



DMD 831

Differential Pressure Transmitter with Display and Contact for Fluids and Gases

- ▶ 2 piezoresistive stainless steel sensors
- ▶ differential pressure from 0 ... 1 bar up to 0 ... 70 bar
- ▶ display and pressure port rotatable

Technical Data



Input pressure range							
Type	D5	D6	D7	D8	DA	DB	H1
Differential pressure range gauge/abs (calibration) [bar]	0 ... 1	0 ... 2	0 ... 3,5	0 ... 7	0 ... 20	0 ... 35	0 ... 70
Permissible static pressure one-sided [bar]	1	2	3,5	7	20	35	70

Analogue signal / Supply	
Standard	3-wire: 4 ... 20 mA 24 V_{DC} ± 10 %
Permissible load	500 Ω
Accuracy ¹	≤ ± 1 % BFSL
¹ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)	

Contact	
Number, type	standard: 1 PNP option: 2 independent PNP
Max. switching current	125 mA, short-circuit proof
Switching accuracy ¹	≤ ± 0.5 % FSO
Repeatability	≤ ± 0.1 % FSO
Switching cycles	> 100 x 10 ⁶
Delay time	0 ... 100 sec

Programming	
Adjustability	analogue output / contact refers to: <ul style="list-style-type: none"> - pressure (+ port) - pressure (- port) - differential pressure
	Turn-Down: max. 1:10

Thermal error ² (offset and span) / Permissible temperatures	
Tolerance band	≤ ± 1.5 % FSO
TC, average	± 0.2 % FSO / 10 K
In compensated range	0 ... 70 °C
Permissible temperatures	medium: -40 ... 125 °C electronics / environment: -25 ... 85 °C storage: -40 ... 85 °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

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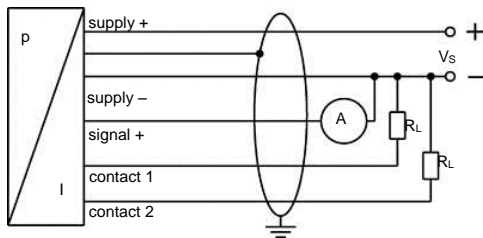
Differential Pressure Transmitter

Technical Data

Mechanical stability		
Vibration	10 g RMS (20 ... 2000 Hz)	according to DIN EN 60068-2-6
Shock	100 g / 11 msec	according to DIN EN 60068-2-27
Materials		
Pressure port	stainless steel 1.4404 (316L)	
Housing	PA 6.6, Polycarbonate	
Seals (media wetted)	FKM	others on request
Diaphragm	stainless steel 1.4435 (316L)	
Media wetted parts	pressure port, seals, diaphragm	
Miscellaneous		
Display	4-digit, red LED-display, digit size 7 mm range of indication -1999 ... +9999; accuracy 0.1 % +/- 1 digit; digital damping 0.3 ... 30 sec (programmable);	
Current consumption	signal output current: max. 60 mA (without switching current)	
Weight	approx. 350 g	
Operational life	> 100 x 10 ⁶ pressure cycles	
Ingress protection	IP 65	

Electrical connections		
Standard	connector M12x1 / 5- pin (IP 67)	others on request

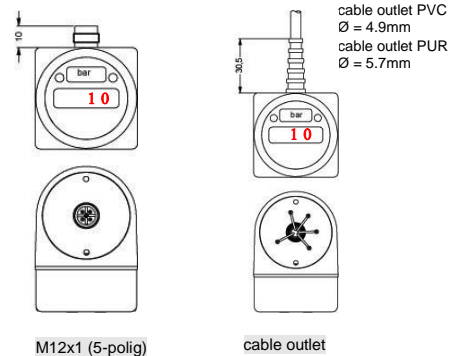
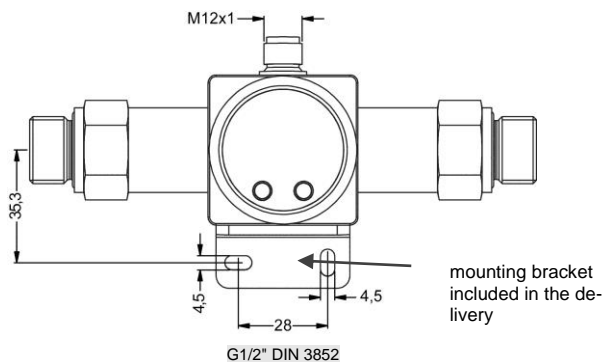
Wiring diagram



