





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 directly wetted by the measured media. It features high accuracy and excellent long term stability.

The DMD 341 offers high flexibility with regard to mounting as well as mechanical and electrical connection. Additionally, different output signals are available.

A very interesting version especially for monitoring applications is created by combination of DMD 341 with our display and switching unit ASM 430. The 4-digit LED display indicates value of differential pressure and supports programming with foil keys. Up to 2 freely configurable contacts are available.

Display and housing of the display and switching unit are rotatable so that clear readability is guaranteed even on unusual installation positions.

DMD 341

Pressure Transmitter for Low Differential Pressure

- piezoresistive silicon sensor
- for non-aggressive gases and compressed air
- compact and robust aluminium housing
- option: display- and switching unit
- differential pressure from
 0 ... 6 mbar up to 0 ... 1 bar
 - gauge and differential pressure measurement
 - for non-aggressive gases and compressed air
 - current and voltage output signals in 2- and 3-wire systems
 - excellent long term stability
 - compact design
 - mechanically robust
 - option: display and switching unit with up to 2 switching outputs
 - customer specific versions on request

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<u>Characteristics</u>



Input pressure range	Э										
Nominal pressure P_N [mbar] (gauge and differential pressure)	6	10	20	40	60	100	160	250	400	600	1000
Permissible overpressure[mbar]	100	100	200	500	500	1000	1000	1000	1000	3000	3000

Output signal / Supply								
Standard	2-wire:	4 20 mA	$/V_{s} = 12 36 V_{DC}$					
Optional	3-wire:	0 10 V	$/V_{s} = 14 36 V_{DC}$					

Performance				
Accuracy ¹	$P_{N} > 160 \text{ mbar:}$ $P_{N} = 40 \dots 160 \text{ mbar:}$ $P_{N} < 40 \text{ mbar:}$	$\leq \pm 0.35 \%$ FSO $\leq \pm 1 \%$ FSO $\leq \pm 2 \%$ FSO	$\begin{array}{l} ({\sf BFSL:} \ \leq \pm \ 0.17 \ \% \ {\sf FSO}) \\ ({\sf BFSL:} \ \leq \pm \ 0.5 \ \% \ {\sf FSO}) \\ ({\sf BFSL:} \ \leq \pm \ 1 \ \% \ {\sf FSO}) \end{array}$	
Permissible load	current 2-wire: voltage 3-wire:	$\begin{split} \textbf{R}_{\text{max}} &= [(\textbf{V}_{\text{s}} - \textbf{V}_{\text{smin}}) \ / \ \textbf{0}, \\ \textbf{R}_{\text{min}} &= 10 \ \textbf{k} \Omega \end{split}$	02] Ω	
Influence effects	supply: load:	0.05 % FSO / 10 V 0.05 % FSO / kΩ		
Long term stability	\leq \pm 0.2 % FSO / year			

Thermal errors (Offset and Span)									
Nominal pressure P _N	≤ 10 mbar	≤ 20 mbar	≤ 250 mbar	> 250 mbar					
Tolerance band [% FSO]	$\leq \pm 2$	≤±1.5	≤±1	$\leq \pm 0.5$					
TC, average [% FSO / 10 K]	± 0.3	± 0.25	± 0.15	± 0.08					
in compensated range 0 60 °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 ms						

Permissible temperatures							
Media	-25 125 °C						
Electronics / environment	-25 85 °C						
Storage	-40 125 °C						

Display and switching unit (optional)

Technical data of display and switching unit see data sheet ASM 430

¹ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)

Mechanical connection











G1/8" internal

G

- 13









G1/8" internal with display and switching unit ASM 430

5 8

Standard



Optional



-G1/8



M12x1 4-pin (IP 67)





Cable gland (IP 67) ²

² different cable types and lengths available; standard: 2 m PVC cable (without ventilation tube), optionally cable with ventilation tube

Materials								
Pressure port	G1/8" internal: no pressure port flexible tube connection Ø6.6 x 11: brass, nickel plated others: material of adapter							
Housing	aluminium, silver anodised							
Seals (media wetted)	PUR, bonded							
Sensor	silicon, glass, RTV, ceramics Al_2O_3 , nickel							
Media wetted parts	pressure port, seals, diaphragm							

Miscellaneous		
Current consumption	signal output current: signal output voltage:	max. 25 mA max. 6 mA
Weight	approx. 250 g	
Operational life	> 100 x 10 ⁶ cycles	

Pin configuration									
Electrical connection		DIN 43650	M12x1 (4-pin)	cable colours (DIN 47100)					
2-wire-system	Supply + Supply –	1 2	1 2	white brown					
	Ground	ground pin	4	yellow / black					
3-wire-system	Supply + Supply – Signal +	1 2 3	1 2 3	white brown green					
	Ground	ground pin	4	yellow / black					

Wiring diagrams

2-wire-system (current)



3-wire-system (voltage)



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Ordering code DMD 341																		
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Pressure																		
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gau	ge pressure	3 3 1																
Input	[mbar]																	
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	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	50	0													
	400		4	0 0	0													
	600		6	0 0	0													
	1000		1	0 0	1													
	customer		Х	XX	X													
Output																		
4 20 r	nA / 2-wire					1												
0 10	0 V / 3-wire					3												
	customer					Х												
Accuracy																		
standard for $P_N > 160$ mbar	0,35 %						3											
standard for $P_N = 40 \dots 160 m$	ibar 1,0 %						8											
standard for P _N < 40 mbar	2,0 %						G											
	customer						Х			-	_							
Electrical Connection																		
iviale and temale plug	DIN 43050							1	0									
IVI I	ZXI (4-pin)							IVI	0	0	_							
Cable gland	Incl. Cable							4										
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Iviechanical Connection	1 rpal throad										0	0	0					
Ø66 x 11 /for flox	tubes Ø6)										v	0	0					
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PI	JR. bonded													6				
Special version	, sonaoa													0				
	standard														0	0	0	
	customer														x	X	X	
	540101101														~	17	1	1

¹ different cable types and lengths deliverable, standard: 2 m PVC cable (without ventilation tube)

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