Industrial Smart Differential Pressure Transmitter Model: MDDP

Applications

- For level, volume or mass measurement in liquids, differential pressure monitoring as well as flow measurement (volume or mass flow) in conjunction with primary elements in gases, vapors and liquids.
- Process industry: Chemical/petro chemical, power stations, food and beverage, offshore oil rigs, pulp and paper, environmental technology, machine building and general plant construction.

Special features

- Accuracy 0.075 and 0.04,0.02
- Best accuracy, reproducibility and long-term stability
- Local zero and span adjustments
- Automatic temperature compensation
- Intrinsically safe and explosion proof
- Easy menu-guided commissioning via local display

- 4 to 20mA with HART, PROFIBUS PA, FOUNDATION Fieldbus
- Overload-resistant up to 420bar / 42MPa / 6300psi, function-monitored
- Cost savings with modular concept for easy replacement of sensor, display or electronics

Description

Accuracy class	0.075 standard and 0.04,0.02 (option)
Accuracy stability	Accuracy will be held for the nominal range for a minimum of 3 years
Over pressure limit	250 bar standard, 350bar, 420bar (option)
Transfer function	Linear or squar root
Response time	0.1 second
Diaphragm material	Stainless steel 316, Hastelloy, Monel, Tantalum(option)
Process connection	Stainless steel 316, Hastelloy, Monel, Tantalum(option)
Vent material	Stainless steel 316, Hastelloy, Monel, Tantalum(option)
Operating temperature	-20 ... +90°C
Storage temperature	-40 ... +120°C
temperature coefficient	within range -20 to +90 °C

■ **zero & span**	(compensated temperature range) zero: ≤ 0.005 % per °C typical, ≤ 0.01 % per °C max. span: ≤ 0.005 % per °C typical, ≤ 0.01 % per °C max.
■ **Damping**	0...60 sec adjustable
■ **Long stability**	±0.1%F.S/year
■ **Pressure type**	Differential, Gauge, absolute
■ **Protection**	IP67
■ **Power supply**	10 - 36VDC
■ **Output signal**	4 ... 20mA, 0.5 ... 4.5VDC, 1 ... 5VDC, 1 ... 10VDC
■ **Intrinsically safe**	II 1/2 Ex ia IIC T4/T5
■ **Explosion-proof**	II 1/2 Exia/d IIC T5/T6
■ **Pressure port**	1/2NPTF, 1/4NPTF or customize
■ **Housing material**	Aluminum, Stainless steel
■ **Fill liquid**	Silicon or inert fill
■ **Message**	Self diagnosis message
■ **Conduit entry size**	1/2NPTF or M20*1.5
■ **shock**	50g /11ms

These transmitters can be configured utilizing any of the three following methods: **(1)** locally configuring the instrument (zero, range, shift, characteristics and damping ratio) by means of pushbuttons on the transmitter, **(2)** by a PC with a dedicated interface and the MADECO smart configuration software **(3)** with having the capability of digital communication, they may be configured using MADECO hand-held terminal with HART protocol or other hand-held communicators*.The data interchange with the transmitter enables the user to identify the transmitter, calibrate the sensor, read the immediate measured value of the input and the current output of the transmitter. User may alter the measurement unit and the range, introduce zero elevation, apply measurement inversion, take a square root or squar the value of the measurement and set the damping time. Additionally the operator may force an output current with a set value.

MDDP Differential pressure transmitter measures in both corrosive and non-corrosive gases, vapors and liquids. The pressure transmitter makes use of the piezo-resistive effect to make the measurement.The output signal is a DC current which is linearly proportional to the input pressure.

