

Smart Differential Pressure Transmitter

CYDPT Sereis

I Product Introduction

The differential pressure transmitter is applied to prevent medium in pipes from entering into transmitter directly, and relies on capillary to link with pressure diaphragm. It is suitable to measure the liquid level, density and pressure of liquid, gas or vapor. And it converts pressure signal into 4~20mA DC digital signal. It can communicate, set up and monitor mutually with manipulator by HART protocol.

Suitable applied situations:

In petrochemical production process, differential pressure transmitter is always combined with throttling device to measure liquid, vapor and gas flow, or to detect liquid level, liquid interface and differential pressure and other parameters.



II Performance Specifications

Zero shift volume

Maximum positive migration volume:

difference between migration volume upper range and measuring range

Maximum negative migration volume:

measuring range lower limiting value

Measuring range

Lower range limit:

-100%URL ~ +100%URL-Span

Upper range limit:

-100%URL+Span ~ +100%URL

Measuring range and zero adjustment

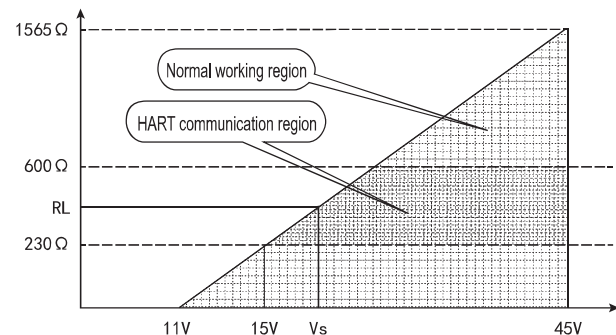
HART manipulator, local button, communication software supported by HART protocol.

Response time

When the electrical damping of the transmitter turns off, the response time of the step input applied to the transmitter from 10% to 90% of the output range is less than or equal to 0.4s.

Measuring object: liquid, vapor and gas
 Ambient temperature: -40°C~85°C
 Accuracy: 0.1% F.S
 Range down: 100:1
 Insulation resistance: >100MΩ (500VDC)
 Damping value: 0.1 ~ 16s (Option)
 Temperature affecting value: 0.1%F.S/10°C
 EMC: EN 61326-1:2013
 Output signal: 4 ~ 20mA (Max 22mA, Min 3.8mA)
 Communication interface: HART
 Intrinsic safety: EX ia IIC T6
 Enclosure rating: IP67

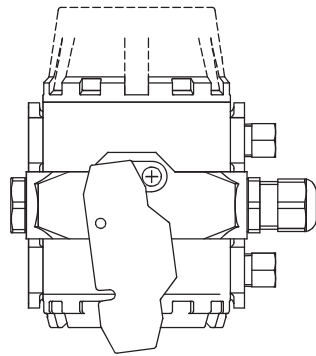
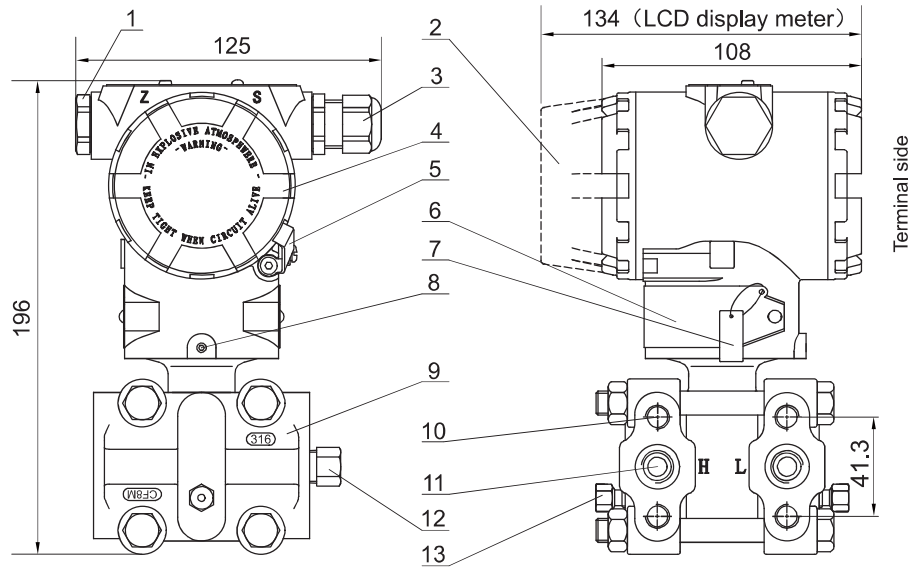
Load Characteristic (Current mode)



