



# DMP 343

## Industrial Pressure Transmitter

### Without Media Isolation

accuracy according to IEC 60770:  
**0.35 % FSO**

Industrial  
Pressure Transmitter

#### Nominal pressure:

from 0 ... 10 mbar  
up to 0 ... 1000 mbar

#### Product characteristics

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

#### Optional versions

- ▶ IS-version:  
Ex ia = intrinsically safe for  
gases and dusts
- ▶ SIL 2 application  
according to IEC 61508 / IEC 61511
- ▶ different electrical and  
mechanical connections
- ▶ customer specific versions

The pressure transmitter **DMP 343** 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 343** 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 343** covering a wide field of applications.

#### Preferred areas of use are



Plant and Machine Engineering



Heating and Air Conditioning

**DMP 343**



Input pressure range														
Nominal pressure gauge	[mbar]	-1000 ... 0	10	16	25	40	60	100	160	250	400	600	1000	
Overpressure	[bar]	3	0.2	0.2	0.2	0.5	0.5	1	2	3	3	3	3	
Burst pressure	[bar]	5	0.3	0.3	0.3	0.75	0.75	1.5	3	5	5	5	5	
Output signal / Supply														
Standard	2-wire: 4 ... 20 mA / $V_S = 8 \dots 32 V_{DC}$													
Option IS-protection	2-wire: 4 ... 20 mA / $V_S = 10 \dots 28 V_{DC}$													
Options 3-wire	3-wire: 0 ... 20 mA / $V_S = 14 \dots 30 V_{DC}$ 0 ... 10 V / $V_S = 14 \dots 30 V_{DC}$													
Performance														
Accuracy <sup>1</sup>	standard: $\leq \pm 0.35 \% \text{ FSO}$ nominal pressure $\leq 100 \text{ mbar}$ : $\leq \pm 0.50 \% \text{ FSO}$													
Permissible load	current 2-wire: $R_{\max} = [(V_S - V_{S \min}) / 0.02] \Omega$ current 3-wire: $R_{\max} = 500 \Omega$ voltage 3-wire: $R_{\min} = 10 \text{ k}\Omega$													
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / k $\Omega$													
Response time	2-wire: $\leq 10 \text{ msec}$ 3-wire: $\leq 3 \text{ msec}$													
<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]	-1000 ... 0	$\leq 100$				$\leq 400$				$> 400$			
Tolerance band	[% FSO]	$\leq \pm 0.75$	$\leq \pm 1.5$				$\leq \pm 1$				$\leq \pm 0.75$			
in compensated range	[°C]	-20 ... 85	0 ... 50				0 ... 70				-20 ... 85			
Permissible temperatures														
Permissible temperatures	medium: -40 ... 125 °C electronics / environment: -40 ... 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	500 g / 1 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 DX19-DMP 343	IBExU10ATEX1068X Zone 0: II 1 G Ex ia IIC T4 Ga Zone 20: II 1 D Ex iaD 20 T85 °C													
Safety technical maximum values	$U_i = 28 \text{ V}$ , $I_i = 93 \text{ mA}$ , $P_i = 660 \text{ mW}$ , $C_i \approx 0 \text{ nF}$ , $L_i \approx 0 \text{ }\mu\text{H}$													
Permissible temperatures for environment	in zone 0: -20 ... 60 °C with $p_{\text{atm}}$ 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: 160 pF/m cable inductance: signal line/shield also signal line/signal line: 1 $\mu\text{H}/\text{m}$													
Miscellaneous														
Option SIL 2 application	according to IEC 61508 / IEC 61511													
Current consumption	signal output current: max. 25 mA signal output voltage: max. 5 mA													
Weight	approx. 140 g													
Installation position	any													
CE-conformity	EMC Directive: 2004/108/EC													

