



# 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

**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



**DMD 341**

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 PA 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

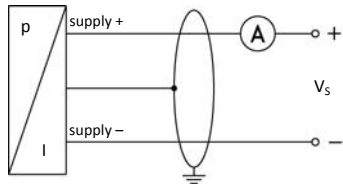
Input pressure range												
Nominal pressure P <sub>N</sub> (over, differential pressure) [mbar]	0...6	0...10	0...20	0...40	0...60	0...100	0...160	0...250	0...400	0...600	0...1000	
Nominal pressure P <sub>N</sub> symmetric (differential pressure) [mbar]	± 6	± 10	± 20	± 40	± 60	± 100	± 160	± 250	± 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 <sub>S</sub> = 12 ... 36 V <sub>DC</sub>								
	symmetric pressure range:		2-wire:	(12 ± 8) mA / V <sub>S</sub> = 12 ... 36 V <sub>DC</sub>								
Options 3-wire	standard pressure range:		3-wire:	0 ... 20 mA / V <sub>S</sub> = 14 ... 36 V <sub>DC</sub>								
				0 ... 10 V / V <sub>S</sub> = 14 ... 36 V <sub>DC</sub>								
	symmetric pressure range:		3-wire:	(10 ± 10) mA / V <sub>S</sub> = 14 ... 36 V <sub>DC</sub>								
				(5 ± 5) V / V <sub>S</sub> = 14 ... 36 V <sub>DC</sub>								
Performance												
Accuracy <sup>1</sup>	P <sub>N</sub> > 160 mbar:		≤ ± 0.35 % FSO									
	40 mbar ≤ P <sub>N</sub> ≤ 160 mbar:		≤ ± 1 % FSO									
	P <sub>N</sub> < 40 mbar:		≤ ± 2 % FSO									
Permissible load	current 2-wire:		R <sub>max</sub> = [(V <sub>S</sub> - V <sub>S</sub> min) / 0.02] Ω									
	current 3-wire:		R <sub>max</sub> = 500 Ω									
	voltage 3-wire:		R <sub>min</sub> = 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											
<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 <sub>N</sub> [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 PA 430 (optional)												
Technical data of display and switching unit see data sheet PA 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 <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 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					

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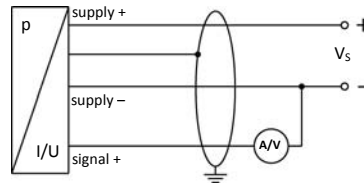
Differential Pressure Transmitter

Technical Data

## Wiring diagrams

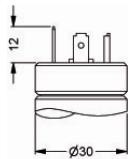


## 3-wire-system (current / voltage)



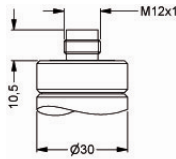
## Electrical connections (dimensions in mm)

### standard

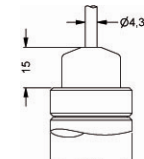


ISO 4400 (IP 65)

### option



M12x1 4-pin (IP 67)

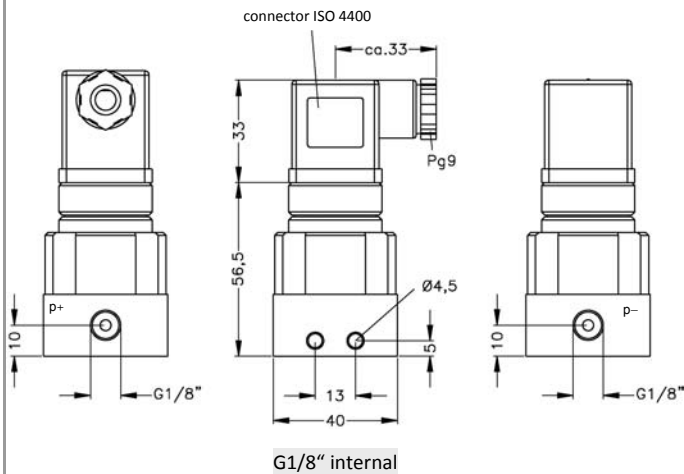
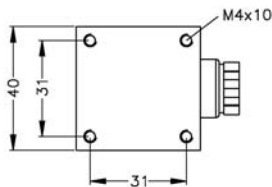


