



# **DMP 336**

Industrial **Pressure Transmitter** for Technical Gases and H<sub>2</sub> Applications

Welded, Dry Stainless Steel Sensor

accuracy according to IEC 60770: 0.5 % FSO

#### **Nominal pressure**

from 0 ... 16 bar up to 0 ... 1000 bar

#### **Output signal**

2-wire: 4 ... 20 mA others on request

#### Special characteristics

- media wetted parts of special stainless steel
- insensitive to pressure peaks
- high overpressure capability
- oil and grease free according to ISO 15001 (e.g. for oxygen applications)

#### **Optional version**

IS-version zone 0 Ex ia = intrinsically safe for gases and dusts

The industrial pressure transmitter DMP 336 was especially developed for hydrogen applications and can also be used with other technical gases (e.g. oxygen).

This is achieved by using an alloy based on 316L which prevents hydrogen embrittlement of the media-wetted parts. Level of hydrocarbon and particle contamination are significantly reduced by special treatment during production and cleaning.

An IS- version is optionally available for explosionprotected applications zone 0 / 20.

#### Preferred areas of use are



Technical gases



Hydrogen



Fuel cell



Medical technology











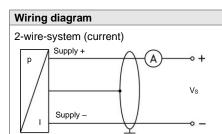




## **Industrial Pressure Transmitter**

Input pressure range											
Nominal pressure gauge	[bar]	16	25	40	60	100	160	250	400	600	1000
Overpressure	[bar]	50	50	80	120	200	320	500	800	1200	1500
Burst pressure ≥	[bar]	125	125	200	300	500	800	1250	2000	2000	3000 <sup>1</sup>
Vacuum resistance		unlimited	l								
<sup>1</sup> UL confirmed max. burst pressu	ure 2420 ba	ar									

Output signal / Supply						
Standard	2-wire: 4 20 mA / V <sub>S</sub> = 8 32 V <sub>DC</sub>					
Option IS-protection	2-wire: 4 20 mA / V <sub>S</sub> = 10 28 V <sub>DC</sub>					
Performance	· · · · · · · · · · · · · · · · · · ·					
Accuracy <sup>2</sup>	≤±0.5% FSO					
Permissible load	$R_{\text{max}} = [(V_{\text{S}} - V_{\text{S} \text{min}}) / 0.02 \text{ A}] \Omega$					
Influence effects	supply: 0.05 % FSO / 10 V					
	load: $0.05 \% FSO / k\Omega$					
Long term stability	≤ ± 0.2 % FSO / year at reference conditions					
Response time	≤ 10 msec					
<sup>2</sup> accuracy according to IEC 60770 – limit	point adjustment (non-linearity, hysteresis, repeatability)					
Thermal effects (Offset and Span)						
Thermal error	± 0.2 % FSO / 10 K					
in compensated range	-25 85 °C					
Permissible temperatures						
Permissible temperatures	medium: -40 125 °C					
. composition peratures	electronics / environment: -40 100 °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					
Mechanical stability						
Vibration	20 g RMS (25 2000 Hz) according to DIN EN 60068-2-6					
Shock	500 g / 1 msec according to DIN EN 60068-2-27					
Materials	<u> </u>					
Housing	stainless steel 316L (1.4404)					
Pressure port, sensor, diaphragm	stainless steel 316L (1.4435)					
Seals	none (welded)					
Media wetted parts	pressure port, sensor, diaphragm					
Explosion protection						
Approvals DX19-DMP 336	IBExU 10 ATEX 1068 X / IECEx IBE 12.0027X					
	zone 0: II 1G Ex ia IIC T4 Ga					
	zone 20: II 1D Ex ia IIIC T 135°C Da					
Safety technical maximum values	$U_i$ = 28 $V_{DC}$ , $I_i$ = 93 mA, $P_i$ = 660 mW, $C_i \approx 0$ nF, $L_i \approx 0$ $\mu$ H, the supply connections have an inner capacity of max. 27 nF					
Permissible temperatures for	in zone 0: -20 60 °C with p <sub>atm</sub> 0.8 bar up to 1.1 bar					
environment	in zone 1 or higher: -20 70 °C					
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					
Miscellaneous						
Current consumption	max. 25 mA					
Weight	approx. 140 g					
Installation position	any					
Operational life	$p_N \le 600$ bar: 100 million load cycles $p_N > 600$ bar: 10 million load cycles					
CE-conformity	EMC Directive: 2014/30/EU					
•	Pressure Equipment Directive: 2014/68/EU (module A) <sup>3</sup>					
ATEX Directive	2014/34/EU					
<sup>3</sup> This directive is only valid for devices with	th maximum permissible overpressure > 200 bar.					
Purity regarding residual particles	/ greases					
Oil and grease free version	residual particles: no particles > 100 μm (based on 10 dm²)					
-	residual greases: residual grease content < 0.2 mg/dm²					



#### Pin configuration Electrical connections M12x1 / metal (4-pin) 1 supply + 2 supply -Shield 4

2
1
3
4

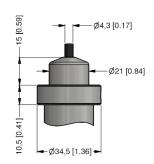
cable colours (IEC 60757)
WH (white)
BN (brown)
GNYE (green-yellow)

#### Electrical connections (dimensions mm / in)

standard option



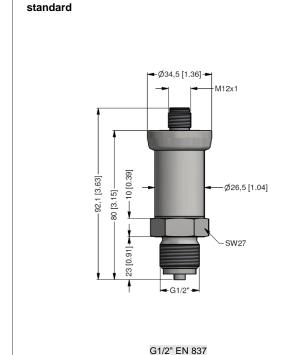


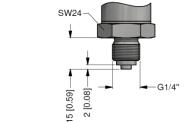


cable outlet with PVC cable (IP 67) 4

 $^4$  standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C)

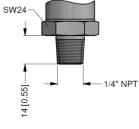
### Mechanical connections (dimensions mm / in)





options

G1/4" EN 837 p<sub>N</sub> ≤ 600 bar



1/4" NPT

⇒ metric threads and different types on demand

DMP336\_E\_160421

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put   [bar]    16	ressure    gauge   2   1   5		Ordering code DMP 336	6
put   [bar]    16	Sample   2   1   5	DMP 336		Ⅲ-□-Ⅲ
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40	40		2 5 0 2	
100	100 1 0 0 3		4 0 0 2	
100	100 1 0 0 3		6 0 0 2	
250	250	100	1 0 0 3	
400	400		1 6 0 3	
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1000	1000		4 0 0 3	
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