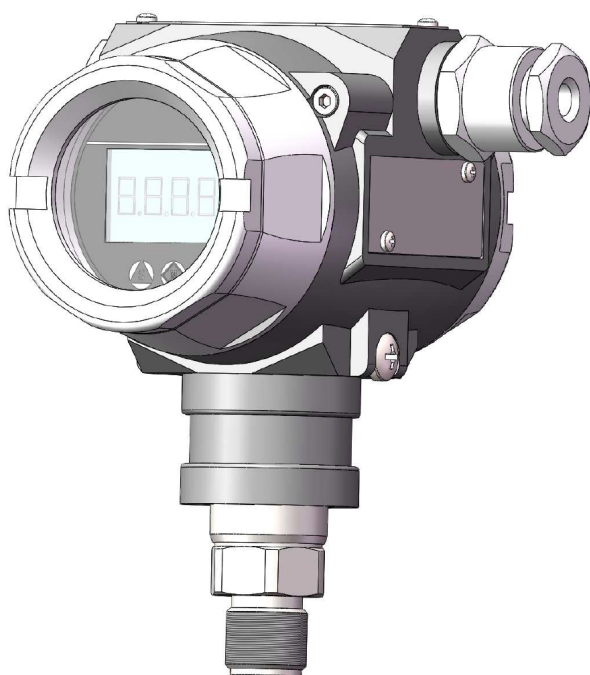


Manual/Quick Start Guide



4-20 mA Industrial Pressure Transmitter

The new microprocessor and surface mount technology transmission module which collects and processes the signal of the pressure sensor and amends the measurement error through a built-in temperature sensor. This fully improves the performance of the pressure transmitter. The new external three-button menu function design makes it easier to operate the parameter settings and safe to operate in dangerous situations.

Main parameters

Pressure types	Guage Pressure
Measuring range	0-30psi,0-100psi,0-300psi,0-1,000psi 0-3,000psi,0-6,000psi, & 0-10,000psi
Output signal	4-20 mA
Reference accuracy	±0.2% URL

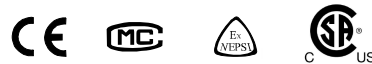
Measuring Medium

Liquid, gas, or steam flow as well as liquid level, density and pressure

Field of application

Pressure, Level, Temperature, Density

Approvals



Reference accuracy

Standard and reference conditions, including linearity(BFSL), hysteresis and repeatability. calibration temperature: 68F ± 2F		
Linear output accuracy	±0.2%URL	Nominal value : 0-30psi,0-100psi,0-300psi,0-1,000psi 0-3,000psi,0-6,000psi, & 0-10,000psi
<i>The accuracy of square root output is 1.5 times of above linear reference output accuracy.</i>		

Standard specifications and reference conditions

Test standard: GB/T28474 / IEC60770; Zero based-calibration span, Silicon oil filling, 316L stainless steel isolated diaphragm.

Mounting position effects

Apply to any position. Installation error less than 0.058 psi which can be corrected by PV=0 reset

Performance specifications

The overall performance including but not limited to ±0.2% URL

Typical accuracy: ±0.2%URL

Stability: ±0.1% URL/ year

Vibration effects

According to GB/T 1827.3/IEC61298-3 tests, <0.1% URL

Output signal

4-20 mA Output

Unit

Unit	Definition
kPa	Kilopascal
MPa	Megapascals
bar	Bar
psi	Pounds per square inch
mmHg	Millimetre(s) of mercury@0°C
mmH2O	Millimeter of water@4°C
mH2O	Meter of water@4°C
inH2O	Inches of water@4°C
ftH2O	Feet of water@4°C
inHg	Inches of mercury@0°C
mHg	Meter mercury column@0°C
TORR	Torr
mbar	Millibar
g/cm2	Gram per square centimeter
kg/cm2	Kilogram per square centimeter
Pa	PA
ATM	Standard atmospheric pressure
mm	Millimeter(Note1)
m	Meter(Note1)
Note1: length unit need to mark medium density	

Power supply effects

Zero and span change should not be more than ± 0.005% URL/V when power supply changes in 10.5/16.5-55VDC

Pressure Ranges

1	0-30 PSI
2	0-100 PSI
3	0-300 PSI
4	0-1,000 PSI
5	0-3,000 PSI
6	0-6,000 PSI
7	0-10,000 PSI

Technical Specifications

Ambient temperature effects(Typical)