Cable outlet with PVC-cable (IP 67)<sup>2</sup>

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

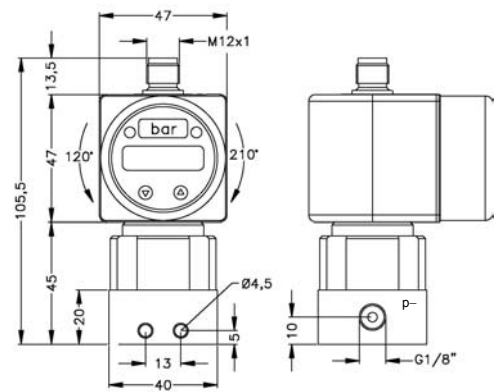
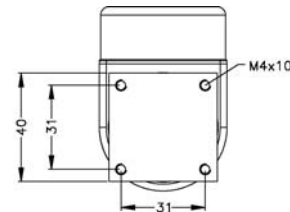
## Mechanical connection (dimensions in mm)

### Standard



G1/8" internal

### Version with display and switching unit PA 430



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

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



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Messgröße																						
	Differenzdruck	3	3	0																		
	Relativdruck	3	3	1																		
Eingang		[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															auf Anfrage		
	-10 ... 10	S	0	1	0																auf Anfrage	
	-20 ... 20	S	0	2	0																auf Anfrage	
	-40 ... 40	S	0	4	0																auf Anfrage	
	-60 ... 60	S	0	6	0																auf Anfrage	
	-100 ... 100	S	1	0	0																auf Anfrage	
	-160 ... 160	S	1	6	0																auf Anfrage	
	-250 ... 250	S	2	5	0																auf Anfrage	
	-400 ... 400	S	4	0	0																auf Anfrage	
	-600 ... 600	S	6	0	0																auf Anfrage	
	-1000 ... 1000	S	1	0	2																auf Anfrage	
	Sondermessbereiche	9	9	9	9																auf Anfrage	
Ausgang																						
	4 ... 20 mA / 2-Leiter																					1
	0 ... 20 mA / 3-Leiter																					2
	0 ... 10 V / 3-Leiter																					3
	(12 ± 8) mA / 2-Leiter																					S1
	(10 ± 10) mA / 3-Leiter																					S2
	(5 ± 5) V / 3-Leiter																					S3
	andere																					9
Genauigkeit																						
	Standard für P <sub>N</sub> > 160 mbar	0,35 %																				3
	Standard für 40 mbar ≤ P <sub>N</sub> ≤ 160 mbar	1,0 %																				8
	Standard für P <sub>N</sub> < 40 mbar	2,0 %																				G
	andere																					9
																						auf Anfrage
Elektrischer Anschluss																						
	Stecker und Kabeldose ISO 4400																					1 0 0
	Stecker M12x1 (4-polig)																					M 0 0
	Kabelausgang mit PVC-Kabel <sup>1</sup>																					T A 0
	andere																					9 9 9
																						auf Anfrage
Mechanischer Anschluss																						
	G1/8" Innengewinde																					Q 0 0
	Ø6,6 x 11 (für flex. Schläuche Ø6)																					Y 0 0
	andere																					9 9 9
																						auf Anfrage
Dichtung																						
	PUR, geklebt																					6
Sonderausführungen																						
	Standard																					0 0 0
	andere																					9 9 9
																						auf Anfrage

<sup>1</sup> Standard: 2 m PVC-Kabel ohne Belüftungsschlauch (Temperatureinsatzbereich: -5 ... 70 °C)

Die Angaben dieser Preisliste enthalten die Spezifikation der Produkte, nicht die Zusicherung von Eigenschaften. Ausführliche Informationen zu den Bestelloptionen können dem Datenblatt entnommen werden. Technische Änderungen vorbehalten.