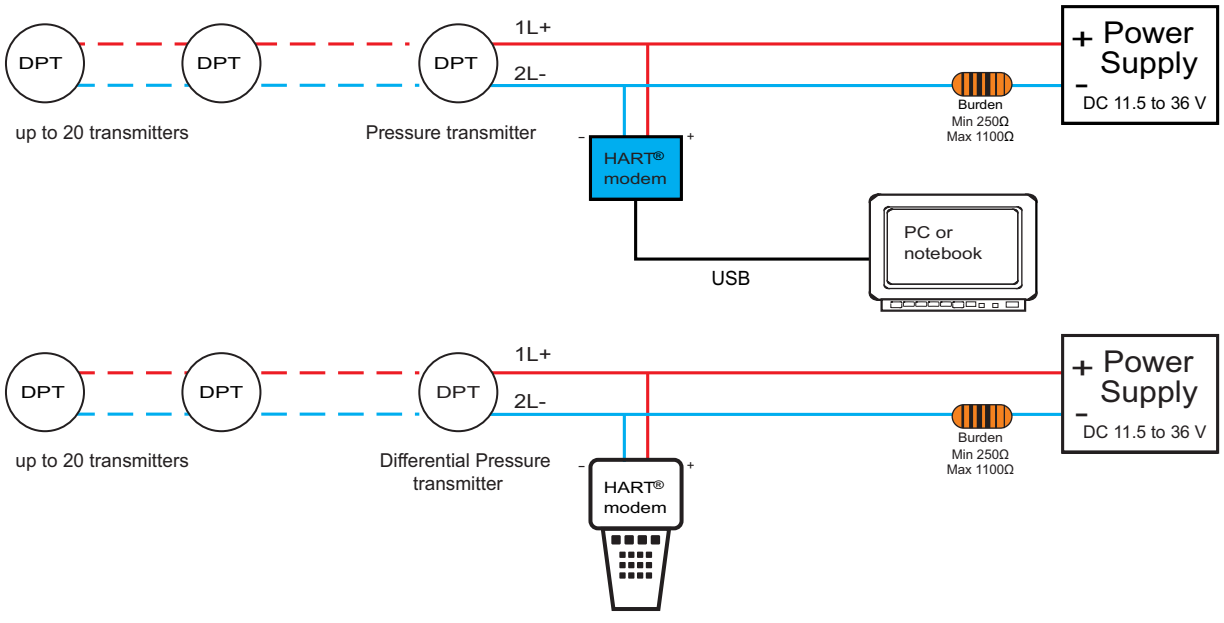
In the version “with Ex protection Ex II 1/2 G Ex ia IIC T6 Ga/Gb“, the transmitter can be mounted within the hazarduos area Zone 1, for connection to Zone 0.

MDDP Industrial Differential Pressure Transmitter

ORDERING CODE	Example: MDDP	D	4	4	A	2	M	S	I	AT	H
Measurement Type											
D - Differential		D									
A - Absolute											
G - Gauge											
Process Connection											
4 - 1/2 NPTF			4								
6 - 1/4 NPTF											
8 - 1/2 BSPM											
C - Customer											
Pressure Range											
2 - (-10...10 mbar)											
4 - (-60...60 mbar)				4							
6 - (-600...600 mbar)											
8 - (-2.5...2.5 bar)											
10 - (-20...20 bar)											
12 - (-120...120 bar)											
C - Customer											
Housing material											
A - Aluminum					A						
S - Stainless Steel											
C - Customer											
Conduit Entry Size											
2 - 1/2NPT						2					
4 - M20*1.5											
C - Customer											
Isolating Diaphragm											
S - 316L Stainless steel											
M - Monel® 400							M				
H - Hastelloy											
T - Tantalum											
G - Gold plated											
C - Customer											
Process Connection											
S - 316L Stainless steel								S			
M - Monel® 400											
H - Hastelloy											
T - Tantalum											
G - Gold plated											
C - Customer											
Sensor Fill Fluid											
S - Silicone fill &FPM viton gasket											
I - Inert Oxygen services- Fluorolube &NBR v									I		
Accuracy											
AT - 0.075% (std.)										AT	
AC - 0.04%											
AS - 0.02%											

MDDP Industrial Differential Pressure Transmitter

ORDERING CODE	Example: MDDP	H	N	2	N	WC	Note
Transmitter Output							
H - 4...20mA signal based on HART®protocol		H					
F - Foundation™ fieldbus protocol							
P - PROFIBUS®PA Protocol							
L - Low power 1...5 VDC							
W - Wireless							
Certificate							
N - None			N				
I - Intrinsically safe (II 1/2 Ex ia IIC T4/T5)							
E - Explosion proof (II 1/2 Exia/d IIC T5/T6)							
M - Marine certificate-DNV							
Remote Seals							
2 - Not required				2			
4 - One side Assemble to MADECO MDD1 capillary and Diaphragm seals							
6 - Two side Assemble to MADECO MDD1 capillary and Diaphragm seals							
Display					N		
N - None							
D - LCD display							
Options							
AS - Assemble 3way manifold							
AM - Assemble 3way manifold							
BR - Bracket for 2-in.pipe or panel mounting. sst							
CC - Calibration certificate							
CM - Material Traceability certification							
CP - Hydrostatic testing with certificate							
CL - Cleaning for special service							
CR - special calibrated range (please specify the range)							
AN - Analog zero and span trim							
NH - Stainless steel tag wired to case							
AT - ATEX							W3
W3 - 3 year warranty							
W5 - 5 year warranty							
Other							



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