

DIFFERENTIAL PRESSURE TRANSMITTER

PRODUCT CATALOGUE



PRESSURE at the highest LEVEL.

BD|SENSORS
pressure measurement

>> www.bdsensors.de



PRESSURE AT THE HIGHEST LEVEL

“Successful medium-sized companies are not successful because they are active in many areas, but rather because they concentrate on one area and do it better than anyone else.”

This is our philosophy. That’s why BD|SENSORS has concentrated on electronic pressure measurement technology from the beginning.

With our unremitting product and quality strategy we have been successful in becoming a major player on the world market for electronic pressure sensing devices within a few years.

With 300 employees at 3 locations in Germany, the Czech Republic and China BD|SENSORS has solutions from 0.1 mbar up to 6.000 bar:

- > pressure sensors, pressure transducers
pressure transmitters

- > electronic pressure switches

- > pressure measuring devices with display and switching outputs

- > hydrostatic level probes

Two pressure transmitters and a submersible probe, based on a stainless steel silicon sensor were the beginning. Today the range extends to more than 100 standard products, from economical OEM devices to high-end products with HART® communication or field bus interface.

In addition we have developed hundreds of customer-specific applications, underlining the competence and flexibility of BD|SENSORS. The excellent price/performance ratio of our products is proof of the fact that we are able to meet the toughest demand: Being a problem-solver for our customers.

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For large production batches as well as for small production numbers, no matter for what medium or external factors, with almost any mechanical or electrical connection - we solve your problem

flexibly, quickly and cost-efficiently.

DIFFERENTIAL PRESSURE TRANSMITTER

For differential pressure measurement

Pressure ranges: 0 ... 1 mbar up to 0 ... 70 bar

Thanks to different sensor technologies combined with compact aluminium die-cast cases or plastic housings, our differential pressure transmitters may be used for numerous fluids and gases, e. g. for monitoring ventilation ducts, filters and fans in HVAC areas as well as for level measurement in closed pressurized tanks.



	PRODUCT	PREFERRED APPLICATION			MEDIA WETTED PARTS				DIFFERENTIAL PRESSURE		ACCURACY	APPROVAL		
		process-industry	general purpose	HKL / HVAC	pressure port		sensor diaphragm		bar min	bar max	% FSO (standard)	EX	UL	HART
					metal	aluminium	silicon	stainless steel						
PRECISION	DPT 100		•		•			•	0.01	20	≤± 0.1			
	DPT 200	•			•			•	0.001	20	≤± 0.075	•		•
INDUSTRY	DMD 331		•		•			•	0.02	16	≤± 0.5	•		
	DMD 341		•	•	•	•	•	•	0.006	1	≤± 0.35		•	
	DMD 831		•		•			•	1	70	≤± 1.0 BFSL			
	DPS 200			•	•			•	0.006	1	≤± 1.0 BFSL		•	
	DPS 300			•	•			•	0.0016	1	≤± 0.5 BFSL			



DPT 100

Differential Pressure Transmitter for Process Industry

accuracy according to IEC 60770:
0.1 % FSO

Differential pressure

from 10 mbar up to 20 bar

Static pressure

max. 400 bar

Output signal

2-wire: 4 ... 20 mA

RS485 with Modbus RTU protocol

Special characteristics

- ▶ compact design
- ▶ fast response time
- ▶ aluminium die cast case
- ▶ zero adjustment via button

Optional versions

- ▶ several process connections

The differential pressure transmitter DPT 100 has been especially designed for fast test processes in leakage and flow measurement, where a fast response time and high sampling rate are necessary.

The compact design of the DPT 100 facilitates the usage in standardised applications. For instance, the installation in 19" racks.

The DPT 100 with optionally RS485 interface uses the communication protocol Modbus RTU which has found the way in industrial communication as an open protocol. The Modbus protocol is based on a master Slave architecture with which up to 247 Slaves can be questioned by a master – the data will transfer in binary form.

Preferred areas of use are

Test engineering / leak testing



Machine and plant engineering



Environmental technology



Energy production



Differential pressure ranges						
Pressure range p_N diff.	10 mbar	60 mbar	100 mbar	400 mbar	2.5 bar	20 bar
Pressure range p_N symmetric (diff.)	± 10 mbar	± 60 mbar	± 100 mbar	± 400 mbar	on request	on request
Permissible static pressure	70 bar	400 bar	400 bar	400 bar	400 bar	400 bar

Output signal / Supply						
Standard	2 wire : 4 ... 20 mA / $V_S = 12 \dots 32 V_{DC}$					
Option	digital: RS 485 with Modbus RTU protocol / $V_S = 9 \dots 32 V_{DC}$ (delay time: 500 msec)					
Performance						
Accuracy ¹	$p_N \geq 60$ mbar: $\leq \pm 0.1$ % FSO $p_N < 60$ mbar: $\leq \pm 0.2$ % FSO					
Permissible load	$R_{max} = [(V_S - V_{S min}) / 0.02 A] \Omega$					
Influence supply	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / k Ω					
Influence static pressure p_N [Pa/100 bar]	10 mbar 18	60 mbar 30	400 mbar 40	2.5 bar 250	20 bar 2000	
Influence installation position	max. 400 Pa (can be compensated by zero-point correction) for ranges < 60 mbar please state installation position on the order					
Long term stability	$p_N \geq 60$ mbar: $\leq \pm 0.05$ %FSO/ year at reference conditions $p_N < 60$ mbar: $\leq \pm 0.15$ %FSO/ year at reference conditions					
Sampling rate	250 Hz					
Turn-on time	approx. 260 msec					
Response time (10 ... 90 %)	10 msec					
¹ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)						
Thermal effects (offset and span)						
Thermal error	$\leq \pm 0.1$ % FSO / 10 K					
Compensated range	-20 ... 80 °C					
Permissible temperatures						
Medium	-25 ... 85°C					
Electronics / environment	-25 ... 85°C					
Storage	-25 ... 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						
One-sided overload	according to the maximum static pressure of differential pressure sensor					
Vibration	5 g RMS (25 ... 2000 Hz)			according to DIN EN 60068-2-6		
Shock	100 g / 1 msec			according to DIN EN 60068-2-27		
Materials						
Pressure port / flange	stainless steel 1.4401 (316)				others on request	
Diaphragm	stainless steel 1.4404 (316L)				others on request	
Vent and dump valves, blanking plugs	stainless steel 1.4401 (316)					
Bolts and nuts	steel, zinc flake coated				others on request	
Housing	aluminium die cast with epoxy painting (grey)				others on request	
Cable gland	polyamide					
Seals (media wetted)	standard: FKM options: EPDM, NBR				others on request	
Filling fluids	silicone oil				others on request	
Media wetted parts	pressure port, seal of pressure port, diaphragm					

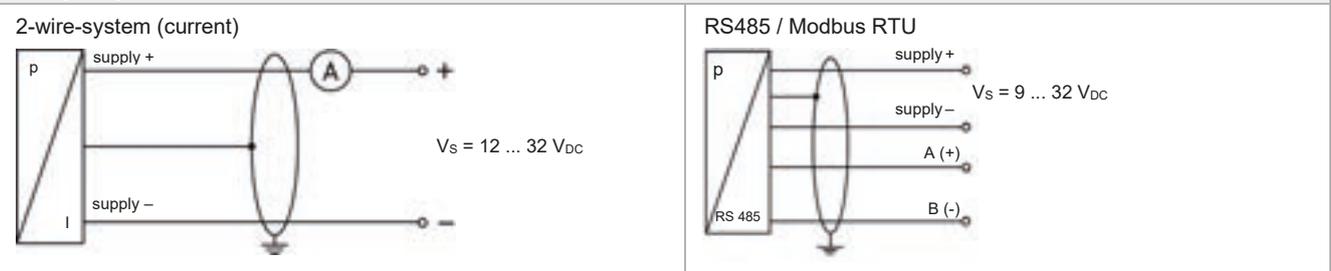
Miscellaneous	
Mounting bracket (optionally)	material C-steel or stainless steel 1.4401 (304) weight 0.45 kg (incl. bolts and nuts)
Ingress protection	IP 66 / IP 67
Installation position	any ²
Weight	approx. 1800 g
Current consumption	approx. 23 mA
Operational life	100 million load cycles
CE-conformity	EMC Directive: 2014/30/EU Pressure Equipment Directive: 2014/68/EU (module A) ³

² Pressure transmitters are calibrated in a vertical position with the pressure connection down. If this position is changed on installation there can be slight deviations in the zero point. Press the button for zero adjustment (see operating manual).

³ This directive is only valid for devices with maximum permissible overpressure > 200 bar.

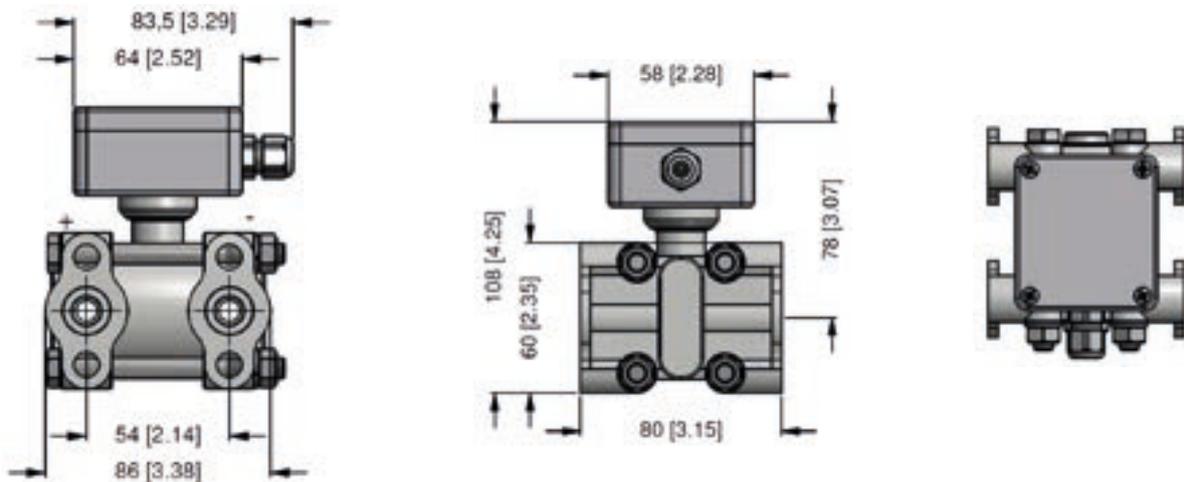
Connections	
Electrical connection	terminal clamps in clamping chamber (for cable-Ø max.2.5 mm ²)
Process connections	Standard option: internal thread 1/4" - 18 NPT / fixing 7/16 UNF option: internal thread 1/4" - 18 NPT / fixing M10 others: on request

Wiring diagram



Pin configuration	terminal clamps	M12x1 / metal (4-pin)
Electrical connection	terminal clamps	M12x1 / metal (4-pin)
Supply +	IN +	1
Supply -	IN -	3
for RS485 / Modbus RTU:		
A (+)	A	2
B (-)	B	4
Ground		plug housing

Dimensions (mm / in)





DPT 200

Differential Pressure Transmitter for Process Industry with HART®-Communication

accuracy according to IEC 60770:
0.075 % FSO

Differential pressure

from 1 mbar up to 20 bar

Static pressure

max. 400 bar

Output signal

2-wire: 4 ... 20 mA

Special characteristics

- ▶ static over pressure 400 bar
- ▶ rangeability max. 100:1
- ▶ aluminium die cast case
- ▶ HART®-communication
- ▶ output signal: linear or square root extraction

Optional versions

- ▶ Ex-version group I
 - Ex ia = intrinsically safe version for firedamp mines
- ▶ Ex-version group II
 - Ex ia = intrinsically safe version
 - Ex d = flameproof enclosure
- ▶ LC display
- ▶ stainless steel housing

The differential pressure transmitter DPT 200 has been especially designed for the process industry and can be used for level measurement of closed, pressurized tanks, pump or filter controlling, etc.

