



# 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

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

### Output signals

2-wire: 4 ... 20 mA

3-wire: 0 ... 20 mA / 0 ... 10 V

### Special characteristics

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

### Optional versions

- ▶ 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 piezo-resistive silicon sensor, which features high accuracy and excellent long term stability.

### Preferred areas of use are



Plant and machine engineering



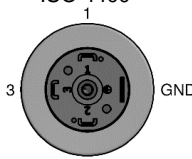
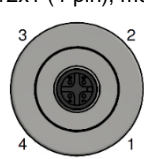

Heating and air conditioning

### Preferred used for



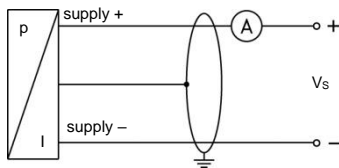
Compressed air,  
non-aggressive gases



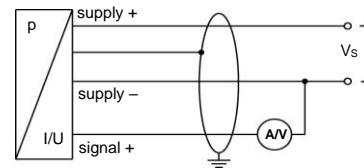
Input pressure range												
Nominal pressure $p_N$ (over, differential pressure) [mbar]	0...6	0...10	0...20	0...40	0...60	0...100	0...160	0...250	0...400	0...600	0...1000	
Nominal pressure $p_N$ symmetric (differential pressure) [mbar]	± 6	± 10	± 20	± 40	± 60	± 100	± 160	± 250	± 400	± 600	± 1000	
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 / $V_S = 8 ... 32 V_{DC}$											
Options 3-wire	standard pressure range: 3-wire: 0 ... 20 mA / $V_S = 14 ... 30 V_{DC}$ 0 ... 10 V / $V_S = 14 ... 30 V_{DC}$											
Performance												
Accuracy <sup>1</sup>	$p_N > 160$ mbar: ≤ ± 0.35 % FSO $40 \text{ mbar} \leq p_N \leq 160$ mbar: ≤ ± 1 % FSO $p_N < 40$ mbar: ≤ ± 2 % FSO											
Permissible load	current 2-wire: $R_{max} = [(V_S - V_{S \text{ min}}) / 0.02 \text{ A}] \Omega$						current 3-wire: $R_{max} = 240 \Omega$					
Influence effects	voltage 3-wire: $R_{min} = 10 \text{ k}\Omega$						supply: 0.05 % FSO / 10 V					
Long term stability	load: 0.05 % FSO / kΩ											
Response time	≤ ± 0.2 % FSO / year at reference conditions											
	< 5 msec											
<sup>1</sup> accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)												
Thermal effects (offset and span)												
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											
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 <sub>2</sub> O <sub>3</sub> , 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 million load cycles											
CE-conformity	EMC Directive: 2014/30/EU											
Pin configuration												
Electrical connection	ISO 4400 			M12x1 (4-pin), metal 			cable colour (IEC 60757)					
Supply +	1			1			WH (white)					
Supply -	2			2			BN (brown)					
Signal + (only 3-wire)	3			3			GN (green)					
Shield	ground pin 			4			GNYE (green-yellow)					

### Wiring diagrams

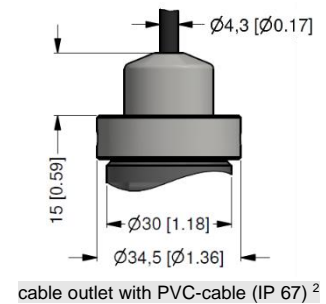
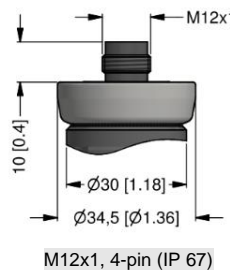
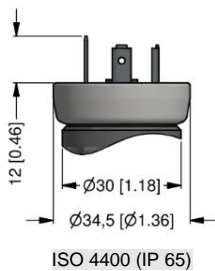
#### 2-wire-system (current)



#### 3-wire-system (current / voltage)

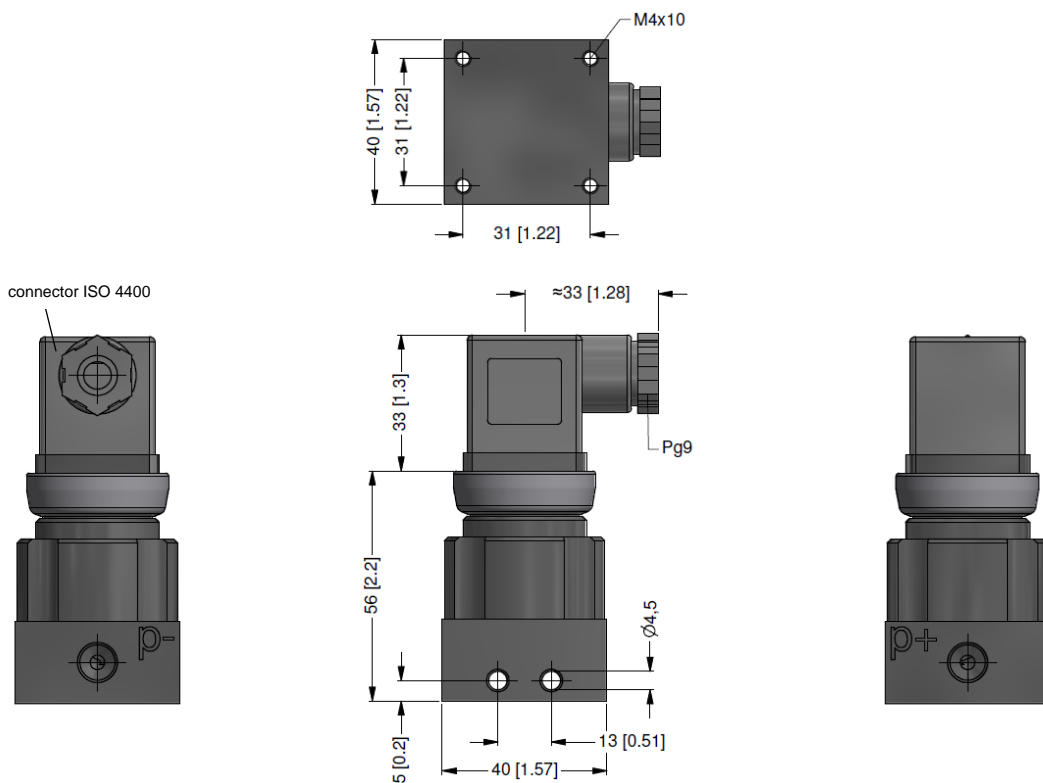


### Electrical connections (dimensions mm / in)



<sup>2</sup> standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C); optionally cable with ventilation tube

### Dimensions (mm / in)



### Mechanical connection (dimensions mm / in)

