance sensor using the patented Ashcroft® Si-Glass™ sensor. This ultra-thin single crystal diaphragm provides inherent sensor repeatability and stability.

Sensor Cross Section

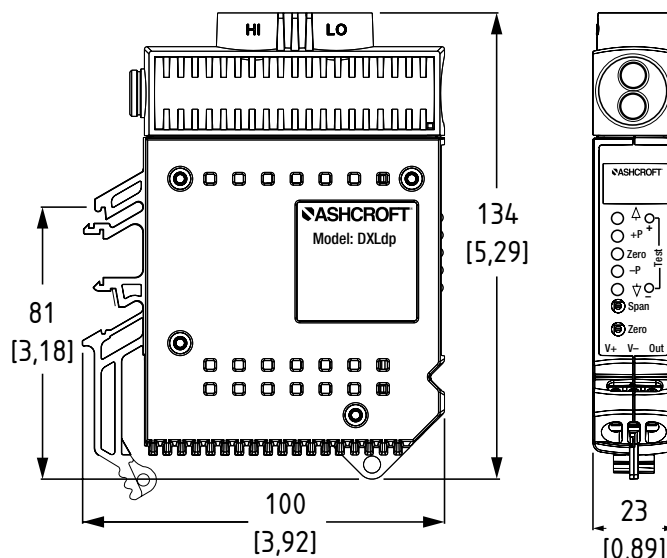


The silicon diaphragm sensor has no glues or other organics to contribute to drift or mechanical degradation over time.

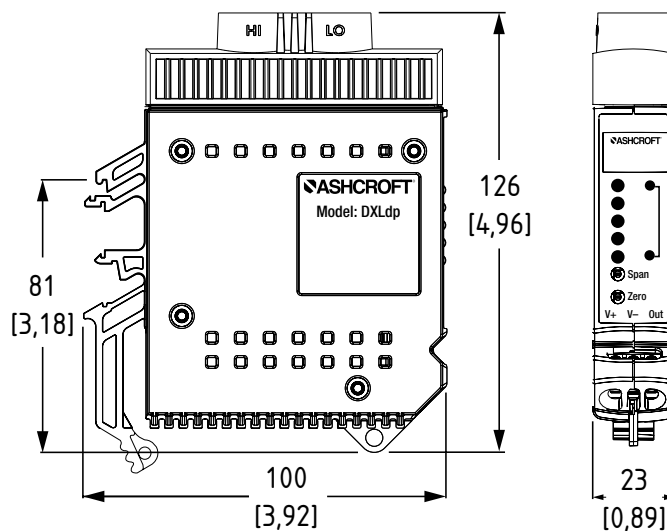
DIMENSIONS IN MM [INCH]

For reference only, consult Ashcroft for specific dimensional drawings

SpoolCal™ AND LED (optional)



BASIC UNIT



DXLdp Ultra-Low Differential Pressure Transmitter
PRESSURE RANGES

Pascal Pa				Inch Water In.H2O			
unidirectional		bidirectional		unidirectional		bidirectional	
Code	Range	Code	Range	Code	Range	Code	Range
25PA	25 Pa	25PAL	± 25 Pa	P1IW	0,10 "W.C.	P05IWL	± 0,05 "W.C.
30PA	30 Pa	30PAL	± 50 Pa	P25IW	0,25 "W.C.	P1IWL	± 0,10 "W.C.
50PA	50 Pa	50PAL	± 50 Pa	P5IW	0,50 "W.C.	P25IWL	± 0,25 "W.C.
60PA	60 Pa	60PAL	± 60 Pa	P75IW	0,75 "W.C.	P5IWL	± 0,50 "W.C.
100PA	100 Pa	100PAL	± 100 Pa	1IW	1,00 "W.C.	P75IWL	± 0,75 "W.C.
200PA	200 Pa	160PAL	± 160 Pa	1P5IW	1,50 "W.C.	1IWL	± 1,00 "W.C.
250PA	250 Pa	200PAL	± 200 Pa	2IW	2,00 "W.C.	2IWL	± 2,00 "W.C.
400PA	400 Pa	250PAL	± 250 Pa	2P5IW	2,50 "W.C.	2P5IWL	± 2,50 "W.C.
500PA	500 Pa	300PAL	± 300 Pa	3IW	3,00 "W.C.	3IWL	± 3,00 "W.C.
600PA	600 Pa	400PAL	± 400 Pa	5IW	5,00 "W.C.	5IWL	± 5,00 "W.C.
700PA	700 Pa	500PAL	± 500 Pa	10IW	10,00 "W.C.	10IWL	± 10,00 "W.C.
1000PA	1000 Pa	600PAL	± 600 Pa	15IW	15,00 "W.C.	25IWL	± 25,00 "W.C.
1500PA	1500 Pa	1P3KPAL	± 1,3 kPa	20IW	20,00 "W.C.	50IWL	± 50,00 "W.C.
1KPA	1 kPa	2P5KPAL	± 2,5 kPa	25IW	25,00 "W.C.	100IWL	*±100,00 "W.C.*
2P5KPA	2,5 kPa	5KPAL	± 5 kPa	50IW	50,00 "W.C.		
5KPA	5 kPa			100IW	*100,00 "W.C.*		
10KPA	10 kPa						