DPT 200 can be equipped with various chemical seals and different membrane materials to reach an optimal adaptation to the application.

Preferred areas of use are

-  Oil and gas industry
-  Chemical and petrochemical industry
-  Energy industry
-  Food and beverage
-  Paper industry



Differential pressure ranges					
Sensor type	A ¹	B	C	D	E
Differential pressure range dp	10 mbar	60 mbar	400 mbar	2.5 bar	20 bar
Setting limits (offset and span in this range freely adjustable)	-10 ... 10 mbar	-60 ... 60 mbar	-400 ... 400 mbar	-2.5 ... 2.5 bar	-20 ... 20 bar
Lowest permissible span	1 mbar	2 mbar	4 mbar	25 mbar	200 mbar
Permissible static pressure	70 bar	160 bar	160 bar	160 bar	160 bar
optional	-	-	400 bar	400 bar	400 bar
Rangeability TD (with respect to the differential pressure range dp)	10:1	30:1	100:1	100:1	100:1

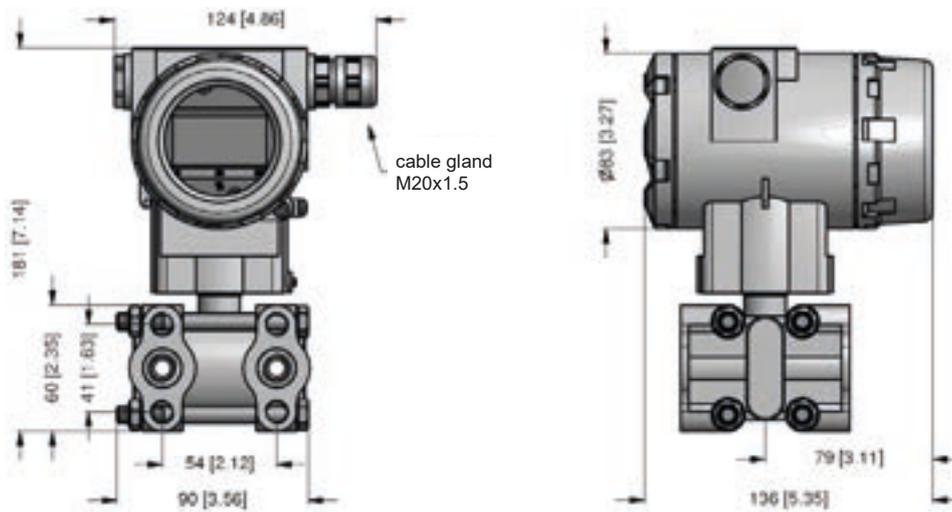
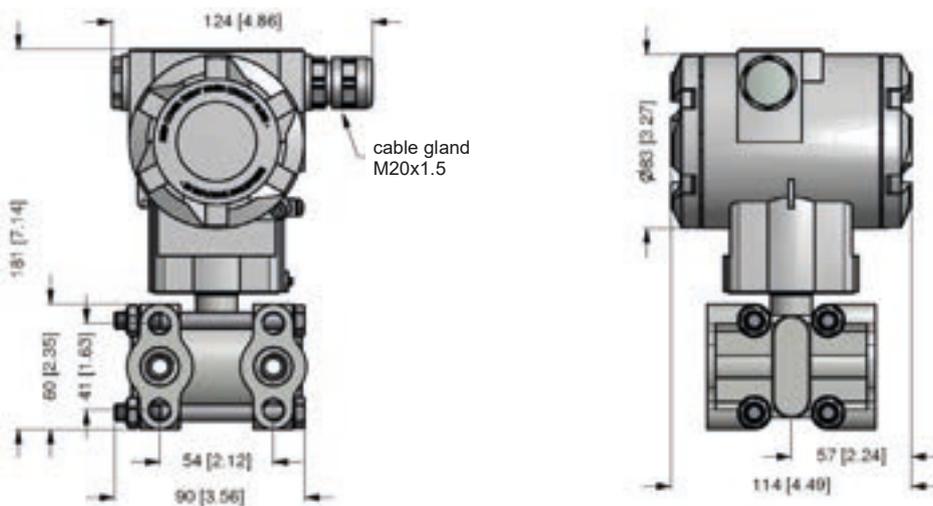
¹ only possible in combination with process connection (code N20), without valve (code 0) and with PTFE seal (code 4)

Output signal / Supply	
Standard	2-wire: 4 ... 20 mA with HART® communication / V _S = 16.5 ... 42 V _{DC}
Option IS-version	2-wire: 4 ... 20 mA with HART® communication / V _S = 16.5 ... 28 V _{DC}
Error signal	Namur NE43 high / low (adjustable)
Performance	
Accuracy	turn-down ≤ 10:1: ≤ ± 0.075 % FSO turn-down > 10:1: ≤ ± [0.0075 x turn-down] % FSO sensor type A: turn-down ≤ 10:1: ≤ ± [0.075 + 0.025 x turn-down] % FSO with turn-down = nominal pressure range / adjusted range (FSO = Full Scale Output)
Influence supply	≤ 0.001 % FSO / 10 V
Influence static pressure	type A: ± [0.015 mbar + 0.1 % of the adjusted range] / 40 bar type B: ± [0.06 mbar + 0.075 % of the adjusted range] / 160 bar type C: ± [0.2 mbar + 0.05 % of the adjusted range] / 160 bar type D: ± [1.25 mbar + 0.05 % of the adjusted range] / 160 bar type E: ± [10 mbar + 0.05 % of the adjusted range] / 160 bar
Influence installation position	max. 400 Pa (can be compensated by zero-point correction)
Long term stability	type A: ≤ ± (0.5 % x differential pressure range dp) / year at reference conditions type B: ≤ ± (0.2 % x differential pressure range dp) / year at reference conditions type C - E: ≤ ± (0.1 % x differential pressure range dp) / year at reference conditions
Permissible load	R _{max} = [(V _S - 16.5 V) / 0.023 A] Ω HART®-communication: R = 230 Ω ... 600 Ω
Response time	type A: approx. 1.6 sec type B: approx. 0.4 sec type C: approx. 0.2 sec type D: approx. 0.2 sec type E: approx. 0.1 sec
Damping	electronic: 0.1 ... 60 sec plus response time
Thermal effects (offset and span)	
Temperature range -20 ... +65°C	type A: ± [0.45 x turn-down + 0.25] % of the adjusted range type B: ± [0.30 x turn-down + 0.20] % of the adjusted range type C - E: ± [0.20 x turn-down + 0.10] % of the adjusted range
Temperature range -40 ... -20°C and +65 ... +100°C	type A: ± [0.45 x turn-down + 0.25] % of the adjusted range type B: ± [0.30 x turn-down + 0.20] % of the adjusted range type C - E: ± [0.20 x turn-down + 0.10] % of the adjusted range
Permissible temperatures	
Environment / storage	without display: -40 ... 85 °C
	with display: -20 ... 65 °C (85°C without function)
Media wetted parts	silicone oil: -40 ... 100 °C (information: +125 °C short time, max. 30 min.)
	fluorolube oil: -40 ... 100 °C (information: +125 °C short time, max. 30 min.)
Electrical protection	
Short-circuit protection	permanent
Reverse polarity protection	no damage, but also no function
Mechanical stability	
One-sided overload	according to the maximum static pressure of differential pressure sensor
Vibration	5 g RMS (25 ... 2000 Hz) according to DIN EN 60068-2-6
Shock	100 g / 1 msec according to DIN EN 60068-2-27
Filling fluids	
Standard	silicone oil (-40...125 °C)
Option (on request)	fluorolube oil (-40...125 °C) others on request

Materials	
Pressure port / flange	stainless steel 1.4401 (316) others on request
Housing	standard: aluminium die cast with epoxy painting (blue) option: stainless steel 1.4301 (304) others on request
Cable gland	aluminium die cast housing: PA grey (for cable-Ø 5 ... 9 mm) stainless steel housing: stainless steel 1.4404 (316L) (for cable-Ø 7 ... 12 mm) option IS-version: specified under "Explosion protection"
Vent and dump valves, blanking plugs, type plate	stainless steel 1.4401 (316) others on request
Bolts and nuts	steel, zinc flake coated
Seals	standard: FKM (-30 ... 250 °C) options: EPDM (-40 ... 125 °C) NBR (-40 ... 125 °C) PTFE (-180 ... 250 °C) others on request
Diaphragm	standard: stainless steel 1.4435 (316L) option: Hastelloy® C-276 (2.4819) others on request
Media wetted parts	pressure port, seal, diaphragm
Explosion protection – aluminium die cast housing	
Approval AX18-DPT200 intrinsically safe version	IBExU 14 ATEX 1273 X / IECEx IBE 16.0005X group II: II 1/2G Ex ia IIC T4 Ga/Gb / II 2D Ex ia IIIC T 85 °C Db safety technical maximum values: P _i = 660 mW, U _i = 28 V, I _i = 93 mA, C _i = 29.7 nF, L _i negligible permissible temperatures for environment: -40 ... 60 °C cable gland in PA grey; for cable-Ø 5 ... 9 mm
Approval AX18B-DPT200 flameproof enclosure	IBExU 15 ATEX 1110 X / IECEx IBE 16.0006X group II: II 2G Ex db IIC T6 Gb permissible temperatures for environment: -40 ... 65 °C cable gland in brass; for cable-Ø 10 ... 14 mm
Explosion protection – stainless steel housing	
Approval AX18-DPT200 intrinsically safe version	IBExU 14 ATEX 1273 X / IECEx IBE 16.0005X group I (mines): I M1 Ex ia I Ma group II: II 1G Ex ia IIC T4 Ga / II 2D Ex ia IIIC T85°C Db safety technical maximum values: P _i = 660 mW, U _i = 28 V, I _i = 93 mA, C _i = 29.7 nF, L _i negligible permissible temperatures for environment: -40 ... 60 °C cable gland in stainless steel 1.4404 (316L); for cable-Ø 7 ... 12 mm
Miscellaneous	
Display (optionally)	type: LCD, lines: 2, digits: 8, bargraph: 0...100%, rotatability: 90°-steps and / or by turn of display module
Configuration	- offset / span local via 2 buttons - local configuration with an optional display - complete configuration via HART®
Ingress protection	IP 67
Installation position	any
Weight	approx. 3 kg (depending on version)
Current consumption	approx. 23 mA
Operational life	100 million load cycles
CE-conformity	EMC Directive: 2014/30/EU
ATEX Directive	2014/34/EU
Wiring diagram	
<p>The diagram illustrates the electrical connections for the DPT 200. It shows a power source (P) with a positive terminal labeled 'supply +' and a negative terminal labeled 'supply -'. The positive terminal is connected to a load (R) and an ammeter (A). The negative terminal is connected to a common ground symbol. The supply voltage is denoted as V_s. Additionally, the device (P) is connected to an 'Interface HART' module, which is then connected to a PC via an RS232 interface.</p>	

