



# DMD 341

## Differential Pressure Transmitter for Gases and Compressed Air in Compact Version

Silicon Sensor

accuracy according to EN IEC 62828-2:  
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 piezoresistive stainless steel silicon sensor, which features high accuracy and excellent long term stability.

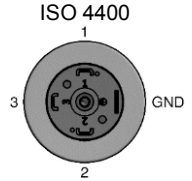
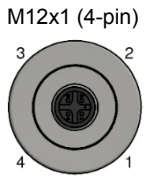
### Preferred areas of use are

-  Plant and Machine Engineering
-  Heating and Air Conditioning

### Preferred used for

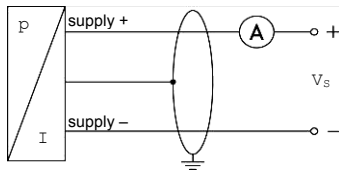
-  Compressed Air,  
Non-Aggressive Gases



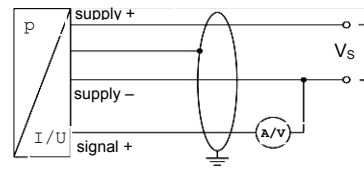
Input pressure range												
Nominal pressure $P_N$ (over, differential pressure) [mbar]	0...6	0...10	0...20	0...40	0...60	0...100	0...160	0...250	0...400	0...600	0...1000	
Nominal pressure $P_N$ symmetric (differential pressure) [mbar]	± 6	± 10	± 20	± 40	± 60	± 100	± 160	± 250	± 400	± 600	± 1000	
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 / $V_S = 8 \dots 32 V_{DC}$											
Options 3-wire	standard pressure range: 3-wire: 0 ... 20 mA / $V_S = 14 \dots 30 V_{DC}$ 0 ... 10 V / $V_S = 14 \dots 30 V_{DC}$											
Performance												
Accuracy <sup>1</sup>	$P_N > 160$ mbar: $\leq \pm 0.35$ % span $40 \text{ mbar} \leq P_N \leq 160$ mbar: $\leq \pm 1$ % span $P_N < 40$ mbar: $\leq \pm 2$ % span											
Permissible load	current 2-wire: $R_{max} = [(V_S - V_S \text{ min}) / 0.02 \text{ A}] \Omega$ current 3-wire: $R_{max} = 500 \Omega$ voltage 3-wire: $R_{min} = 10 \text{ k}\Omega$											
Influence effects	supply: 0.05 % span / 10 V load: 0.05 % span / $\text{k}\Omega$											
Long term stability	$\leq \pm 0.2$ % span / year at reference conditions											
Response time	< 5 msec											
<sup>1</sup> accuracy according to EN IEC 62828-2 – limit point adjustment (non-linearity, hysteresis, repeatability)												
Thermal effects (Offset and Span) / Permissible temperatures												
Nominal pressure $P_N$ [mbar]	$\leq 10$			$\leq 20$			$\leq 250$			> 250		
Tolerance band [% span]	$\leq \pm 2$			$\leq \pm 1.5$			$\leq \pm 1$			$\leq \pm 0.5$		
TC, average [% span / 10 K]	$\pm 0.3$			$\pm 0.25$			$\pm 0.15$			$\pm 0.08$		
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 $\text{Ø}6.6 \times 11$ : brass, nickel plated											
Housing	aluminium, silver anodised											
Seal (media wetted)	PUR, bonded											
Sensor	silicon, glass, RTV, ceramics $\text{Al}_2\text{O}_3$ , 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 $\mu\text{H}/\text{m}$											
Current consumption	signal output current: max. 25 mA signal output voltage: max. 7 mA											
Weight	approx. 250 g											
Operational life	> 100 x 10 <sup>6</sup> pressure cycles											
CE-conformity	EMC Directive: 2014/30/EU											
Pin configuration												
Electrical connection							cable colours (IEC 60757)					
	Supply +	1	1	white								
Supply -	2	2	brown									
Signal + (only 3-wire)	3	3	green									
Shield	ground pin	4	yellow / green									

### Wiring diagrams

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

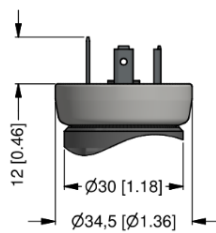


#### 3-wire-system (current / voltage)



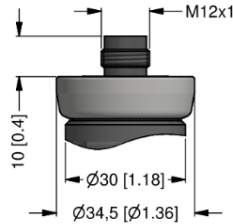
### Electrical connections (dimensions in mm)

#### standard

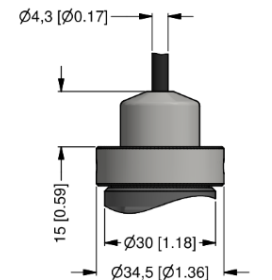


ISO 4400 (IP 65)

#### option



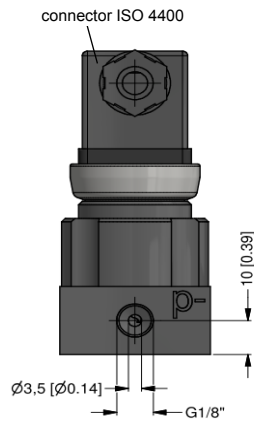
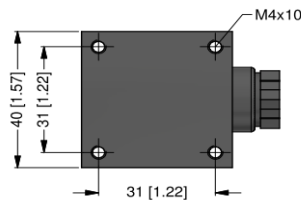
M12x1 4-pin (IP 67)



