



DMD 341

Differential Pressure Transmitter For Gases And Compressed Air In Compact Version

Silicon Sensor

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

DMD 341 Differential Pressure Transmitter

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 = 12 ... 36 V _{DC} symmetric pressure range: 2-wire: (12 ± 8) mA / V _s = 12 ... 36 V _{DC}										
Options 3-wire	standard pressure range: 3-wire: 0 ... 20 mA / V _s = 14 ... 36 V _{DC} 0 ... 10 V / V _s = 14 ... 36 V _{DC} symmetric pressure range: 3-wire: (10 ± 10) mA / V _s = 14 ... 36 V _{DC} (5 ± 5) V / V _s = 14 ... 36 V _{DC}										
Performance											
Accuracy ¹	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										
¹ 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 anodised										
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				

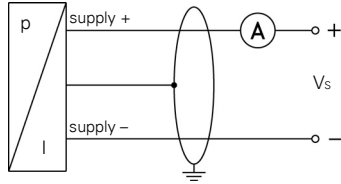
DMD 341

Differential Pressure Transmitter

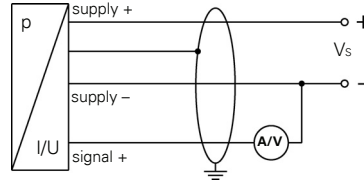
Technical Data

Wiring diagrams

2-wire-system (current)

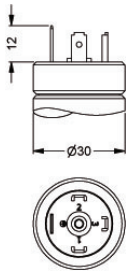


3-wire-system (current / voltage)



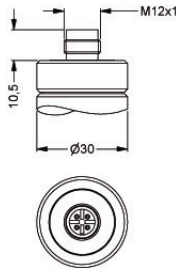
Electrical connections (dimensions in mm)

standard

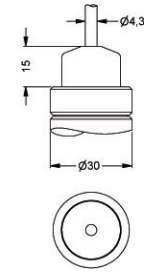


ISO 4400 (IP 65)

option



M12x1 4-pin (IP 67)

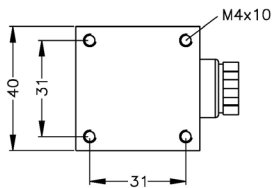


Cable outlet with PVC-cable (IP 67)²

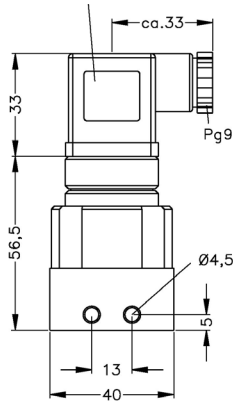
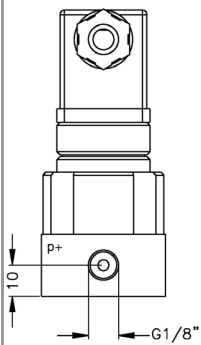
² standard: 2 m PVC cable (without ventilation tube), optionally cable with ventilation tube

Mechanical connection (dimensions in mm)

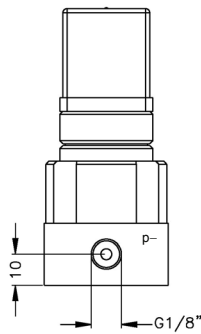
Standard



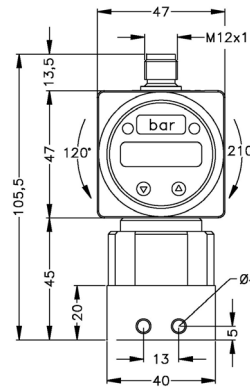
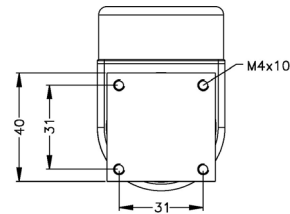
connector ISO 4400



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.

Ordering code DMD 341

DMD 341

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Pressure										
	differential pressure	3	3	0						
	gauge pressure	3	3	1						
Input [mbar]										
	6	0	0	6	0					
	10	0	1	0	0					
	20	0	2	0	0					
	40	0	4	0	0					
	60	0	6	0	0					
	100	1	0	0	0					
	160	1	6	0	0					
	250	2	5	0	0					
	400	4	0	0	0					
	600	6	0	0	0					
	1000	1	0	0	1					
	-6 ... 6	S	0	0	6					consult
	-10 ... 10	S	0	1	0					consult
	-20 ... 20	S	0	2	0					consult
	-40 ... 40	S	0	4	0					consult
	-60 ... 60	S	0	6	0					consult
	-100 ... 100	S	1	0	0					consult
	-160 ... 160	S	1	6	0					consult
	-250 ... 250	S	2	5	0					consult
	-400 ... 400	S	4	0	0					consult
	-600 ... 600	S	6	0	0					consult
	-1000 ... 1000	S	1	0	2					consult
	customer	9	9	9	9					consult
Output										
	4 ... 20 mA / 2-wire				1					
	0 ... 20 mA / 3-wire				2					
	0 ... 10 V / 3-wire				3					
	(12 ± 8) mA / 2-wire				S1					consult
	(10 ± 10) mA / 3-wire				S2					consult
	(5 ± 5) V / 3-wire				S3					consult
	customer				9					consult
Accuracy										
	standard for P _N > 160 mbar	0,35 %			3					
	Standard for 40 mbar ≤ P _N ≤ 160 m	1,0 %			8					
	standard for P _N < 40 mbar	2,0 %			G					
	customer				9					consult
Electrical connection										
	Male and female plug ISO 4400				1	0	0			
	Male plug M12x1 (4-pin)				M	0	0			
	Cable outlet with PVC cable				T	A	0			
	customer				9	9	9			consult
Mechanical connection										
	G1/8" internal thread				Q	0	0			
	Ø6.6 x 11 (for flex. tubes Ø6)				Y	0	0			
	customer				9	9	9			consult
Seals										
	PUR, bonded						6			
Special version										
	standard						0	0	0	
	customer						9	9	9	consult

¹ standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C)

