

# IMPRESS

SENSORS & SYSTEMS

Unit 6 Mercury House, Calleva Park  
Aldermaston, Berkshire, RG7 8PN

Tel: +44 (0)118 981 7980

Fax: +44 (0)118 981 7990

e-mail: [sales@impress-sensors.co.uk](mailto:sales@impress-sensors.co.uk)

Website: [www.impress-sensors.co.uk](http://www.impress-sensors.co.uk)

Pressure - Temperature - Level - Distance - Control - Indication - Data logging



## DMP 335

### Industrial Pressure Transmitter

### Welded, Dry Stainless Steel Sensor

accuracy according to IEC 60770:  
0.5 % FSO

The industrial pressure transmitter DMP 335 is based on a stainless steel welded pressure sensor without fluid.

This characteristic has a special advantage with applications where silicon oil or elastomere seals cannot be used.

#### Preferred areas of use are



Medical Technology



Plant and Machine Engineering



Mobile Hydraulics



Refrigeration



Oxygen application

Industrial  
Pressure Transmitter

DMP 335

#### Nominal pressure

from 0 ... 6 bar  
up to 0 ... 600 bar

#### Output signals

2-wire: 4 ... 20 mA  
3-wire: 0 ... 10 V  
others on request

#### Special characteristics

- ▶ suitable for oxygen applications
- ▶ insensitive to pressure peaks
- ▶ high overpressure capability

#### Optional versions

- ▶ IS-version  
Ex ia = intrinsically safe for  
gases and dusts
- ▶ customer specific versions



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# DMP 335

Industrial Pressure Transmitter

Technical Data

Input pressure range												
Nominal pressure gauge [bar]	6	10	16	25	40	60	100	160	250	400	600	
Overpressure [bar]	14	35	35	70	140	140	350	350	700	1200	1200	
Burst pressure $\geq$ [bar]	35	85	85	175	350	350	850	850	1750	2100	2100	
Vacuum resistance	unlimited											
Output signal / Supply												
Standard	2-wire: 4 ... 20 mA / $V_s = 8 \dots 32 V_{DC}$											
Option IS-version	2-wire: 4 ... 20 mA / $V_s = 10 \dots 28 V_{DC}$											
Option 3-wire	3-wire: 0 ... 10 V / $V_s = 14 \dots 30 V_{DC}$											
Performance												
Accuracy <sup>1</sup>	$\leq \pm 0.5 \% \text{ FSO}$											
Permissible load	current 2-wire: $R_{max} = [(V_s - V_{smin}) / 0.02] \Omega$ voltage 3-wire: $R_{min} = 10 \text{ k}\Omega$											
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / k $\Omega$											
Long term stability	$\leq \pm 0.2 \% \text{ FSO} / \text{year}$ at reference conditions											
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)												
Thermal error	$\pm 0.3 \% \text{ FSO} / 10 \text{ K}$											
in compensated range	0 ... 70 °C											
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	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												
Pressure port	stainless steel 1.4571 (316 Ti)											
Housing	stainless steel 1.4404 (316 L)											
Option compact field housing	stainless steel 1.4305 (303), cable gland brass, nickel plated										others on request	
Seals (media wetted)	none (welded)											
Diaphragm	stainless steel 1.4542 (17-4PH)											
Media wetted parts	pressure port, diaphragm											
Explosion protection (only for 4 ... 20 mA / 2-wire)												
Approval DX19-DMP 335	IBExU 10 ATEX 1068 X zone 0: II 1G Ex ia IIC T4 Ga zone 20: II 1D Ex iaD 20 85°C											
Safety technical maximum values	$U_i = 28 V_{DC}$ , $I_i = 93 \text{ mA}$ , $P_i = 660 \text{ mW}$ , $C_i \approx 0 \text{ nF}$ , $L_i \approx 0 \mu\text{H}$											
Permissible temperatures for environment	in zone 0: -20 ... 60 °C bei $p_{atm}$ 0.8 bar up to 1.1 bar in zone 1: -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 $\mu\text{H}/\text{m}$											
Miscellaneous												
Current consumption	signal output current: max. 25 mA signal output voltage: typ. 5 mA											
Weight	approx. 140 g											
Installation position	any											
Operational life	$> 100 \times 10^6$ pressure cycles											
CE-conformity	EMC Directive: 2004/108/EC Pressure Equipment Directive: 97/23/EC (module A) <sup>2</sup>											
<sup>2</sup> This directive is only valid for devices with maximum permissible overpressure $> 200 \text{ bar}$												

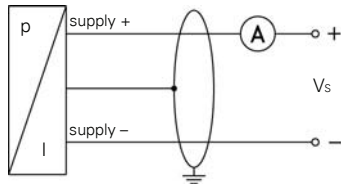
# DMP 335

Industrial Pressure Transmitter

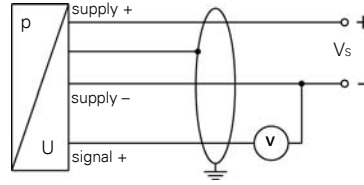
Technical Data

## Wiring diagrams

### 2-wire-system (current)



### 3-wire-system (voltage)

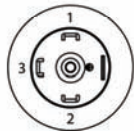
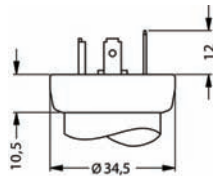


