



DMD 341

Differential Pressure Transmitter For Gases And Compressed Air In Compact Version

Silicon Sensor

accuracy according to IEC 60770:
0.35 % / 1% / 2%

Differential-
Pressure Transmitter

DMD 341

Differential pressure

from 0 ... 6 mbar
up to 0 ... 1000 mbar

Output signals

2-wire: 4 ... 20 mA
(12 ± 8) mA
3-wire: 0 ... 20 mA / 0 ... 10 V
(10 ± 10) mA / (5 ± 5) V

Special characteristics

- ▶ aluminium housing
- ▶ suited for non-aggressive gases and compressed air

Optional versions

- ▶ display and switching module with up to 2 contacts
- ▶ customer specific versions



The DMD 341 is a differential pressure transmitter for non-aggressive gases and compressed air. Because of its compact and robust aluminium housing it is particularly suited for machine and plant engineering.

Basic element of the DMD 341 is a piezoresistive silicon pressure sensor, which features high accuracy and excellent long term stability.

In combination with our display and switching unit ASM 430 the user has a 4-digit LED-display for representing the differential pressure as well as up to 2 freely configurable contacts.

Preferred areas of use are



Plant and Machine Engineering



Heating and Air Conditioning

Preferred used for:



Compressed Air,
Non-Aggressive Gases

Input pressure range											
Nominal pressure P _N [mbar] (over, differential pressure)	0...6	0...10	0...20	0...40	0...60	0...100	0...160	0...250	0...400	0...600	0...1000
Nominal pressure P _N symmetric (differential pressure) [mbar]	± 6	± 10	± 20	± 40	± 60	± 100	± 160	± 250	± 400	± 600	± 1000
Overpressure [mbar]	100	100	200	350	350	1000	1000	1000	1000	3000	3000
Output signal / Supply											
Standard	standard pressure range: 2-wire: 4 ... 20 mA / V _S = 8 ... 32 V _{DC} symmetric pressure range: 2-wire: (12 ± 8) mA / V _S = 8 ... 32 V _{DC}										
Options 3-wire	standard pressure range: 3-wire: 0 ... 20 mA ¹ / V _S = 14 ... 30 V _{DC} 0 ... 10 V / V _S = 14 ... 30 V _{DC} symmetric pressure range: 3-wire: (10 ± 10) mA ¹ / V _S = 14 ... 30 V _{DC} (5 ± 5) V / V _S = 14 ... 30 V _{DC}										
¹ not possible in combination with display and switching module ASM 430											
Performance											
Accuracy ²	P _N > 160 mbar: ≤ ± 0.35 % FSO 40 mbar ≤ P _N ≤ 160 mbar: ≤ ± 1 % FSO P _N < 40 mbar: ≤ ± 2 % FSO										
Permissible load	current 2-wire: R _{max} = [(V _S - V _S min) / 0.02] Ω current 3-wire: R _{max} = 500 Ω voltage 3-wire: R _{min} = 10 kΩ										
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / kΩ										
Long term stability	≤ ± 0.2 % FSO / year										
Response time	< 5 msec										
² accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)											
Thermal effects (Offset and Span) / Permissible temperatures											
Nominal pressure P _N [mbar]	≤ 10		≤ 20		≤ 250		> 250				
Tolerance band [% FSO]	≤ ± 2		≤ ± 1.5		≤ ± 1		≤ ± 0.5				
TC, average [% FSO / 10 K]	± 0.3		± 0.25		± 0.15		± 0.08				
in compensated range	0 ... 60 °C										
Permissible temperatures	medium: -25 ... 125 °C		electronics / environment: -25 ... 85 °C				storage: -40 ... 100 °C				
Electrical protection											
Short-circuit protection	permanent										
Reverse polarity protection	no damage, but also no function										
Electromagnetic compatibility	emission and immunity according to EN 61326										
Mechanical stability											
Vibration	10 g RMS (20 ... 2000 Hz)										
Shock	100 g / 11 msec										
Display and switching unit (optional)											
Technical data of display and switching unit see data sheet ASM 430											
Materials											
Pressure port	G1/8" internal: aluminium, silver anodized flexible tube connection Ø6.6 x 11: brass, nickel plated										
Housing	aluminium, silver anodized										
Seal (media wetted)	PUR, bonded										
Sensor	silicon, glass, RTV, ceramics Al ₂ O ₃ , nickel										
Media wetted parts	pressure port, housing, seal, sensor										
Miscellaneous											
Connecting cables (by factory)	cable capacitance: signal line/shield also signal line/signal line: 160 pF/m cable inductance: signal line/shield also signal line/signal line: 1 µH/m										
Current consumption	signal output current: max. 25 mA signal output voltage: max. 7 mA										
Weight	approx. 250 g										
Operational life	> 100 x 10 ⁶ pressure cycles										
CE-conformity	EMC Directive: 2004/108/EC										
Pin configuration											
Electrical connection	ISO 4400			M12x1 (4-pin)			cable colours (DIN 47100)				
Supply +	1			1			white				
Supply -	2			2			brown				
Signal + (only 3-wire)	3			3			green				
Shield	ground pin			4			yellow / green				

