



DAP 200

Pressure Transmitter for Process Industry with HART®-Communication

accuracy according to IEC 60770:
0.075 % FSO

Pressure range

rel. from 6 mbar up to 400 bar
abs. from 20 mbar up to 0 ... 30 bar

Output signal

2-wire: 4 ... 20 mA

Special characteristics

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

Optional versions

- ▶ IS-version
Ex ia = intrinsically safe version
- ▶ different pressure ports
- ▶ LCD

The pressure transmitter DAP 200 has been especially designed for the demands of the process industry and capture under, over and absolute pressure of gases, steams, liquids up to 600 bar.

There are different thread types available for the pressure port. The transmitter is optionally equipped with the HART®-Communication and disposes of an aluminium-diecast – or stainless steel field housing.

Preferred areas of use are

-  Oil and gas industry
-  Chemical and petrochemical industry
-  Energy industry
-  Heavy industry
-  Paper industry



Pressure range									
Sensor	Type	B	C	D	F	G	H	I	J
Pressure range dp	[bar]	0.06	0.4	2.5	30	100	210	400	600
Setting limits (offset and span in this range freely adjustable)		-0.06 ... 0.06	-0.4 ... 0.4	-1 ... 2.5	-1 ... 30	-1 ... 100	-1 ... 210	-1 ... 400	-1 ... 600
Lowest permissible span		6 mbar	20 mbar	25 mbar	300 mbar	1 bar	2.1 bar	4 bar	0...6 bar
Overcharge	[bar]	2	10	40	150	200	500	500	700
Burst pressure	[bar]	3	11	41	160	210	710	710	710
Rangeability TD (with respect to the differential pressure range dp)		10:1	20:1	100:1	100:1	100:1	100:1	100:1	100:1

Pressure range abs.				
Sensor	Type	L	M	O
Pressure range P _N	[bar]	0.4	2.5	30 bar
Setting limits (offset and span in this range freely adjustable)		0 ... 4	0 ... 2.5	0...30
Lowest permissible span		20 mbar	25 mbar	300 mbar
Overcharge	[bar]	10	40	150
Burst pressure ≥	[bar]	11	41	160
rangeability TD (with respect to the differential pressure range dp)		20:1	100:1	100:1

Output signal / Supply	
Standard	2-wires: 4 ... 20 mA / U _B = 12 ... 42 V _{DC} (with LCD-Display / U _B = 15 ... 42 V _{DC}) Ex- intrinsically safe version / U _B = 15 ... 28 V _{DC}
Signal range	3.9 ... 20.5 mA
Error signal	Low: 3.7 mA / High 21 mA (standard)
Performance	
Accuracy	TD ≤ 10:1: ≤ ± 0.075 % FSO TD >10:1: ≤ ± [0.0075x TD] % FSO (TD = pressure range P _N / adjusted range) (FSO = Full Scale Output)
Influence supply	≤ 0.001 % FSO / 10 V
Influence installation position	max. 250 Pa (can be compensated about zero-point correction)
Long term stability	type B/L: ≤ ± (0.2% x pressure range P _N) / year others: ≤ ± (0.1% x pressure range P _N) / year
Permissible load	without LCD-display: R _{max} = [(U _B - 12 V) / 0.023 A] Ω with LCD-display : R _{max} = [(U _B - 15 V) / 0.023 A] Ω HART®-communication: R = 230 Ω ... 600 Ω
Response time T90	type B: approx. 0.35s type D - O: approx. 0.15s type C: approx. 0.25s
Damping	electronic : 0 ... 60 s plus response time T90

Thermal effects (Offset and Span)	
Temperature range -40 ... 100°C	type B/L: ± [0.30 x TD + 0.20]% of the adjusted range other: ± [0.20 x TD + 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 (info: +125°C short time, max. 30 min.)

Electrical protection	
Short-circuit protection	permanent
Reverse polarity protection	no damage, but also no function

Mechanical stability	
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

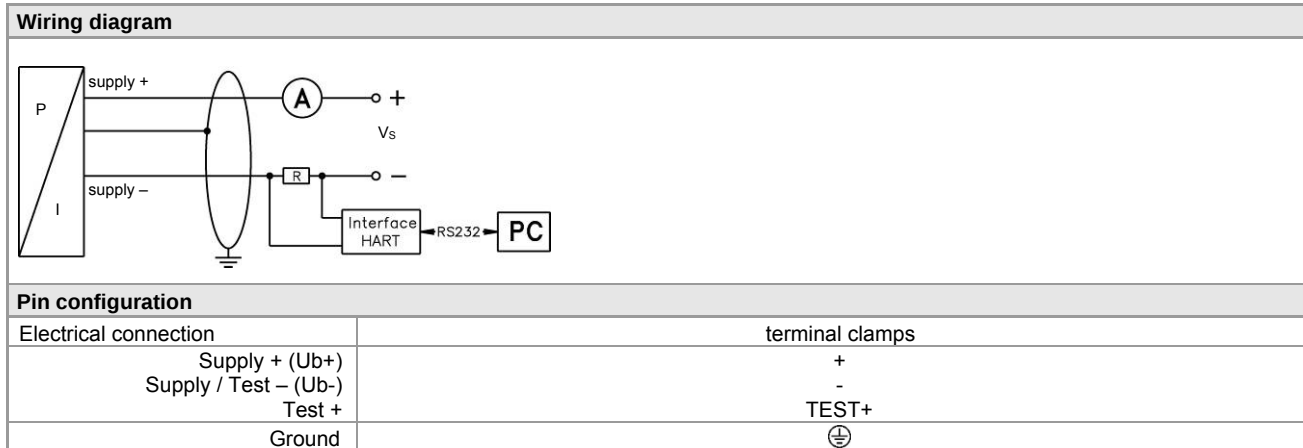
Materials			
Pressure port / flange	standard	stainless steel 316	others: on request
	standard option	stainless steel 316L Hastelloy® C-276	others: on request
Manufacturing label		stainless steel 316	
Housing	standard option	aluminium die cast with epoxy painting (blue) stainless steel 304	others: on request
	standard	silicone oil (-40...125°C)	others: on request