Millibar mbar			
unidirectional		bidirectional	
Code	Range	Code	Range
P13MB	0,125 mbar	P13MBL	± 0,125 mbar
P25MB	0,25 mbar	P25MBL	± 0,25 mbar
P5MB	0,50 mbar	P5MBL	± 0,50 mbar
P6MB	0,60 mbar	P6MBL	± 0,60 mbar
1MB	1,00 mbar	1MBL	± 1,00 mbar
1P3MB	1,30 mbar	1P3MBL	± 1,30 mbar
1P6MB	1,60 mbar	1P6MBL	± 1,60 mbar
2MB	2,00 mbar	2MBL	± 2,00 mbar
2P5MB	2,50 mbar	2P5MBL	± 2,50 mbar
3MB	3,00 mbar	3MBL	± 3,00 mbar
4MB	4,00 mbar	4MBL	± 4,00 mbar
5MB	5,00 mbar	5MBL	± 5,00 mbar
6MB	6,00 mbar	6MBL	± 6,00 mbar
7MB	7,00 mbar	7MBL	± 7,00 mbar
10MB	10 mbar	10MBL	± 10 mbar
13MB	13 mbar	13MBL	± 13 mbar
25MB	25 mbar	25MBL	± 25 mbar
50MB	50 mbar	50MBL	± 50 mbar
63MB	63 mbar	63MBL	± 63 mbar
100MB	100 mbar	100MBL	± 100 mbar
125MB	125 mbar	125MBL	± 125 mbar

* Pressure Ranges cannot be ordered with XPV

Note: 1KP EQUIVALENT TO 1000PA

(EX. 1000PA = 1KP, 2500PA = 2P5KP, 5000PA = 5KP,
10000PA = 10KP)



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ORDERING CODE		EXAMPLE:	DX3	F01	42	ST	50PA	XPV
Model								
DX3	DXLdp Series, Accuracy: $\pm 0,25$ % of span Thermal coefficient $\pm 0,36$ % of span / 10 K		DX3					
DX5	DXLdp Series, Accuracy: $\pm 0,50$ % of span Thermal coefficient $\pm 0,36$ % of span / 10 K							
DX7	DXLdp Series, Accuracy: $\pm 1,00$ % of span Thermal coefficient $\pm 0,36$ % of span / 10 K							
Pressure Connection								
F01	1/8 NPT Female			F01				
MB2	1/4 Barbed Male							
Output Signal								
05	0 - 5 Vdc							
10	0 - 10 Vdc							
15	1 - 5 Vdc							
16	1 - 6 Vdc							
42	4 - 20 mA				42			
Electrical Termination								
ST	Screw Terminal					ST		
Pressure Range (coding example only, see table "Pressure Ranges" at page 3)								
50PA	50 Pascal (unidirectional)						50PA	
Options (If choosing an option(s) must include a "X")								
Calibration								
21	2:1 Turndown							X_
CL	Custom pressure range calibration							
X1	Fast response time (10 ms)							
X2	Slow response time (1 s)							
Case								
DL	LED range status indicators (includes front access test jacks XNL)							
NL	Front access test jacks (no LED indication)							
PV	SpoolCal™ Process valve actuator							PV
Marking/Tagging								
NH	Stainless steel tag wired to case							
NN	Paper tag							
Testing/Certificates								
CD2	Certificate according to EN 10204 2.2							
RH	NIST traceable 9-point calibration report (DX7 only, Standard for DX3 and DX5)							