## Pin configuration

Electrical connections	ISO 4400	Binder 723 (5-pin)	M12x1 (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)

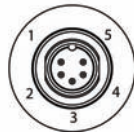
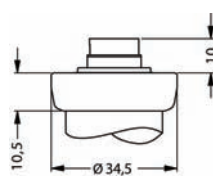
## Electrical connections (dimensions in mm)

### standard

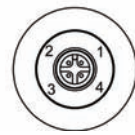
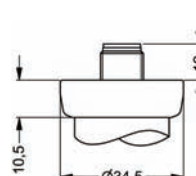


ISO 4400 (IP 65)

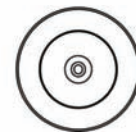
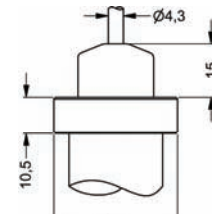
### option



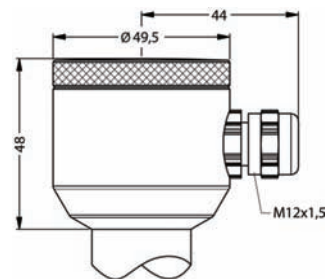
Binder series 723 5-pin (IP 67)



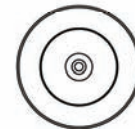
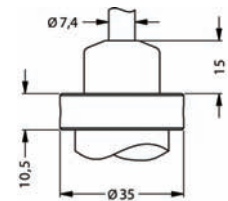
M12x1 4-pin (IP 67)



cable outlet with PVC cable (IP67)<sup>3</sup>



compact field housing (IP 67)



cable outlet, cable with ventilation tube (IP 68)<sup>4</sup>

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

<sup>3</sup> standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C)

<sup>4</sup> different cable types and lengths available, permissible temperature depends on kind of cable

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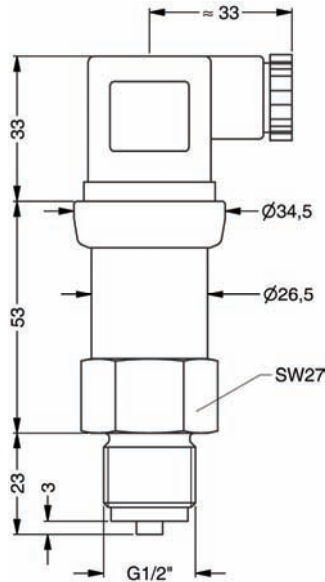
# DMP 335

Industrial Pressure Transmitter

Technical Data

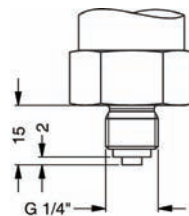
## Mechanical connections (dimensions in mm)

### standard

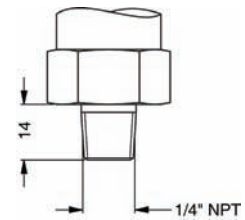


G1/2" EN 837

### option



G1/4" EN 837



1/4" NPT

⇒ metric threads and other versions on request

## Accessories

### Plug-on Display PA 430



#### Functional range

- ▶ free scalable display
- ▶ switch mode, hysteresis, parameterizable deceleration of the contacts
- ▶ display 330 ° rotatable
- ▶ connector 300 ° rotatable
- ▶ no external power supply necessary

#### Product characteristics

- ▶ plug-on display for pressure transmitter with output signal: 4 ... 20 mA / 2-wire or 0 ... 10 V / 3-wire
- ▶ 4-digit LED display

#### Optional versions

- ▶ IS-version
- ▶ 1 or 2 programmable contacts

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

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## Ordering code DMP 335

### DMP 335

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<b>Pressure</b>																			
	gauge	2	1	0															
<b>Input</b>																			
	[bar]																		
	6	6	0	0	1														
	10	1	0	0	2														
	16	1	6	0	2														
	25	2	5	0	2														
	40	4	0	0	2														
	60	6	0	0	2														
	100	1	0	0	3														
	160	1	6	0	3														
	250	2	5	0	3														
	400	4	0	0	3														
	600	6	0	0	3														
	customer	9	9	9	9														
<b>Output</b>																			
	4 ... 20 mA / 2-wire																		
	0 ... 10 V / 3-wire																		
	Intrinsic safety 4 ... 20 mA / 2-wire																		
	customer																		
<b>Accuracy</b>																			
	0.5 %																		
	customer																		
<b>Electrical connection</b>																			
	Male and female plug ISO 4400																		
	Male plug Binder series 723 (5-pin)																		
	Cable outlet with PVC cable <sup>1</sup>																		
	Cable outlet with cable <sup>2</sup>																		
	Male plug M12x1 (4-pin) / metal																		
	Compact field housing stainless steel 1.4305																		
	customer																		
<b>Mechanical connection</b>																			
	G1/2" EN 837																		
	G1/4" EN 837																		
	1/4" NPT																		
	customer																		
<b>Seals</b>																			
	without (welded version)																		
	customer																		
<b>Special version</b>																			
	standard																		
	customer																		

<sup>1</sup> standard: 2 m PVC cable without ventilation tube (permissible temperatur: -5 ... 70 °C)

<sup>2</sup> cable with ventilation tube (code TR0 = PVC cable), different cable types and lengths available, permissible temperature depends on kind of cable; price without cable

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