Explosion protection	
Approvals AX18-DAP200	IBExU 14 ATEX 1273 X / IECEx IBE 16.0005X II 1/2G Ex ia IIC T4 Ga/Gb II 2D Ex ia IIIC T 85 °C Db
Safety technical maximum values for intrinsically safe version	Pi = 660 mW, Ui = 28 V, Ii = 93 mA, Ci 29.7 nF, Li negligible
Permissible temperatures for environment	-40 ... 60 °C

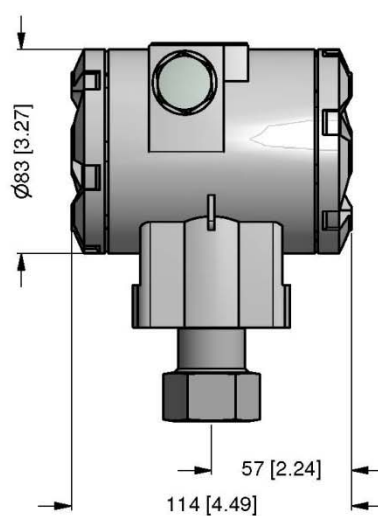
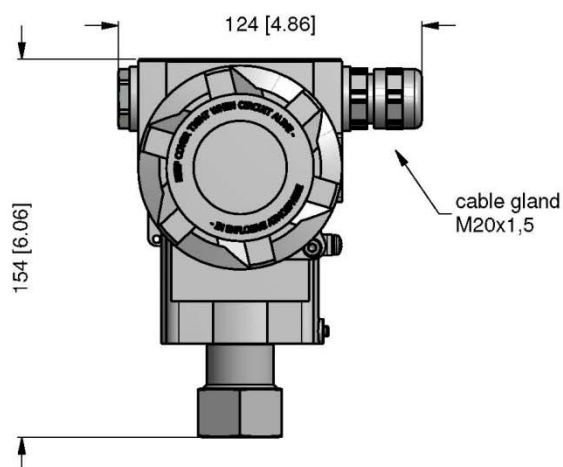
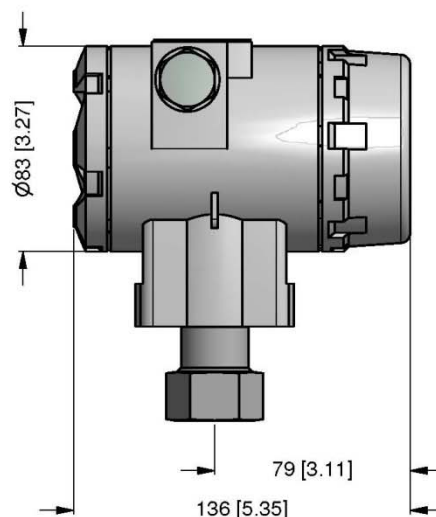
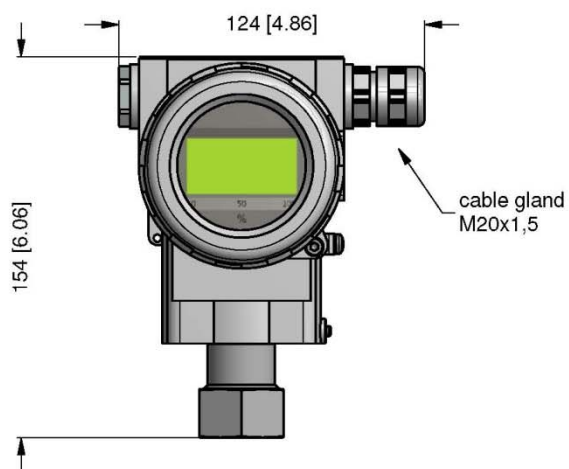
Miscellaneous	
Display (optionally)	type: LCD lines: 2 digits: 8 bargraph: 0...100% rotatability: yes, 90°-steps and / or by turn of the electronic case
configuration	- offset / span local via 2 buttons - local configuration with an optional display - complete configuration via HART®
Mounting bracket (optionally)	material CF8M or stainless steel 304 / 1.4401
Ingress protection	IP 67
Installation position	any
Weight	approx. 1.6 kg
Current consumption	approx. 23 mA
CE-conformity	EMC Directive: 2014/30/EU Pressure Equipment Directive: 2014/68/EU (module A) ¹
ATEX Directive	2014/34/EU

¹ 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 mm²)
Process connections	Standard option ½ " NPT IG ½ " NPT AG; ¼" NPT AG; M20x1.5 IG; G ½" IG; vacuum connection DIN 28403KF16/ISO 2861² others: on request
² only for P _N ≤ 2.5 bar	



Dimensions (in mm)



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