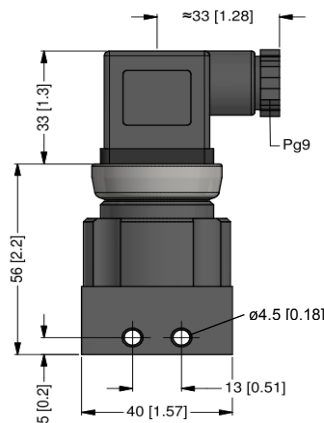
Cable outlet with PVC-cable (IP 67)<sup>2</sup>

<sup>2</sup> standard: 2 m PVC cable (without ventilation tube), optionally cable with ventilation tube

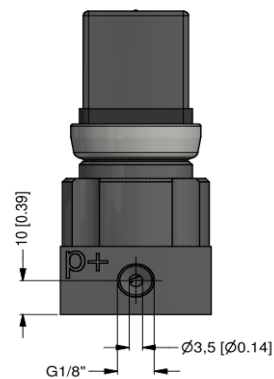
### Dimensions (dimensions in mm)



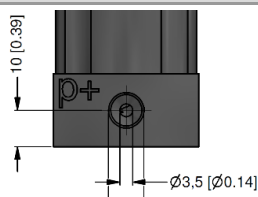
connector ISO 4400



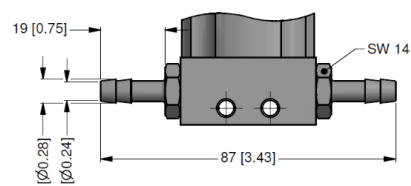
G1/8" internal



### Mechanical connection (dimensions in mm)



G1/8" internal thread



Ø6.6x11 (for flex. tubes Ø6)

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

## Ordering code DMD 341

9.12.2020

DMD 341

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Pressure																					
Differential	3	3	0																		
Gauge	3	3	1																		
Input [mbar]																					
0 ... 6 mbar				0	0	6	0														
0 ... 10 mbar				0	1	0	0														
0 ... 20 mbar				0	2	0	0														
0 ... 40 mbar				0	4	0	0														
0 ... 60 mbar				0	6	0	0														
0 ... 100 mbar				1	0	0	0														
0 ... 160 mbar				1	6	0	0														
0 ... 250 mbar				2	5	0	0														
0 ... 400 mbar				4	0	0	0														
0 ... 600 mbar				6	0	0	0														
0 ... 1000 mbar				1	0	0	1														
-6 ... 6 mbar				S	0	0	6														
-10 ... 10 mbar				S	0	1	0														
-20 ... 20 mbar				S	0	2	0														
-40 ... 40 mbar				S	0	4	0														
-60 ... 60 mbar				S	0	6	0														
-100 ... 100 mbar				S	1	0	0														
-160 ... 160 mbar				S	1	6	0														
-250 ... 250 mbar				S	2	5	0														
-400 ... 400 mbar				S	4	0	0														
-600 ... 600 mbar				S	6	0	0														
-1000 ... 1000 mbar				S	1	0	2														
Customer range				9	9	9	9														
Customer underpressure				X	X	X	X														
Output																					
4 ... 20 mA / 2-wire																			1		
0 ... 20 mA / 3-wire																			2		
0 ... 10 V / 3-wire																			3		
Customer																			9		
Accuracy																					
0,35 % (P <sub>N</sub> > 160 mbar)																			3		
1 % (P <sub>N</sub> = 40 ... 160 mbar)																			8		
2 % (P <sub>N</sub> < 40 mbar)																			G		
0,35 % including Calibration Certificate (P <sub>N</sub> > 160 mbar)																			S		
1 % including Calibration Certificate (P <sub>N</sub> = 40 ... 160 mbar)																			U		
2 % including Calibration Certificate (P <sub>N</sub> < 40 mbar)																			L		
Customer																			9		
Electrical connection																					
Connector DIN 43650 (ISO 4400) (IP 65)																			1	0	0
Connector M12 x 1, 4-pin (IP 67)																			M	0	0
Connector M12 x 1, 4-pin (IP 67) - metal																			M	1	0
Cable outlet with PVC cable (cable length needs to specified) (IP 67) <sup>1</sup>																			T	A	0
+ PVC cable / 1 m																					
Customer																			9	9	9



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The company BD SENSORS s.r.o. is certified by TÜV SÜD Czech according to the standard ISO 9001.

Mechanical connection									
G 1/8" internal thread	Q	0	0						
Ø 6,6 x 11 (for tubes Ø 6)	Y	0	0						
Customer	9	0	0						
Seals									
PUR							6		
Special version									
Standard								0	0
Customer								9	9

0,-...without additional charge

On request... in accordance with the producer

1 - cable without through capillary (permissible temperature -5 ... +70°C)

Surcharges for calibration are not subject to any discounts. Subject to change. □

This document contains the specification for ordering the product;

detailed technical parameters of the product and its possible variants are given in the data sheet.

BD SENSORS reserves the right to change sensor specifications without further notice.



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