

# DMP 341



## Industrial Pressure Transmitter

Without Media Isolation

accuracy according to IEC 60770:  
0.5 % FSO

### Nominal pressure

from 0 ... 6 mbar up to 0 ... 100 mbar

### Product characteristics

- ▶ small thermal effect
- ▶ excellent long term stability
- ▶ excellent linearity



### Optional versions

- ▶ IS-version:  
Ex ia = intrinsically safe for gases and dusts
- ▶ IS-version:  
Ex n = intrinsically safe for zone 2
- ▶ different electrical and mechanical connections
- ▶ customer specific versions

The pressure transmitter DMP 341 has been especially designed for the measurement of very low gauge pressure and for vacuum applications. Permissible media are gases, pressurized air and non-aggressive low viscos oils.

The DMP 341 features excellent thermal behaviour and outstanding long term stability. A variety of standard output signals as well as mechanical and electrical connections make the DMP 341 covering a wide field of applications.

### Preferred areas of use are

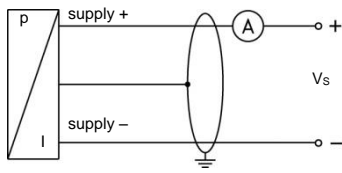
-  Plant and Machine Engineering
-  Heating and Air Conditioning



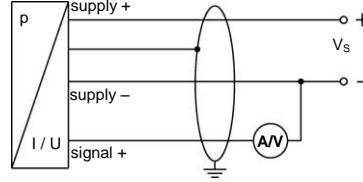
Input pressure range								
Nominal pressure gauge	[mbar]	6	10	16	25	40	60	100
Overpressure	[mbar]	125	125	125	125	125	125	350
Output signal / Supply								
Standard	2-wire: 4 ... 20 mA / $V_S = 12 \dots 36 V_{DC}$							
Option IS-protection EX ia	2-wire: 4 ... 20 mA / $V_S = 14 \dots 28 V_{DC}$							
Option IS-protection EX n	2-wire: 4 ... 20 mA / $V_S = 14 \dots 28 V_{DC}$							
Options 3-wire	3-wire: 0 ... 20 mA / $V_S = 14 \dots 36 V_{DC}$ 0 ... 10 V / $V_S = 14 \dots 36 V_{DC}$							
Performance								
Accuracy <sup>1</sup>	standard – nominal pressure > 10 mbar: $\leq \pm 0.5 \% FSO$ nominal pressure $\leq 10$ mbar: $\leq \pm 1.0 \% FSO$							
Permissible load	current 2-wire: $R_{max} = [(V_S - V_{S min}) / 0.02 A] \Omega$ current 3-wire: $R_{max} = 500 \Omega$ voltage 3-wire: $R_{min} = 10 k\Omega$							
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / k $\Omega$							
Long term stability	$\leq \pm 0.3 \% FSO$ / year at reference conditions, for $P_N < 100$ mbar $\leq \pm 0.1 \% FSO$ / year at reference conditions, for $P_N \geq 100$ mbar							
<sup>1</sup> accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)								
Thermal effects (Offset and Span)								
Nominal pressure $P_N$	[mbar]	-100 ... 0	$\leq 10$	$\leq 40$	$> 40$			
For offset and span		$\leq \pm 0.75 \% FSO$	$\leq \pm 1.5 \% FSO$	$\leq \pm 1 \% FSO$	$\leq \pm 0.75 \% FSO$			
Middle TK		$\pm 0.08 \% FSO / 10 K$	$\pm 0.15 \% FSO / 10 K$	$\pm 0.12 \% FSO / 10 K$	$\pm 0.08 \% FSO / 10 K$			
in compensated range	[°C]	0 ... 60						
Permissible temperatures								
Permissible temperatures		medium:	-25 ... 90 °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 (25 ... 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		stainless steel 1.4404 (316L)						
Seals (media wetted)		FKM						
Sensor		stainless steel 1.4404 (316L), silicon, epoxy or RTV, mineral glass						
Media wetted parts		pressure port, seals, sensor						
Explosion protection (only for 4 ... 20 mA / 2-wire)								
Approval DX3-DMP 341		<b>TÜVU03ATEX2005 X</b> zóna 0: II 1G Ex ia IIC T4 zóna 20: II 1D Ex tD A20 IP65 T 85°C						
Approval DMP 341 Exn		II 3G Ex nA IIC T4 Gc						
Safety technical maximum values		$U_i = 28 V$ , $I_i = 93 mA$ , $P_i = 660 mW$ , $C_i \approx 0 nF$ , $L_i \approx 0 \mu H$ , the supply connections have an inner capacity of max. 27 nF opposite the housing						
Ambient temperature range		in zone 0: -20 ... 60 °C with $p_{atm}$ 0.8 bar up to 1.1 bar in zone 1 or higher: -25 ... 70 °C						
Connecting cables (by factory)		cable capacitance: signal line/shield also signal line/signal line: 200 pF/m cable inductance: signal line/shield also signal line/signal line: 1 $\mu H/m$						
Miscellaneous								
Current consumption		signal output current: max. 25 mA signal output voltage: max. 7 mA						
Weight		approx. 140 g						
Installation position		any						
CE-conformity		EMC Directive: 2014/30/EU (English version), NV616/2006 (Czech version)						
ATEX Directive		2014/34/EU						