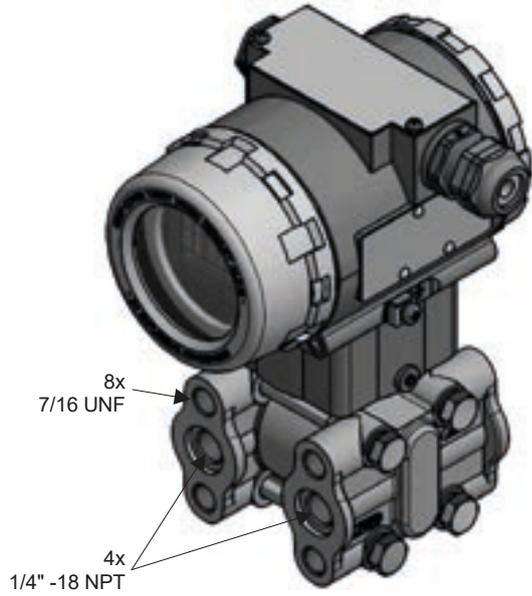
Pin configuration

Electrical connection	terminal clamps (for cable-Ø max. 2.5 mm ²)
Supply + (V _s +)	+
Supply / Test - (V _s -)	-
Test +	TEST +
Ground	⊕

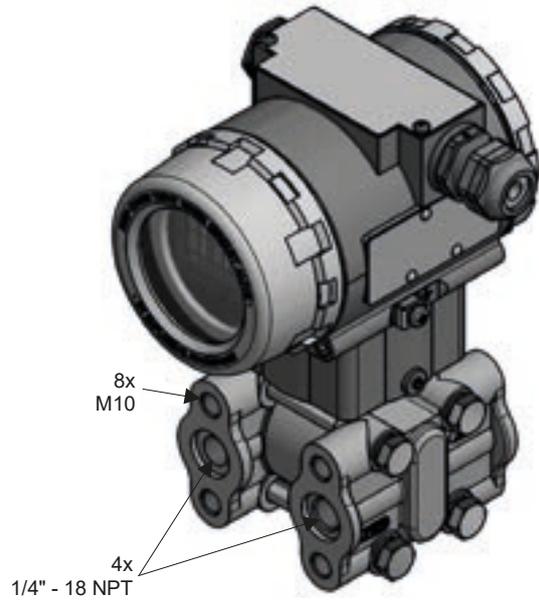
Dimensions (mm / in)**DPT 200 with display****DPT 200 without display**

Process connections

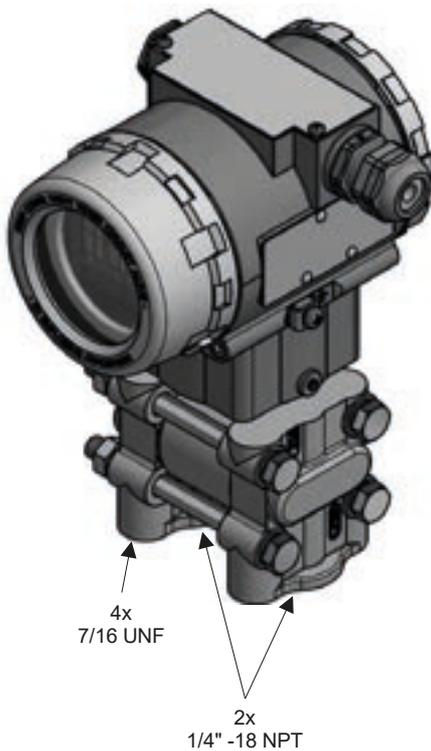
code N20 / N25
1/4" - 18 NPT / fixing 7/16 UNF



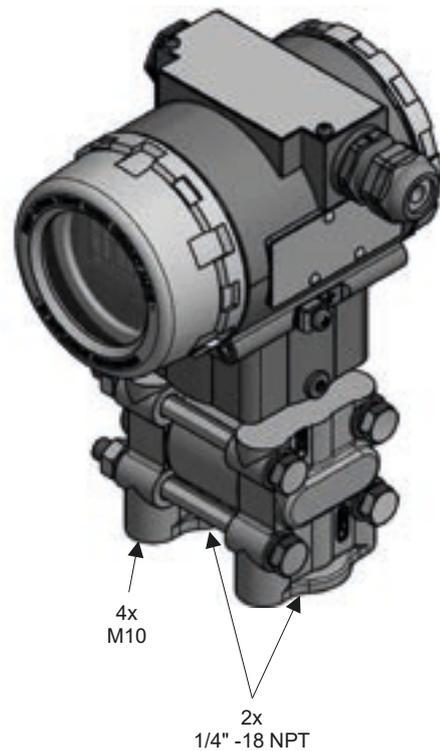
code N30
1/4" - 18 NPT / fixing M10



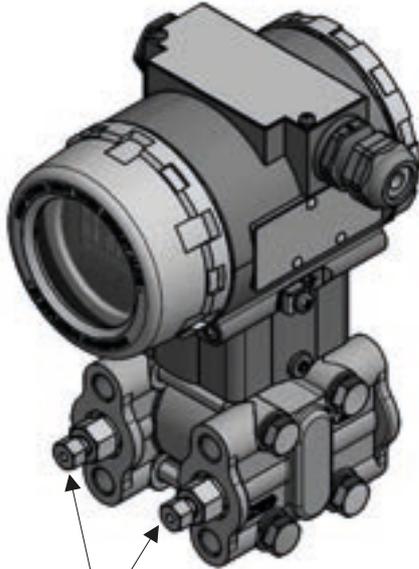
code N21
1/4" - 18 NPT vertical / fixing 7/16 UNF



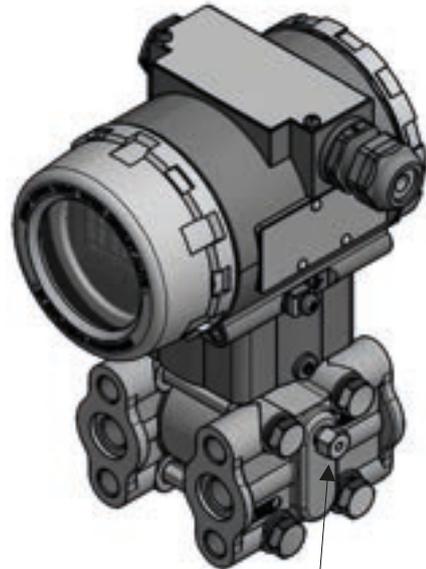
code N31
1/4" - 18 NPT vertical / fixing M10



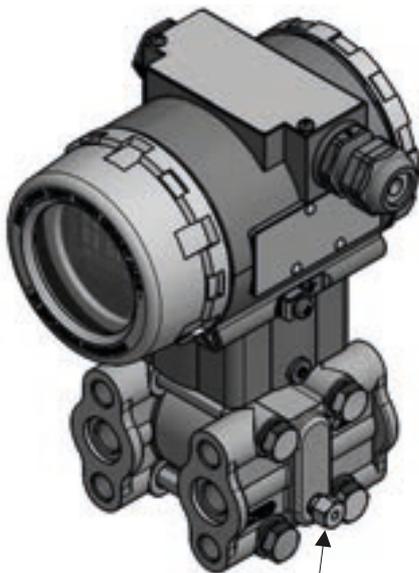
⇒ In scope of delivery two locking screws 1/4" - 18 NPT are included as standard.

Valves (optionally)**code 1**

vent position:
straight (2x)

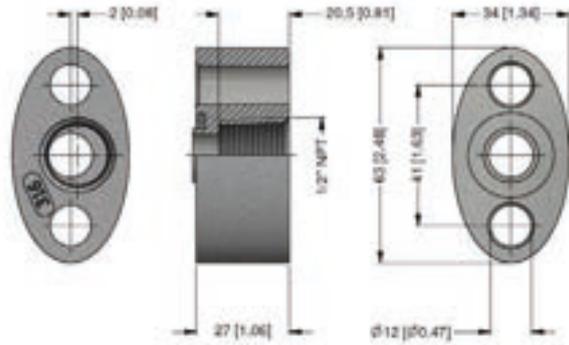
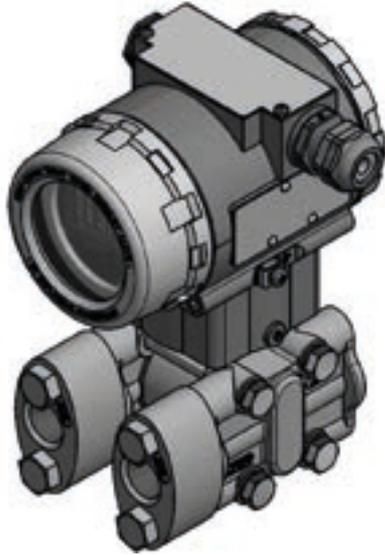
code 2

vent position:
top (2x)

code 3

vent position:
bottom (2x)

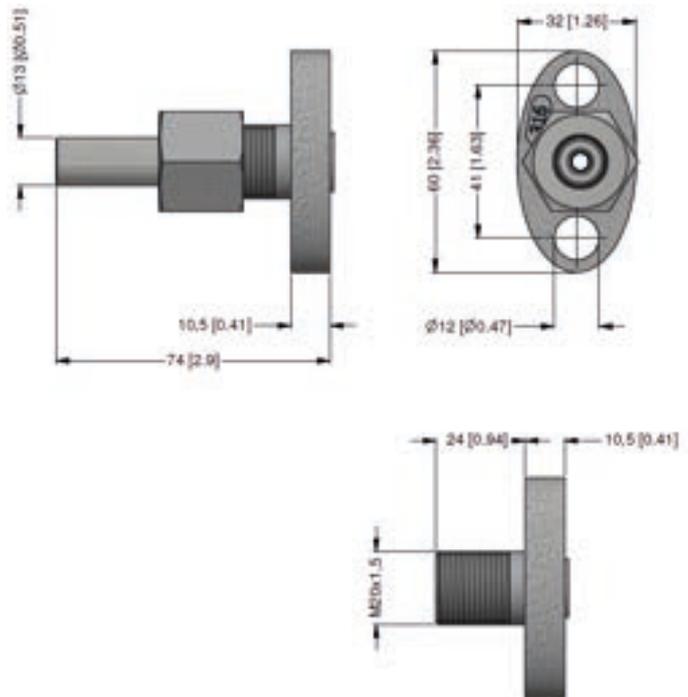
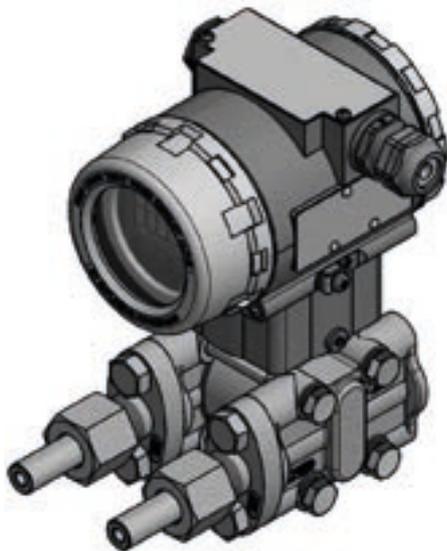
Oval flange adapter 1/2" NPT female