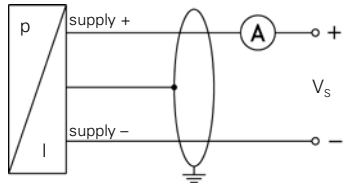
DMD 341

Differential Pressure Transmitter

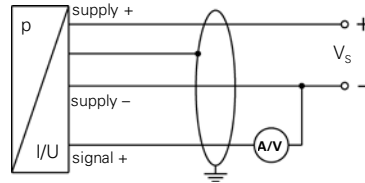
Technical Data

Wiring diagrams

2-wire-system (current)

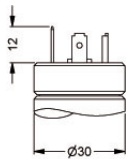


3-wire-system (current / voltage)



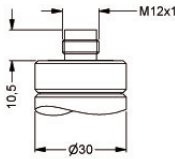
Electrical connections (dimensions in mm)

standard

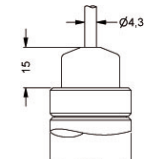


ISO 4400 (IP 65)

option



M12x1 4-pin (IP 67)

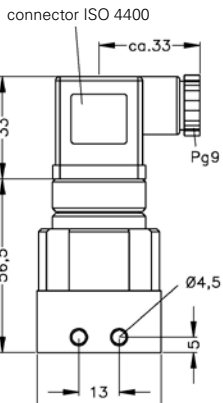
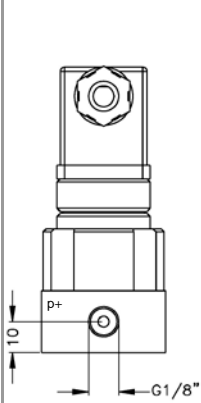
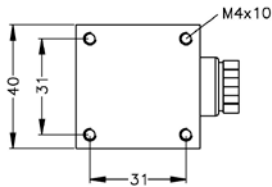


Cable outlet with PVC-cable (IP 67)³

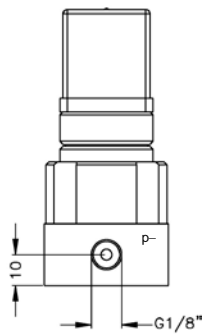
³ standard: 2 m PVC cable (without ventilation tube), optionally cable with ventilation tube

Mechanical connection (dimensions in mm)

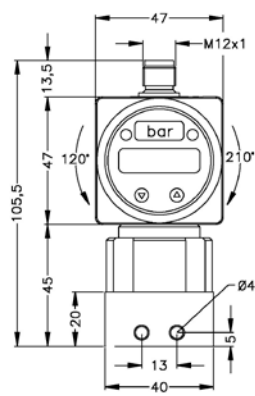
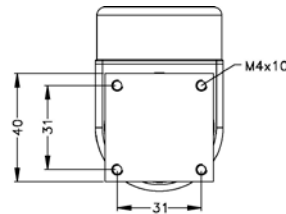
Standard



G1/8" internal



Version with display and switching unit



G1/8" internal
with display and switching module ASM 430

This data sheet contains product specification, properties are not guaranteed. Subject to change without notice.