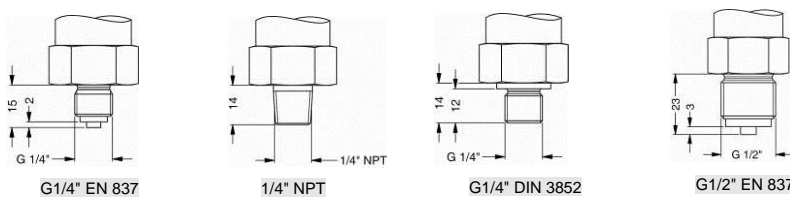
Pin configuration		
Electrical connections	M12x1 (5-pin), plastic	cable outlet (IP 67)
Supply +	1	wh (white)
Supply -	3	bn (brown)
Signal +	2	gn (green)
Contact 1	4	gy (grey)
Contact 2	5	pk (pink)
Shield	via pressure port	ye/gn (yellow / green)

Mechanical connections (in mm) Electrical connections (dimensions in mm)

standard



option



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Messgröße		Pressure																			
Differenzdruck rel.		differential pressure gauge		7	3	2															
Differenzdruck abs.		differential pressure abs.		7	3	3															
max. statischer Druck		max. static pressure		[bar]		[bar]															
1		1						D 5													
2		2						D 6													
3,5		3,5						D 7													
7		7						D 8													
20		20						D A													
35		35						D B													
70		70						H 1													
Sondermessbereiche		customer						9 9												auf Anfrage consult	
Differenzdruckbereich		differential pressure range		[bar]		[bar]		D5 D6 D7 D8 D A D B H 1													
Minimum		Maximum		Minimum		Maximum															
0,1		1		0,1		1		1		0		0		1							
0,2		2		0,2		2		2		0		0		1							
0,35		3,5		0,35		3,5		3		5		0		1							
0,7		7		0,7		7		7		0		0		1							
2		20		2		20		2		0		0		2							
3,5		35		3,5		35		3		5		0		2							
7		70		7		70		7		0		0		2							
Sondermessbereiche		customer						9 9		9 9											
Analogausgang		Analogue output																			
4 ... 20 mA / 3-Leiter		4 ... 20 mA / 3-wire																			
andere		customer																		auf Anfrage consult	
Schaltausgang		Contact																			
1 Schaltausgang PNP		1 contact PNP																			
2 Schaltausgänge PNP		2 contacts PNP																			
andere		customer																		auf Anfrage consult	
Genauigkeit		Accuracy																			
1 % FSO BFSL		1% FSO BFSL																			
andere		customer																		auf Anfrage consult	
Elektrischer Anschluss		Electrical connection																			
M12x1 (5-polig)		M12x1 (5-pin)																			
Kabelausgang mit PVC-Kabel		Cable outlet with PVC cable ¹																			
andere		customer																		auf Anfrage consult	
Mechanischer Anschluss		Mechanical connection																			
G 1/2" DIN 3852		G 1/2" DIN 3852																			
G 1/2" EN 837		G 1/2" EN 837																			
G 1/4" DIN 3852		G 1/4" DIN 3852																			
G 1/4" EN 837		G 1/4" EN 837																			
1/2" NPT		1/2" NPT																			
1/4" NPT		1/4" NPT																			
andere		customer																		auf Anfrage consult	
Dichtung		Seals																			
FKM		FKM																			
andere		customer																		auf Anfrage consult	
Sonderausführungen		Special version																			
Standard		standard																			
andere		customer																		auf Anfrage consult	

Preise EXW Thierstein, aussch. Verp Prices EXW Thierstein, excluding package

¹ Standard: 2 m PVC-Kabel ohne Belüftungsschlauch standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70°C)

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