Technical data

Material of adapter	stainless steel 1.4401 (316)
Weight	approx. 300 g
Scope of delivery	two adapter, four locking screws 7/16 UNF x 1 3/4" A2
Ordering type	Ordering code
Oval flange adapter with 1/2" NPT female	Z1004181

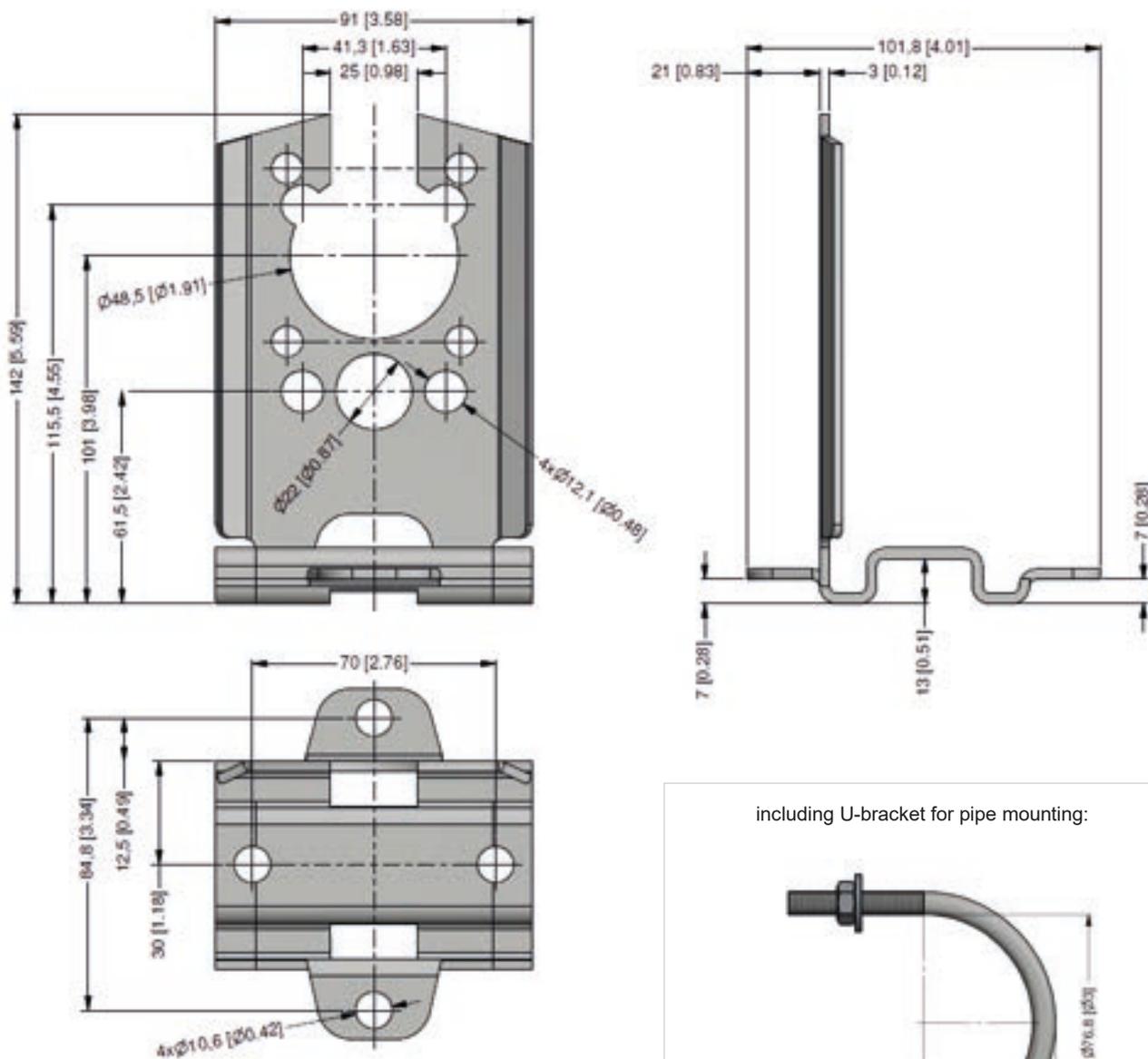
Oval flange adapter M20x1.5 male with tube ϕ 13 mm (optionally with volume reduced flange - code N25)



Technical data

Material of adapter / tube	stainless steel 1.4401 (316)
Weight	approx. 250 g
Scope of delivery	two adapter, four locking screws 7/16 UNF x 1" A2
Ordering type	Ordering code
Oval flange adapter M20x1.5 male with tube	Z1004182

Mounting bracket



Technical data

Material of mounting bracket	stainless steel 1.4301 (304)
Weight	approx. 500 g
Scope of delivery	mounting bracket, four locking screws 7/16 UNF x 3/4" A2, U-bracket for pipe mounting with two nuts

Ordering type

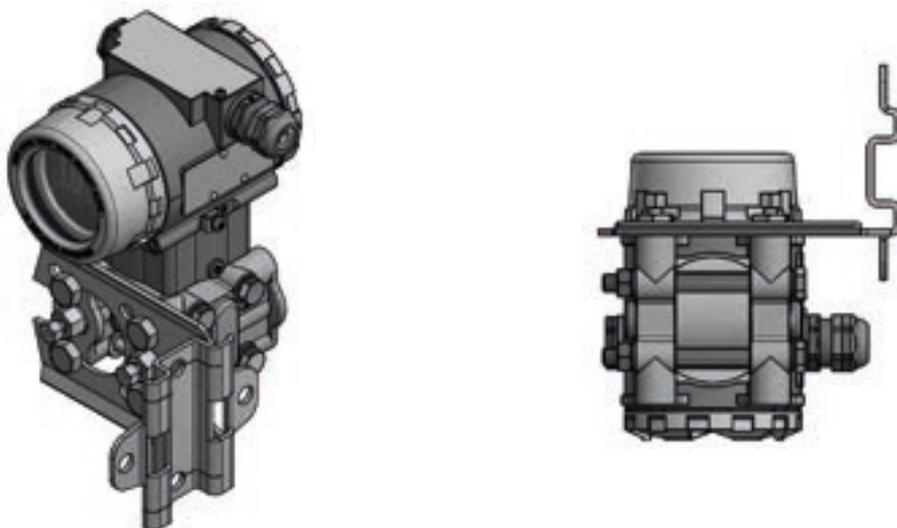
Mounting bracket

Ordering code

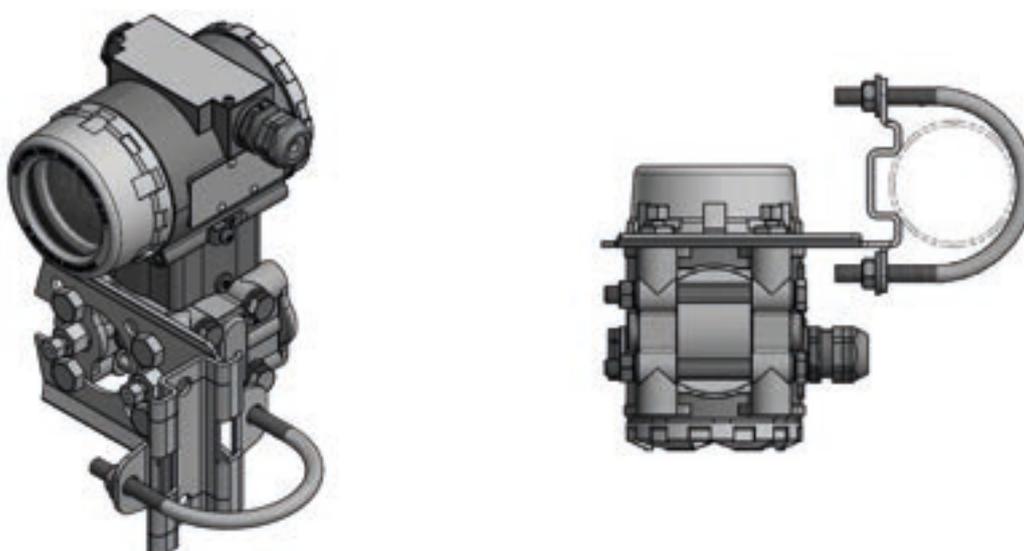
Z1004179

Mounting variants for mounting bracket

wall mounting



pipe mounting



HART® is a registered trademark of HART Communication Foundation; Hastelloy® is a brand name of Haynes International Inc.



DMD 331

Differential Pressure Transmitter for Liquids and Gases

Stainless Steel Sensor

accuracy according to IEC 60770:
0.5 % FSO

Differential pressure

from 0 ... 20 mbar up to 0 ... 16 bar

Output signals

2-wire: 4 ... 20 mA

3-wire: 0 ... 10 V

Special characteristics

- ▶ differential pressure wet / wet
- ▶ permissible static pressure -onesided- up to 30 times of differential pressure range
- ▶ compact design
- ▶ mechanical robust and reliable at dynamic pressures as well as shock and vibration

Optional versions

- ▶ IS-version
Ex ia = intrinsically safe
for gases and dust
- ▶ different electrical and mechanical connections
- ▶ customer specific versions

The DMD 331 is a differential pressure transmitter for industrial applications and is based on a piezoresistive stainless steel sensor, which can be pressurized on both sides with fluids or gases compatible with SST 1.4404 (316L) and 1.4435 (316L).

The compact design allows an integration of the DMD 331 in machines and applications with limited space. The DMD 331 calculates the difference between the pressure on the positive and the negative side and converts it into a proportional electrical signal.