### Wiring diagrams

2-wire-system (current)



3-wire-system (current / voltage)

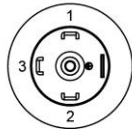
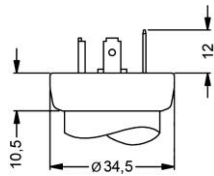


### Pin configuration

Electrical connection	ISO 4400	Binder 723 (5-pin)	M12x1 / metal (4-pin)	field housing	cable colours (DIN 47100)
Supply +	1	3	1	IN +	wh (white)
Supply -	2	4	2	IN -	bn (brown)
Signal + (only for 3-wire)	3	1	3	OUT+	gn (green)
Shield	ground pin	5	4	⊥	gn/ye (green / yellow)

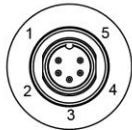
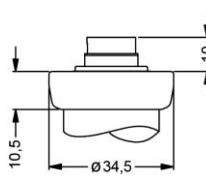
### Electrical connections (dimensions in mm)

standard

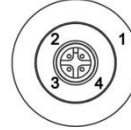
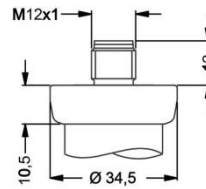


ISO 4400 (IP 65)

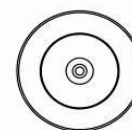
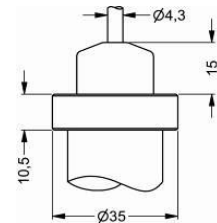
option



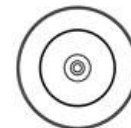
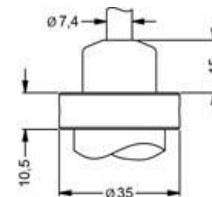
Binder Series 723 5-pin (IP 67)



M12x1 4-pin (IP 67)



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



cable outlet, cable with ventilation tube (IP 68)<sup>3</sup>

⇒ universal field housing stainless steel 1.4404 (316 L) with cable gland M20x1.5 (ordering code 880) and other versions on request

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

<sup>3</sup> different cable types and lengths available, permissible temperature depends on kind of cable

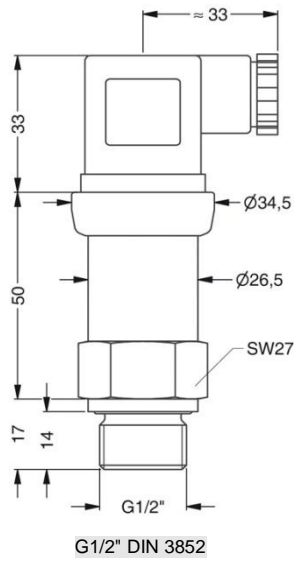
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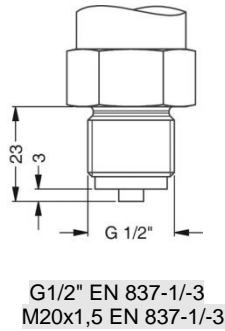
Technical Data

## Mechanical connection (dimensions in mm)

standard



option



⇒ metric threads and others on request

⇒ Ex version: total length increases!

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

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