



# 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 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: ≤ ± 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: $R_{max} = 500 \Omega$ voltage 3-wire: $R_{min} = 10 \text{ k}\Omega$											
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / kΩ											
Long term stability	≤ ± 0.2 % FSO / year											
Response time	< 5 msec											
<sup>1</sup> 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											
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: 1µH/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: 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					

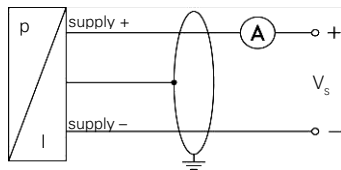
# DMD 341

Differential Pressure Transmitter

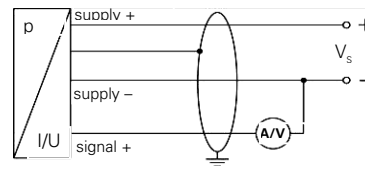
Technical Data

## Wiring diagrams

### 2-wire-system (current)

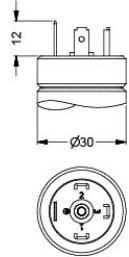


### 3-wire-system (current / voltage)



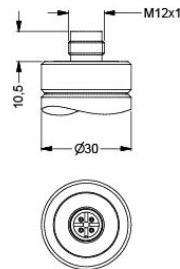
## Electrical connections (dimensions in mm)

### standard

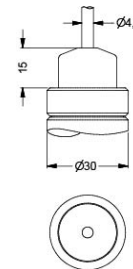


ISO 4400 (IP 65)

### option



M12x1 4-pin (IP 67)

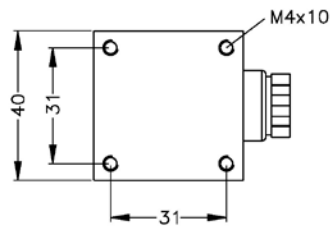


Cable outlet with PVC-cable (IP 67)<sup>2</sup>

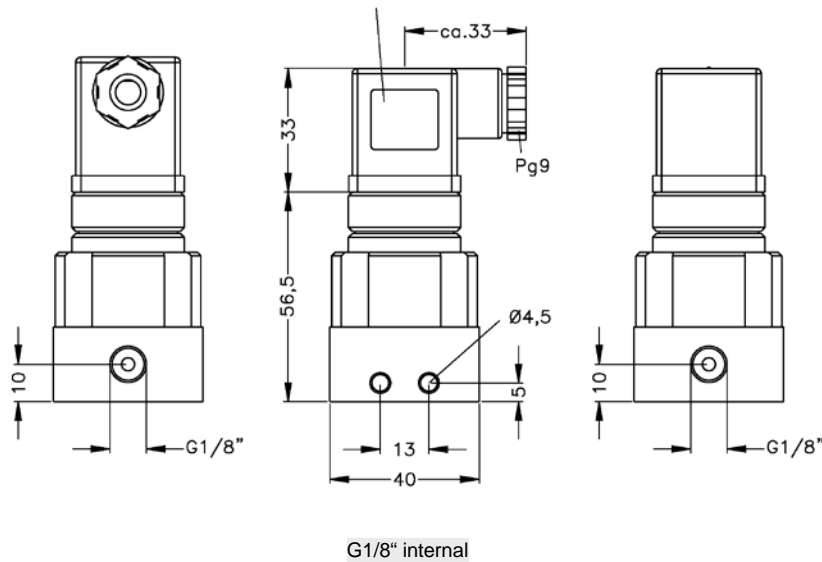
<sup>2</sup> standard: 2 m PVC cable (without ventilation tube), optionally cable with ventilation tube

## Mechanical connection (dimensions in mm)

### Standard



connector ISO 4400



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														
	0 ... 20 mA / 3-wire														
	0 ... 10 V / 3-wire														
	customer														consult
Accuracy															
	standard for $P_N > 160$ mbar	0,35	%												
	Standard for $40 \text{ mbar} \leq P_N \leq 160$ mbar	1,0	%												
	standard for $P_N < 40$ mbar	2,0	%												
	customer														consult
Electrical connection															
	Male and female plug ISO 4400														
	Male plug M12x1 (4-pin)														
	Cable outlet with PVC cable <sup>1</sup>														
	customer														consult
Mechanical connection															
	G1/8" internal thread														
	Ø 6.6 x 11 (for flex. tubes Ø 6)														
	customer														consult
Seals															
	PUR, bonded														6
Special version															
	standard														0 0 0
	customer														9 9 9

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