Preferred areas of use are



Plant and machine engineering



Energy industry

Preferred used for



Water



Input pressure range							
Nominal pressure [bar]	0.2	0.4	1	2.5	6	16	
Differential pressure range [bar]							
TD 1 : 1	0 ... 0.2	0 ... 0.4	0 ... 1	0 ... 2.5	0 ... 6	0 ... 16	
up to	up to	up to	up to	up to	up to	up to	
TD 1 : 10	0 ... 0.02	0 ... 0.04	0 ... 0.1	0 ... 0.25	0 ... 0.6	0 ... 1.6	
Permissible static pressure, one-sided [bar]	0.5	1	3	6	20	60	

Output signal / Supply	
Standard	2-wire: 4 ... 20 mA / $V_S = 12 \dots 36 V_{DC}$
Option IS-version	2-wire: 4 ... 20 mA / $V_S = 14 \dots 28 V_{DC}$
Option 3-wire	3-wire: 0 ... 10 V / $V_S = 14 \dots 36 V_{DC}$

Performance	
Accuracy ¹	for ranges of max. input pressure $P_N > 1$ bar (codes C, D, E) $\leq \pm 0.5$ % FSO (differential pressure range with TD from 1:1 up to 1:5) $\leq \pm 1$ % FSO (differential pressure range with TD > 1:5 up to 1:10) for ranges of max. input pressure $P_N \leq 1$ bar (codes A, B, F) $\leq \pm 0.5$ % FSO (differential pressure range with TD from 100 to 50 % from nominal pressure) $\leq \pm 1$ % FSO (differential pressure range with TD > 50 to 10 % from nominal pressure)
Permissible load	current 2-wire: $R_{max} = [(V_S - V_S \text{ min}) / 0.02 \text{ A}] \Omega$ voltage 3-wire: $R_{min} = 10 \text{ k}\Omega$
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / $\text{k}\Omega$
Long term stability	$\leq \pm 0.2$ % FSO / year at reference conditions
Response time	< 5 msec

¹ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)

Thermal effects ² (Offset and Span) / Permissible temperatures			
Nominal pressure P_N [bar]	0.2	0.4	≥ 1.0
Tolerance band [% FSO]	$\leq \pm 2.5$	$\leq \pm 2$	$\leq \pm 1.5$
TC, average [% FSO / 10 K]	± 0.4	± 0.3	± 0.2
in compensated range [°C]	0 ... 50		0 ... 70
Permissible temperatures	medium: -25 ... 125 °C	electronics / environment: -25 ... 85 °C	storage: -40 ... 100 °C

² relating to nominal pressure range

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 (20 ... 2000 Hz)
Shock	100 g / 11 msec

Materials	
Pressure port	stainless steel 1.4404 (316L)
Housing	aluminium, black anodized
Seals (media wetted)	FKM / others on request
Diaphragm	stainless steel 1.4435 (316L)
Media wetted parts	pressure port, seals, diaphragm

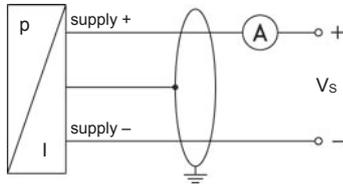
Miscellaneous	
Current consumption	signal output current: max. 25 mA signal output voltage: max. 7 mA
Weight	approx. 250 g
Operational life	100 million load cycles
Ingress protection	IP 65
CE-conformity	EMC Directive: 2014/30/EU
ATEX Directive	2014/34/EU

Explosion protection (only for 4 ... 20 mA / 2 wire)	
Approvals	IBExU 08 ATEX 1125 X
DX13A-DMD 331	zone 1: II 2G Ex ia IIC T4 Gb zone 21: II 2D Ex ia IIIC T85°C Db
Safety technical maximum values	$U_i = 28 V_{DC}$, $I_i = 93 \text{ mA}$, $P_i = 660 \text{ mW}$, $C_i \leq 1 \text{ nF}$, $L_i \leq 10 \mu\text{H}$, the supply connections have an inner capacity of max. 27 nF to the housing
Permissible temperatures for environment	-25 ... 65°C

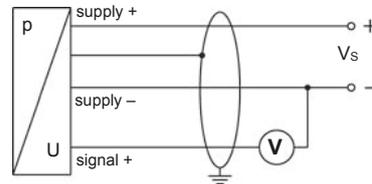
Pin configuration	
Electrical connection	ISO 4400
Supply +	1
Supply -	2
Signal + (only 3-wire)	3

Wiring diagrams

2-wire-system (current)

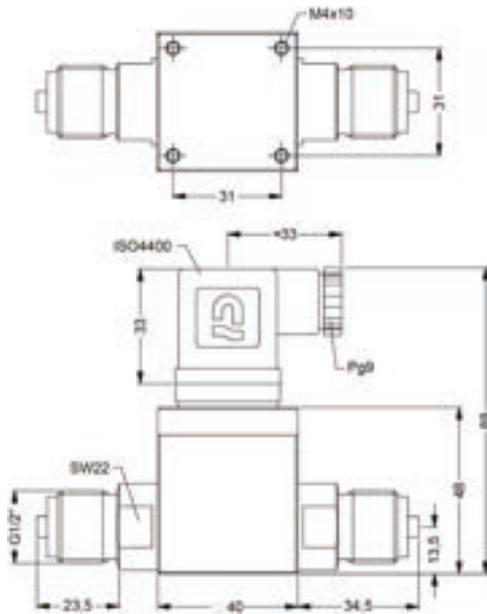


3-wire-system (voltage)



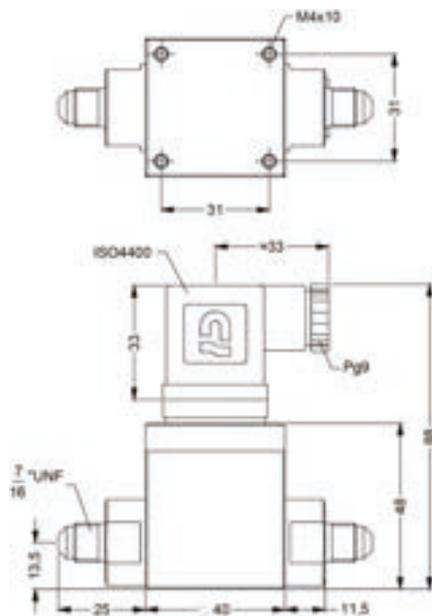
Mechanical connection (dimensions in mm)

standard

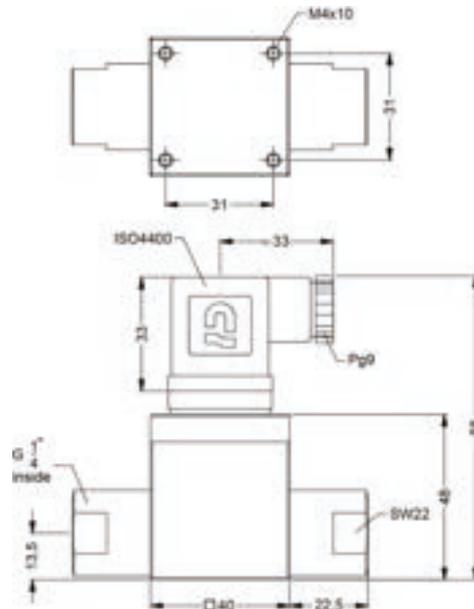


G1/2" EN 837

option



7/16" UNF DIN 3866



G1/4" internal

Ordering code DMD 331

DMD 331

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Pressure											
differential pressure	7	3	0								
Nominal pressure range [bar]											
0.2										F	
0.4										A	
1.0										B	
2.5										C	
6.0										D	
16										E	
customer										9	
Differential pressure range [bar]											
		F	A	B	C	D	E				
0.02		■						0	2	0	0
0.04		■	■					0	4	0	0
0.10		■	■	■				1	0	0	0
0.25		■	■	■	■			2	5	0	0
0.40		■	■	■	■	■		4	0	0	0
0.60		■	■	■	■	■	■	6	0	0	0
1.0		■	■	■	■	■	■	1	0	0	1
2.5		■	■	■	■	■	■	2	5	0	1
4.0		■	■	■	■	■	■	4	0	0	1
6.0		■	■	■	■	■	■	6	0	0	1
10		■	■	■	■	■	■	1	0	0	2
16		■	■	■	■	■	■	1	6	0	2
customer		■	■	■	■	■	■	9	9	9	9
Output											
4 ... 20 mA / 2-wire											1
intrinsic safety 4 ... 20 mA / 2 wire											E
0 ... 10 V / 3-wire											3
customer											9
Accuracy											
TD ≤ 1:5	0.5 % FSO										5
TD > 1:5 up to 1:10	1.0 % FSO										8
customer											9
Electrical connection											
male and female plug ISO 4400											1
customer											9
Mechanical connection											
G1/2" EN 837											2
7/16" UNF DIN 3866											U
G1/4" internal thread											J
customer											9
Seals											
FKM											1
customer											9
Special version											
standard											0
customer											9



DMD 341

Differential Pressure Transmitter for Gases and Compressed Air in Compact Version

Silicon Sensor

accuracy according to IEC 60770:
0.35 % / 1% / 2%

Differential pressure

from 0 ... 6 mbar up to 0 ... 1000 mbar

Output signals

2-wire: 4 ... 20 mA

3-wire: 0 ... 20 mA / 0 ... 10 V

Special characteristics

- ▶ aluminium housing
- ▶ suited for non-aggressive gases and compressed air

Optional versions

- ▶ customer specific versions

The DMD 341 is a differential pressure transmitter for non-aggressive gases and compressed air. Because of its compact and robust aluminium housing it is particularly suited for machine and plant engineering.

Basic element of the DMD 341 is a piezo-resistive silicon sensor, which features high accuracy and excellent long term stability.

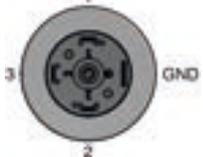
Preferred areas of use are

-  Plant and machine engineering
-  Heating and air conditioning

Preferred used for

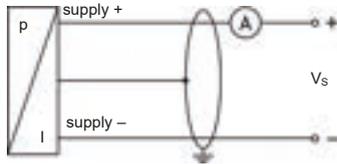
-  Compressed air, non-aggressive gases



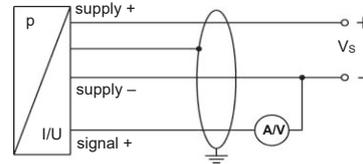
Input pressure range											
Nominal pressure p_N (over, differential pressure) [mbar]	0...6	0...10	0...20	0...40	0...60	0...100	0...160	0...250	0...400	0...600	0...1000
Nominal pressure p_N symmetric (differential pressure) [mbar]	± 6	± 10	± 20	± 40	± 60	± 100	± 160	± 250	± 400	± 600	± 1000
Overpressure [mbar]	100	100	200	350	350	1000	1000	1000	1000	3000	3000
Output signal / Supply											
Standard	standard pressure range: 2-wire: 4 ... 20 mA / $V_S = 8 \dots 32 V_{DC}$										
Options 3-wire	standard pressure range: 3-wire: 0 ... 20 mA / $V_S = 14 \dots 30 V_{DC}$ 0 ... 10 V / $V_S = 14 \dots 30 V_{DC}$										
Performance											
Accuracy ¹	$p_N > 160$ mbar: $\leq \pm 0.35$ % FSO $40 \text{ mbar} \leq p_N \leq 160$ mbar: $\leq \pm 1$ % FSO $p_N < 40$ mbar: $\leq \pm 2$ % FSO										
Permissible load	current 2-wire: $R_{max} = [(V_S - V_{S min}) / 0.02 A] \Omega$ current 3-wire: $R_{max} = 240 \Omega$ voltage 3-wire: $R_{min} = 10 k\Omega$										
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / k Ω										
Long term stability	$\leq \pm 0.2$ % FSO / year at reference conditions										
Response time	< 5 msec										
¹ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)											
Thermal effects (offset and span)											
Nominal pressure p_N [mbar]	≤ 10		≤ 20		≤ 250		> 250				
Tolerance band [% FSO]	$\leq \pm 2$		$\leq \pm 1.5$		$\leq \pm 1$		$\leq \pm 0.5$				
TC, average [% FSO / 10 K]	± 0.3		± 0.25		± 0.15		± 0.08				
in compensated range	0 ... 60 °C										
Permissible temperatures											
Medium	-25 ... 125 °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 (20 ... 2000 Hz)										
Shock	100 g / 11 msec										
Materials											
Pressure port	G1/8" internal: aluminium, silver anodized flexible tube connection $\varnothing 6.6 \times 11$: brass, nickel plated										
Housing	aluminium, silver anodised										
Seal (media wetted)	PUR, bonded										
Sensor	silicon, glass, RTV, ceramics Al_2O_3 , nickel										
Media wetted parts	pressure port, housing, seal, sensor										
Miscellaneous											
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 μ H/m										
Current consumption	signal output current: max. 25 mA signal output voltage: max. 7 mA										
Weight	approx. 250 g										
Operational life	100 million load cycles										
CE-conformity	EMC Directive: 2014/30/EU										
Pin configuration											
Electrical connection	ISO 4400		M12x1 (4-pin), metal				cable colour (IEC 60757)				
											