Output mode and power supply voltage requirement

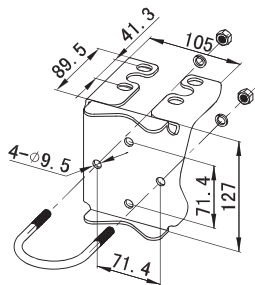
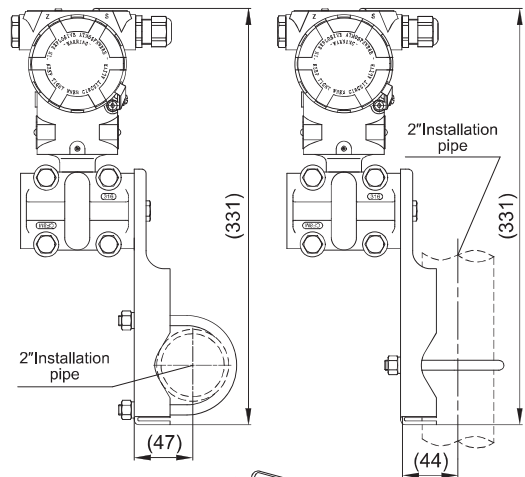
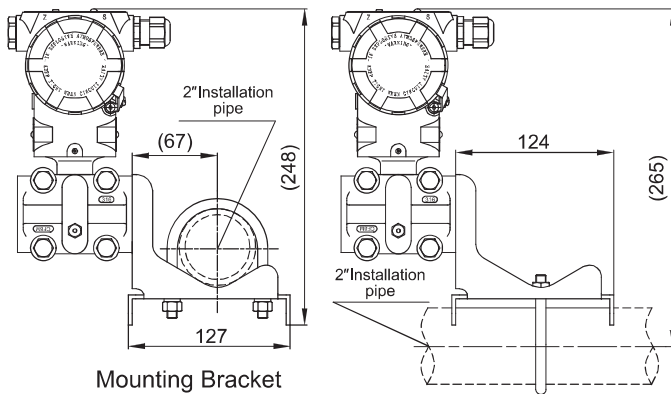
Type code	Analog output mode	Communication interface	Standard supply voltage	Supply voltage range	Ripple requirement
H	(4~20)mA	HART	24VDC	12V~45VDC	<0.5%
M	(4~20)mA	ModBus	24VDC	12V~34VDC	<0.5%
W	None	RF Radio Frequency	3.6VDC	3.2V~3.6VDC	With lithium battery

III Structural Drawing

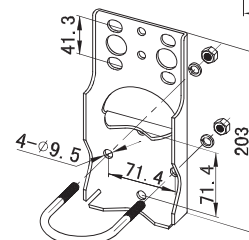


1. Electrical sealing plug
2. Side Cover of Electronic Component
3. Electrical Interface: M20x1,5 cable gland
4. Terminal Cover
5. Safety fixing buckle for cover (Explosion proof)
6. Nameplate
7. Tag label (Option)
8. Rotation positioning screw with electronic shell
9. Process flange
10. Female thread used for mounting: M10/M12
11. Process connection: NPT1/4 female
Flange interface according to DIN 19213
12. Process connection with bulkhead or relief valve (Option)
13. Side release screw (Option)

Smart Differential Pressure Transmitter outline dimensional drawing (Unit:mm)



Bending pipe bracket: B01 B04



Bending pipe bracket: B03 B06

IV Selection List

CYDP Seires

Code 1	Product category
T	Differential Pressure Transmitter
Code 2	Accuracy
B	0.1%F.S
C	0.25%F.S
Code 3	Output
H	(4~20) mA & HART
M	(4~20) mA & ModBus
W	Wireless
Code 4	Measuring range
2	(0 - 0.6 ~ 1.5)kPa
3	(0 - 1.0 ~ 7.5)kPa
4	(0 - 0.4 ~ 40)kPa
5	(0 - 1.86 ~ 186)kPa
6	(0 - 6.9 ~ 690)kPa
7	(0 - 0.02 ~ 2)MPa
Code 5	Process connection
N	NPT1/4 Female, no relief valve
B	NPT1/4 Female, relief valve on Flange's back
U	NPT1/4 Female, relief valve on Flange's upper side
L	NPT1/4 Female, relief valve on Flange's lower side
R	Remote
Code 6	Isolating diaphragm
2	316L stainless steel
3	Hastelloy C
Code 7	O-ring material process flange
N	Perbunan (NBR)
F	Viton (FKM)
P	Telfon
Code 8	Mounting Bracket
0	No bracket
1	Carbon bracket
2	Stainless steel bracket
Code 9	Instructions & Nameplate language
E	In English
Code	Option
M	LCD display meter
d	Explosion proof Ex d II C T4~T6
i	Intrinsic safety safe Ex ia II C T4~T6
K	Degreasing and oil prohibition

P	Stainless steel tag label
E	NPT1/2 Female waist-type flange
F	M20*1.5 T-joint---Ø14 Pressure pipe

Example:

Smart Differential Pressure Transmitter

CYDPT-BH4N2-N2E-MiP

[B] : Accuracy: 0.1%F.S

[H] : Output: (4~20) mA & HART

[4] : Measuring range: (0 - 0.4 ~ 40)kPa

[N] : Process connection: NPT1/4 Female, no relief valve

[2] : Isolating diaphragm: 316L stainless steel

[N] : O-ring material process flange: Perbunan (NBR)

[2] : Mounting Bracket: Stainless steel bracket

[E] : Instructions & Nameplate language: In English

[M] : LCD display meter

[i] : Intrinsic safety Ex ia II C T4~T6

[P] : Stainless steel tag label