**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)

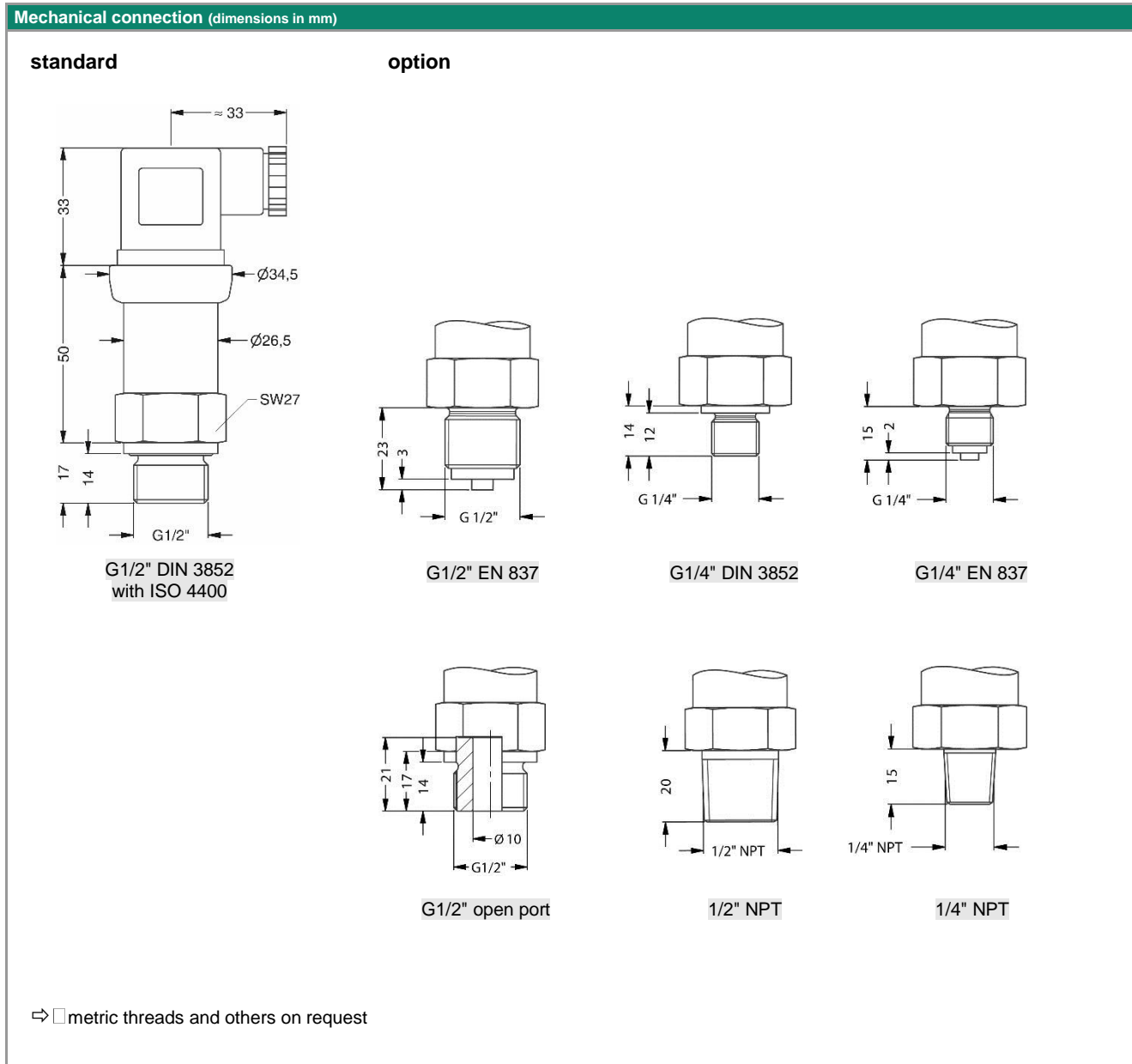
cable outlet with PVC cable (IP 67)<sup>2</sup>

compact field housing (IP 67)

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



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



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Messgröße		relativ	1	0	0															
<b>Eingang</b>	[mbar]																			
	10		0	1	0	0														
	16		0	1	6	0														
	25		0	2	5	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														
	-1000 ... 0		X	1	0	2														
	Sondermessbereiche		9	9	9	9														auf Anfrage
<b>Ausgang</b>																				
	4 ... 20 mA / 2-Leiter					1														
	0 ... 20 mA / 3-Leiter					2														
	0 ... 10 V / 3-Leiter					3														
	Ex-Schutz 4 ... 20 mA / 2-Leiter					E														
	andere					9														auf Anfrage
<b>Genauigkeit</b>																				
	Standard für P <sub>N</sub> > 100 mbar	0,35 %				3														
	Standard für P <sub>N</sub> ≤ 100 mbar	0,5 %				5														
<b>Elektrischer Anschluss</b>																				
	Stecker und Kabeldose ISO 4400					1	0	0												
	Stecker Binder Serie 723 (5-polig)					2	0	0												
	Kabelausgang mit PVC-Kabel <sup>1</sup>					T	A	0												
	Kabelausgang <sup>2</sup>					T	R	0												
	Stecker M12x1 (4-polig) / Metall					M	1	0												
	Kompakt-Feldgehäuse					8	5	0												
	Edelstahl 1.4305					9	9	9												
	andere					9	9	9												auf Anfrage
<b>Mechanischer Anschluss</b>																				
	G1/2" DIN 3852					1	0	0												
	G1/2" EN 837					2	0	0												
	G1/4" DIN 3852					3	0	0												
	G1/4" EN 837					4	0	0												
	G1/2" DIN 3852 offener Anschluss					H	0	0												
	1/2" NPT					N	0	0												
	1/4" NPT					N	4	0												
	andere <sup>3</sup>					9	9	9												auf Anfrage
<b>Dichtung</b>																				
	FKM					1														
	andere					9														auf Anfrage
<b>Sonderausführungen</b>																				
	Standard						0	0	0											
	andere						9	9	9											auf Anfrage

<sup>1</sup> Standard: 2 m PVC-Kabel ohne Belüftungsschlauch (Temperatureinsatzbereich: -5 ... 70 °C), optional Kabel mit Belüftungsschlauch  
<sup>2</sup> Kabel mit Luftschlauch (Code TR0 = PVC-Kabel), Kabel in verschiedenen Ausführungen und Längen lieferbar; Kabel nicht im Preis enthalten  
<sup>3</sup> metrische Gewinde und andere auf Anfrage

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.