Supply +	1		1				WH (white)				
Supply -	2		2				BN (brown)				
Signal + (only 3-wire)	3		3				GN (green)				
Shield	ground pin 		4				GNYE (green-yellow)				

Wiring diagrams

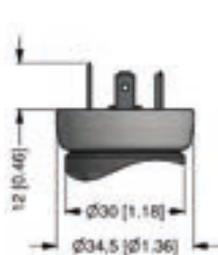
2-wire-system (current)



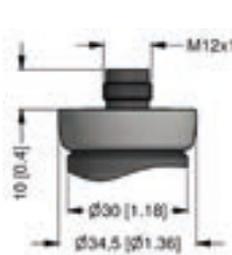
3-wire-system (current / voltage)



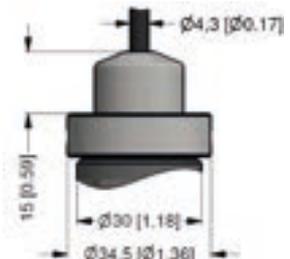
Electrical connections (dimensions mm / in)



ISO 4400 (IP 65)



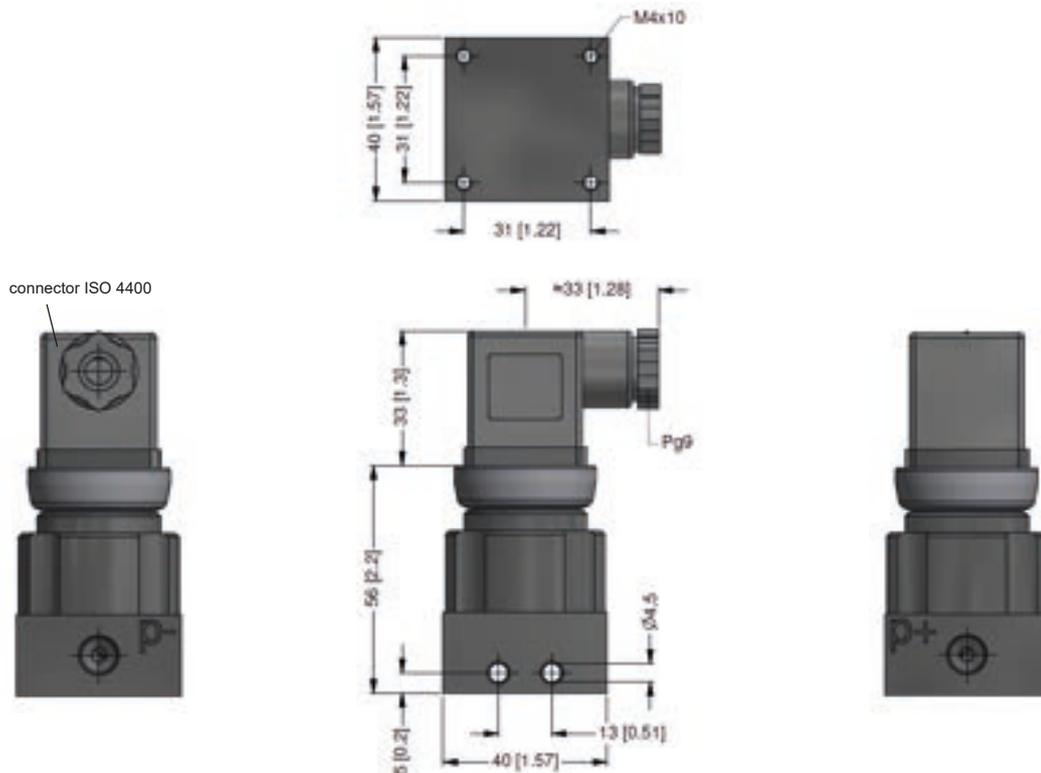
M12x1, 4-pin (IP 67)



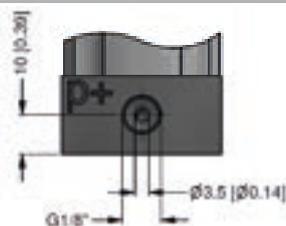
cable outlet with PVC-cable (IP 67)²

² standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C); optionally cable with ventilation tube

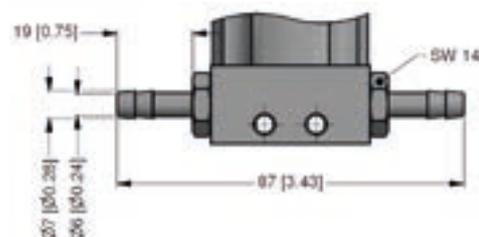
Dimensions (mm / in)



Mechanical connection (dimensions mm / in)



G1/8" internal thread



Ø6.6x11 (for flex. tubes Ø6)

Ordering code DMD 341

DMD 341

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---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Pressure																						
	differential pressure	3	3	0																		
	gauge pressure	3	3	1																		
Input [mbar]																						
	6	0	0	6	0																	
	10	0	1	0	0																	
	20	0	2	0	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																	
	-6 ... 6	S	0	0	6															consult		
	-10 ... 10	S	0	1	0																consult	
	-20 ... 20	S	0	2	0																consult	
	-40 ... 40	S	0	4	0																consult	
	-60 ... 60	S	0	6	0																consult	
	-100 ... 100	S	1	0	0																consult	
	-160 ... 160	S	1	6	0																consult	
	-250 ... 250	S	2	5	0																consult	
	-400 ... 400	S	4	0	0																consult	
	-600 ... 600	S	6	0	0																consult	
	-1000 ... 1000	S	1	0	2																consult	
	customer	9	9	9	9																consult	
Output																						
	4 ... 20 mA / 2-wire																				1	
	0 ... 20 mA / 3-wire																				2	
	0 ... 10 V / 3-wire																				3	
	customer																				9	
																						consult
Accuracy																						
	standard for $p_N > 160$ mbar:	0,35 %	FSO																		3	
	standard for $40 \text{ mbar} \leq p_N \leq 160$ mbar:	1,0 %	FSO																		8	
	standard for $p_N < 40$ mbar:	2,0 %	FSO																		G	
	customer																				9	
																						consult
Electrical connection																						
	male and female plug ISO 4400																				1	
	male plug M12x1 (4-pin), metal																				M	
	cable outlet with PVC cable (IP67) ¹																				T	
	customer																				9	
																						consult
Mechanical connection																						
	G1/8" internal thread																				Q	
	Ø 6.6 x 11 (for flex. tubes Ø 6)																				Y	
	customer																				9	
																						consult
Seals																						
	PUR, bonded																				6	
Special version																						
	standard																				0	
	customer																				9	
																						consult

¹ standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C); others on request



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 mode selectable: P+, P-, ΔP
- ▶ display and pressure ports rotatable

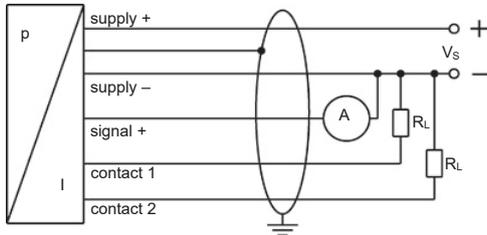


Technical Data

Input pressure range								
Nominal pressure ¹	[bar]	1	2	3.5	7	20	35	70
Differential pressure range	[bar]							
	TD 1:1	0 ... 1	0 ... 2	0 ... 3.5	0 ... 7	0 ... 20	0 ... 35	0 ... 70
	up to	up to	up to	up to	up to	up to	up to	up to
TD 1:10		0 ... 0.1	0 ... 0.2	0 ... 0.35	0 ... 0.7	0 ... 2	0 ... 3.5	0 ... 7
¹ nominal pressure corresponds to the maximal permissible static pressure (one-sided)								
Analogue signal / Supply								
Standard		3-wire: 4 ... 20 mA				24 V _{DC} ± 10 %		
Permissible load		500 Ω						
Accuracy ²		≤ ± 1 % BFSL						
² accuracy according to IEC 60770 (non-linearity, hysteresis, repeatability)								
Contact								
Number, type		standard: 1 PNP				option: 2 independent PNP		
Max. switching current		125 mA, short-circuit proof						
Switching accuracy ²		≤ ± 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: pressure "P+" or pressure "P-" or pressure difference turn-down: max. 1:10						
Thermal error ³ (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		
³ relating to nominal pressure range								
Electrical protection								
Short-circuit protection		permanent						
Reverse polarity protection		no damage, but also no function						
Electromagnetic compatibility		emission and immunity according to EN 61326						

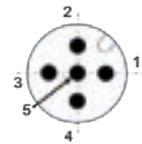
Mechanical stability		
Vibration	10 g RMS (20 ... 2000 Hz)	according to DIN EN 60068-2-6
Shock	100 g / 11 msec	according to DIN EN 60068-2-27
Materials		
Pressure port	stainless steel 1.4404 (316L)	
Housing	PA 6.6, Polycarbonate	
Seals	FKM	others on request
Diaphragm	stainless steel 1.4435 (316L)	
Media 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	max. 60 mA (without switching current)	
Weight	approx. 350 g	
Operational life	100 million load cycles	
Ingress protection (device)	IP 65	

Wiring diagram



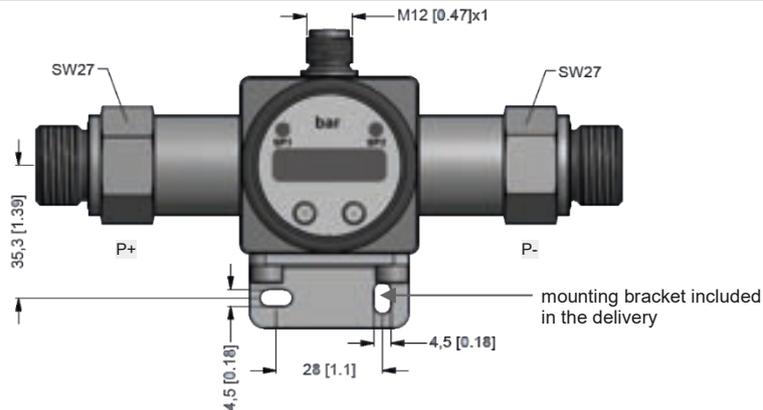
Pin configuration

Electrical connections	M12x1 (5-pin), plastic
Supply +	1
Supply -	3
Signal +	2
Contact 1	4
Contact 2	5
Shield	via pressure port

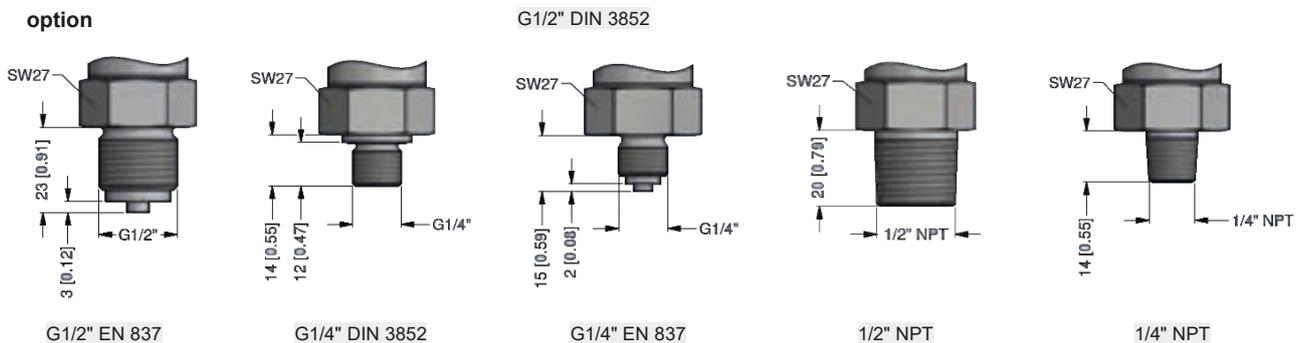


Mechanical connections (dimensions mm / in)

standard



option



Ordering code DMD 831

DMD 831

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Pressure												
differential pressure	7	3	2									
Nominal pressure range [bar]												
1.0				D	5							
2.0				D	6							
3.5				D	7							
7.0				D	8							
20				D	A							
35				D	B							
70				H	1							
customer				9	9					consult		
Differential pressure range [bar]												
1.0						1	0	0	1			
2.0						2	0	0	1			
3.5						3	5	0	1			
7.0						7	0	0	1			
20						2	0	0	2			
35						3	5	0	2			
70						7	0	0	2			
customer						9	9	9	9	consult		
Analogue output												
4 ... 20 mA / 3-wire									7			
customer									9	consult		
Contact												
1 contact PNP									1			
2 contacts PNP									2			
customer									9	consult		
Accuracy												
1% FSO BFSL									G			
customer									9	consult		
Electrical connection												
M12x1 (5-pin)									N	0	1	
customer									9	9	9	
Mechanical connection												
G 1/2" DIN 3852									1	0	0	
G 1/2" EN 837									2	0	0	
G 1/4" DIN 3852									3	0	0	
G 1/4" EN 837									4	0	0	
1/2" NPT									N	0	0	
1/4" NPT									N	4	0	
customer									9	9	9	
Seal												
FKM										1		
customer										9	consult	
Special version												
standard										0	0	0
customer										9	9	9



DPS 200

Differential Pressure Transmitter for Gas and Compressed Air

Applications:

- ▶ for HVAC-applications

Characteristics:

- ▶ piezoresistive silicon sensor
- ▶ differential pressure range 6 ... 1000 mbar



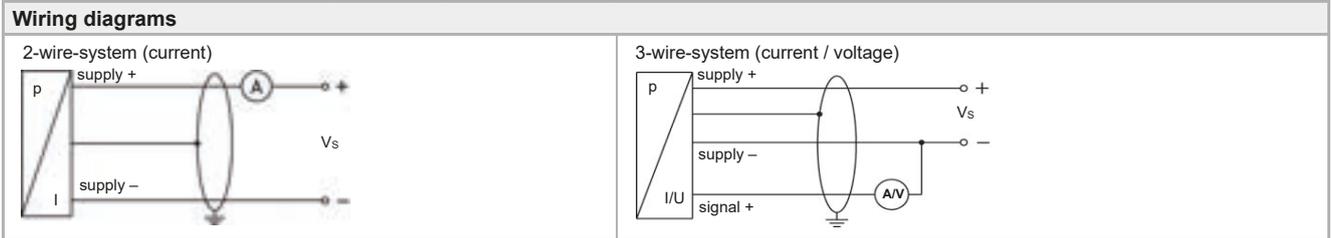
Technical Data

Input pressure range												
Nominal pressure P_N [mbar] (differential, gauge pressure)	6	10	16	25	40	60	100	160	250	400	600	1000
max. static pressure [mbar]	200	345	345	345	345	345	345	1000	1000	3000	3000	3000
Output signal / Supply												
Standard	3-wire: 0 ... 10 V	$V_S = 19 \dots 32 V_{DC}$										
Option	2-wire: 4 ... 20 mA	$V_S = 11 \dots 32 V_{DC}$										
	3-wire: 4 ... 20 mA	$V_S = 19 \dots 32 V_{DC}$										
Performance												
Accuracy	$\leq \pm 1\% \text{ FSO BFSL}$											
Permissible load	current 2-wire: $R_{max} = [(V_S - V_{Smin}) / 0,02 \text{ A}] \Omega$ current 3-wire: 330 Ω voltage 3-wire: 10 k Ω											
Influence effects	supply: $\leq \pm 0,1\% \text{ FSO}/10V$ load: $\leq \pm 0,1\% \text{ FSO}/k\Omega$											
Response time (0 ... 100%)	2-wire: adjustable by potentiometer in the range of 500 msec up to 2.5 sec 3-wire: adjustable by potentiometer in the range of 50 msec up to 2.5 sec											
Long term stability	$\leq \pm 0,5\% \text{ FSO} / \text{year}$ at reference conditions											
Measuring rate	2-wire: 8 Hz					3-wire: 1 kHz						
Thermal effects (offset and span)												
Thermal error	$\leq \pm 0,3\% \text{ FSO} / 10 \text{ K (typ.)}$											
in compensated range	0 ... 50 °C											
Permissible temperatures												
Medium	0 ... 50°C											
Electronics / environment	0 ... 50°C											
Storage	-10 ... 70°C											
Electrical protection												
Short-circuit protection	permanent											
Reverse polarity protection	no damage, but also no function											
Electromagnetic protection	emission and immunity according to EN 61326											
Materials												
Pressure port	brass nickel plated											
Housing	ABS											
Sensor	ceramic, silicon, epoxy, RTV											
Media wetted parts	pressure port, PVC / silicone tube, sensor											

Miscellaneous	
LC-Display (optional)	visible range 32.5 x 22.5 mm; 5-digit 7-segment-main display, digit size 8 mm; 8-digit 14-segment-additional display, digit size 5 mm; 52-segment-bargraph
Current consumption	2-wire: signal output current: max. 22 mA 3-wire: signal output current: max. 30 mA signal output voltage: 7.5 mA (20 mA short circuit) display: + 1 mA
Units	following units can be set at factory: [bar], [mbar], [PSI], [Inch Hg], [cm Hg], [mm Hg], [hPa], [kPa], [MPa], [mH ₂ O], [Pa], [mmH ₂ O]
Ingress protection	IP 54
Weight	approx. 165 g
Installation position	vertical ¹
Operational life	100 million load cycles

¹ The devices are calibrated in a vertical position with the pressure port down. If this position is changed on installation there can be slight deviations in the zero point.

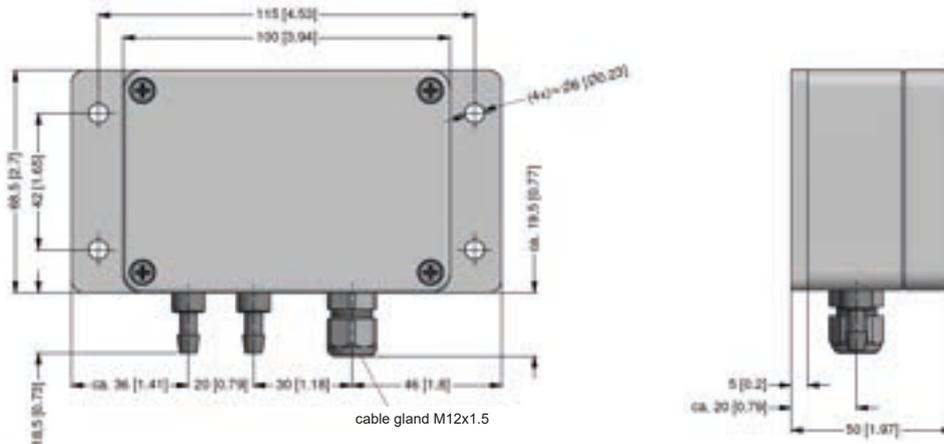
Mechanical connections (dimensions in mm)	
Standard	Ø 6.6 x 11 (for flex. tubes Ø 6)
Option	Ø 4.4 x 10 (for flex. tubes Ø 4)



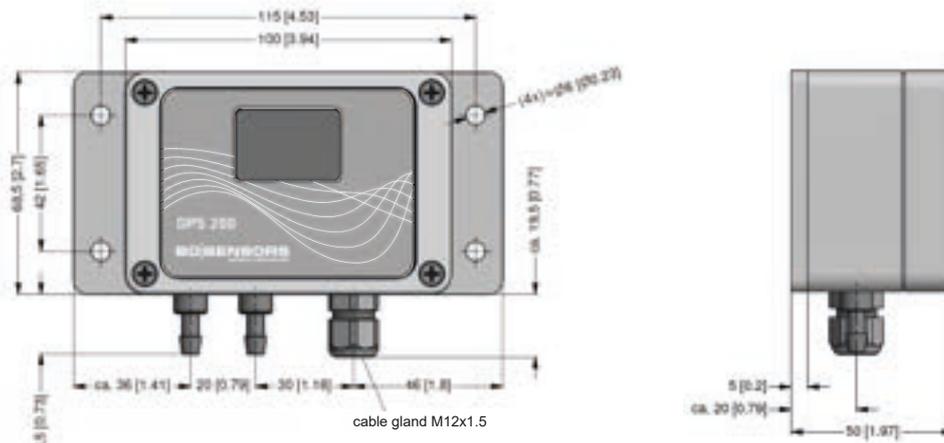
Pin configuration		
Electrical connections	terminals 2-wire-system	terminals 3-wire-system
supply + supply - signal + (only for 3-wire)	2 / + 3 / - 1 (not connected)	2 / V _S + 3 / V _S - 1 / SIG

Dimensions (mm / in)

without display



with display





DPS 300

Multi Range Differential Pressure Transmitter for Gas and Compressed Air

Silicon Sensor

accuracy according to IEC 60770:
0.5% FSO BFUL

Differential pressure

from 0 ... 1.6 mbar up to 0 ... 1000 mbar

Output signals

3-wire: 0 ... 10 V, 0 ... 20 mA
(0 ... 5 V, 4 ... 20 mA switchable)

2-wire: 4 ... 20 mA (optional)

Special characteristics

- ▶ adjustable ranges
- ▶ high overpressure capability
- ▶ adjustable damping
- ▶ compact form

Optional versions

- ▶ LC-display, two-line
- ▶ automatic zero adjustment
- ▶ contacts
(only in combination with display)
- ▶ square root extraction
(only in combination with display)

The pressure transmitter DPS 300 was developed for the differential pressure measuring for dry, non aggressive gases and compressed air and can be used for several HVAC applications

The DPS 300 is a multi range transmitter with up to three adjustable ranges.

The device is equipped with a two-line LC display optionally and can be parameterized simply. Values, status of the contact and the unit are shown on the display.

Preferred applications are



HAVC applications
e.g. air conditioning, clean room
technology, filter monitoring



Medical

Preferred areas of use are



Gas, compressed air



Input pressure range						
Nominal pressure p_N (differential, gauge pressure) [mbar]	1.6	4	10	40	250	1000
Adjustable to [mbar]	1.0	2.5	6	25	60 / 160	400 / 600
Nominal pressure p_N symmetric (differential pressure) [mbar]	± 1.6	± 4	± 10	± 40	± 250	± 1000
Max. static pressure [mbar]	200	200	200	345	1000	3000

Output signal / Supply			
Standard	3-wire:	switchable on:	0 ... 10 V / 0 ... 20 mA 0 ... 5 V / 4 ... 20 mA with automatic zero adjustment: $V_S = 19 \dots 32 V_{DC}$ $V_S = 24 \dots 32 V_{DC}$
Option	2-wire:		4 ... 20 mA with automatic zero adjustment: $V_S = 11 \dots 32 V_{DC}$ $V_S = 24 \dots 32 V_{DC}$

Performance	
Accuracy	for $p_N \geq 6$ mbar: $\leq \pm 0.5\%$ FSO BFSL for $p_N < 6$ mbar: $\leq \pm 1\%$ FSO BFSL
Permissible load	voltage 3-wire: $R_{min} = 10 \text{ k}\Omega$ current 3-wire: 330 Ω current 2-wire: $R_{max} = [(V_S - V_{Smin}) / 0,02 \text{ A}] \Omega$
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / $\text{k}\Omega$
Response time T_{90}	< 100 msec; adjustable by potentiometer in the range of 0 msec up to 5000 msec
Turn on time	500 msec
Long term stability	for $p_N < 6$ mbar: $\leq \pm 0.5\%$ FSO / year at reference conditions for $p_N \geq 6$ mbar: $\leq \pm 0.2\%$ FSO / year at reference conditions
Measuring rate	12.5 Hz

Contact (optional)		
	3-wire version	2-wire version
Number, form	2 x relay-output (NO/NC)	2 x PNP-open-collector-contact
switching current	max. 1 A	max. 125 mA resistant; short-circuit-proof
switching voltage	max. 60 V_{DC} ; max. 40 V_{AC}	
switching capacity	max. 60 W	
Accuracy of switching points	$\leq \pm 2\%$ FSO	$\leq \pm 2\%$ FSO
Accuracy of repeatability	$\leq \pm 0.5\%$ FSO	$\leq \pm 0.5\%$ FSO
Switching frequency	5 Hz	5 Hz
Switching cycles	< 100 x 10 ⁶	< 100 x 10 ⁶

Thermal effects (offset and span)	
Thermal error	for $p_N < 6$ mbar: $\leq \pm 0.5\%$ FSO / 10 K (typ.) for $p_N \geq 6$ mbar: $\leq \pm 0.3\%$ FSO / 10 K (typ.)
in compensated range	0 ... 50 °C

Permissible temperatures	
Medium	0 ... 50 °C
Electronics / environment	0 ... 50 °C
Storage	-10 ... 70 °C

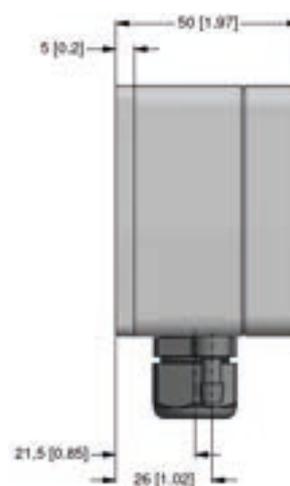
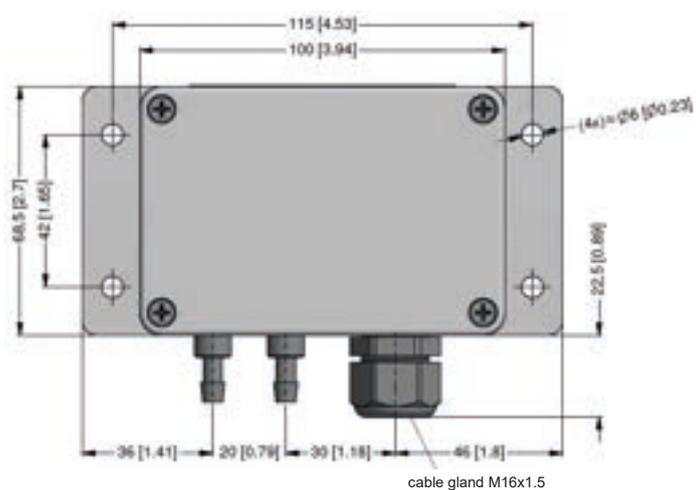
Electrical protection	
Short-circuit protection	permanent
Reverse polarity protection	no damage, but also no function
Electromagnetic protection	EMC directive: 2014/30/EU emission and immunity according to EN 61326

Materials	
Pressure port	brass nickel plated
Housing	ABS
Sensor	ceramic, silicon, epoxy, RTV
Media wetted parts	pressure port, PVC / silicone tube, sensor

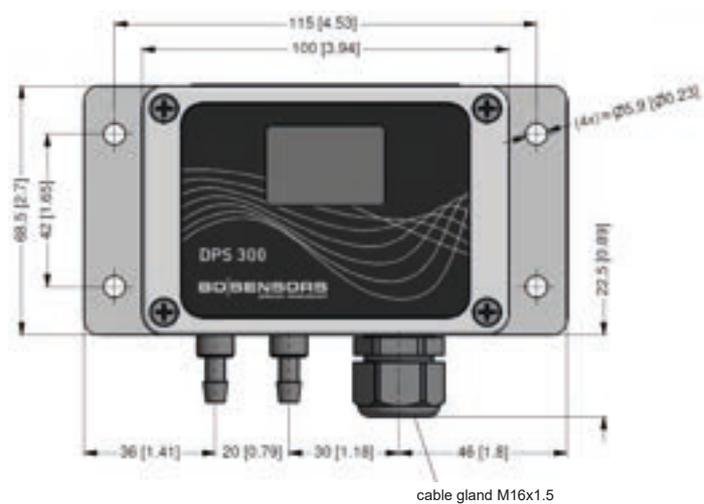
Display (optionally)																			
Performance	two-line LC-Display, visible range 32.5 x 22.5 mm 5-digit 7-segment-main display, digit size 8 mm, range of indication: ± 9999 8-digit 14-segment-additional display, digit size 5 mm 52-segment-bargraph accuracy: 0.1% ± 1 digit																		
Functions	<ul style="list-style-type: none"> - parameterisation of contacts - selection of units - selection of signal (linear, square root extraction) - cut-off-function (only with square root extraction) - min- / max-value - recalibration - autozeroing - factory setting 																		
Miscellaneous																			
Current consumption	2-wire: max. 22 mA 3-wire: max. 30 mA (during automatic zero adjustment: +23 mA)																		
Weight	approx. 200 g																		
Ingress protection	IP 54																		
Installation position	vertical ¹																		
Operational life	100 million load cycles																		
¹ The devices are calibrated in a vertical position with pressure port down. If this position is changed on installation there can be slight deviations in the zero point.																			
Mechanical connections (dimensions in mm)																			
Standard	$\varnothing 6.6 \times 11$ (for flex. tubes $\varnothing 6$)																		
Option	$\varnothing 4.4 \times 10$ (for flex. tubes $\varnothing 4$)																		
Electrical connections (conductor cross-section)																			
Without ferrule	1.5 mm ²																		
With ferrule	1 mm ²																		
Pin configuration																			
Standard	cable gland M16x1.5																		
Electrical connections	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>3-wire</th> <th>2-wire</th> </tr> </thead> <tbody> <tr> <td>supply +</td> <td>VS +</td> <td>VS +</td> </tr> <tr> <td>supply -</td> <td>VS -</td> <td>VS -</td> </tr> <tr> <td>signal + (only for 3-wire)</td> <td>Iout / Vout</td> <td>-</td> </tr> <tr> <td>contact 1</td> <td>C1 / NO1 / NC1</td> <td>S1</td> </tr> <tr> <td>contact 2</td> <td>C2 / NO2 / NC2</td> <td>S2</td> </tr> </tbody> </table>		3-wire	2-wire	supply +	VS +	VS +	supply -	VS -	VS -	signal + (only for 3-wire)	Iout / Vout	-	contact 1	C1 / NO1 / NC1	S1	contact 2	C2 / NO2 / NC2	S2
	3-wire	2-wire																	
supply +	VS +	VS +																	
supply -	VS -	VS -																	
signal + (only for 3-wire)	Iout / Vout	-																	
contact 1	C1 / NO1 / NC1	S1																	
contact 2	C2 / NO2 / NC2	S2																	
Wiring diagrams																			
<p>3-wire-system (current / voltage)</p>	<p>3-wire-system (current / voltage) with 2 contacts</p>																		
<p>2-wire-system (current)</p>	<p>2-wire-system (current) with 2 contacts</p>																		

Dimensions (mm / in)

without display



with display



Ordering code DPS 300

DPS 300



Pressure										
	differential pressure	8	1	5						
	gauge pressure	8	1	6						consult
Input										
	[mbar]									
	1.6	0	0	1	6					
	4.0	0	0	4	0					
	10	0	1	0	0					
	40	0	4	0	0					
	250	2	5	0	0					
	1000	1	0	0	1					
	-1.6 ... 1.6	S	1	K	6					
	-4 ... 4	S	0	0	4					
	-10 ... 10	S	0	1	0					
	-40 ... 40	S	0	4	0					
	-250 ... 250	S	2	5	0					
	-1000 ... 1000	S	1	0	2					
	customer	9	9	9	9					consult
Output										
	3-wire: 0 ... 10 V, 0 ... 20 mA ¹					3Z				
	2-wire: 4 ... 20 mA					1				
	customer					9				consult
contact										
	without					0				
	2 contacts ²					B				
Accuracy										
	p _N ≥ 6 mbar	0,5 % FSO BFSL				8				
	p _N < 6 mbar	1,0 % FSO BFSL				G				
Display										
	without display					0				
	LC display					C				
	customer					9				consult
Front foil										
	BD SENSORS					1				
	neutral					N				
	customer					9				consult
Mechanical connection										
	Ø6.6 x 11 (for flex. tubes Ø6)						Y	0	0	
	Ø4.4 x 10 (for flex. tubes Ø4)						Y	0	2	
							9	9	9	consult
Pressure port										
	brass nickel plated							M		
	customer							9		consult
Special version										
	standard							0	0	0
	automatic zeroing							6	0	0
	square-root extraction ²							6	0	5
	customer							9	9	9
										consult

¹ output switchable on 0 ... 5 V / 4 ... 20 mA

² only in combination with display

COMPETENCE

Industrial pressure measurement technology from 0.1 mbar up to 8000 bar

- > pressure transmitters, electronic pressure switches or hydrostatic level probes
- > OEM or high-end products
- > standard products or customized solutions

BD|SENSORS has the right pressure measuring device at the right price.

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Pressure measurement at the highest level

The concentration on electronic pressure transmitter has led to extraordinary efficiency and economical pricing.

BD|SENSORS is certain to be one of the most economical suppliers on the world market, given equal technical and commercial conditions.

RELIABILITY

Projectable delivery times and strict observance of deadlines

Short delivery times and firm deadlines, even for special designs, make BD|SENSORS a reliable partner for our customers.

BD|SENSORS reduces the level of your stock-keeping and increases your profitability.

FLEXIBILITY

We have special solutions for your individual requirement.

We solve your problem in industrial pressure measurement quickly and economically, not only with large-scale production lines, but also for smaller requirements.

BD|SENSORS is especially flexible when technical support and quick assistance are required in service case as well as for rush orders.

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heavy industry



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packaging and paper industry

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sewage



aggressive media



colours



gases



fuels and oils



pasty and viscous media



oxygen



water



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