Within the range - 4 -176F Degrees total impact	$\pm(0.1+0.1TD)\%$ URL
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Insulation resistance

$\geq 20M \Omega @, 100VDC$

Damping time

Total damping time constant: equal to the sum of damping time of amplifier and sensor capsule
Damping time of amplifier : 0-100S adjustable
Diaphragm capsule (isolated diaphragm and silicone oil filling) damping time: $\leq 0.2s$
Startup after power off : $\leq 6S$
Normal services after data recovery : $\leq 31S$

Weight

Net weight: about 3.17lbs (without mounting bracket and process connection adaptor)

Electrical connection

Code	Item	Description
T1	Electrical connection	Aluminum-alloy terminal, 2 cable entry 3/4" NPT(F), grey body, white cover
R2	Cable entry protector	Flame proof, 1/2"NPT(F) one side, blind plug another side, stainless steel material
R3		Flame proof, 3/4"NPT(F) one side, blind plug another side, stainless steel material

Code	Position	Description
S	Isolated diaphragm material	SUS316L Optional: Hastelloy
S	Isolated filling fluid	Silicone oil, process temperature: -45-401F
S	Sensor seal	O-ring, FKM, process temperature: -20-392F

Power supply

Item	Operating conditions
4-20 mA	18-30VDC Standard/flame proof
Transmission distance	$<2000m$
Power consumption	$\leq 500mW @ 24VDC, 20.8mA$

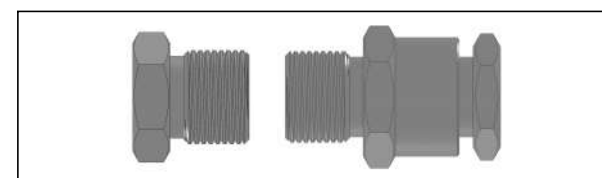
Environment condition

Items	Operational condition
Working temperature	-40-85℃, integrated LCD display: -20-85℃
Storage temperature	-40-85℃, integrated LCD display: -40-85℃
Media temperature	Silicone oil filling: -40-85℃
Working humidity	5-100% RH@25℃
Protection class	IP67
Dangerous condition	Class I, Division 1, Group A, B, C and D T6 Class II, Division 1 Group E, F and G T80℃ Class III

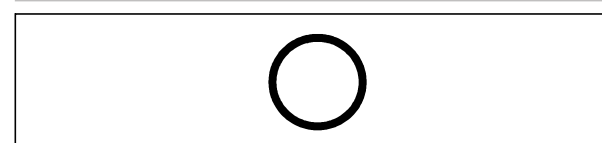
Housing(T1)



Flame proof cable entry protective adaptor(R2/R3)



Seal(S)



Product selection instruction

Transmission module type

Output signal	Local control
4-20 mA	LCD/3 buttons on body

LCD display unit

Display mode	Details
PV	Process variable shows on main screen, temperature on main screen
%	Percentage shows on main screen, percentage and progress bar shows on secondary screen

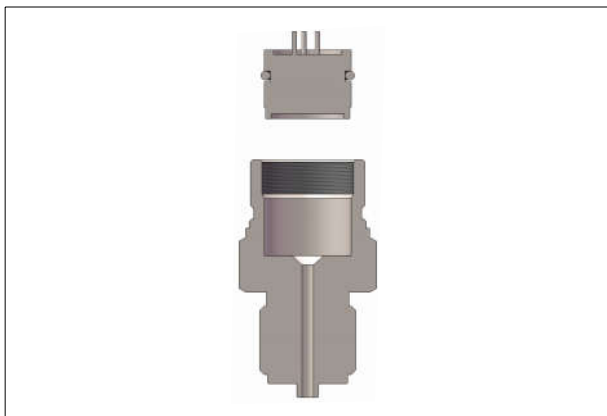
Transmission module

Code	Items	Description
FS	Output signal	4-20 mA, power supply: 9-55VDC
MS	Output signal	Modbus RTU RS 485, power supply: 9-55 VDC
LS	Output	Low Power, 1-5 VDC

Terminals



Wetted parts



Measuring menu set

Mark	State
URV	Upper range value, Digital
LRV	Lower range value, Digital

Damping time

Units	Setting range
S	0-100

Quick menu

Parameter	Instruction
Zero adjustment	re-range with pressure @ 0%
Span adjustment	re-range with pressure @ 100%
Restore factory setting	Restore backup data when error

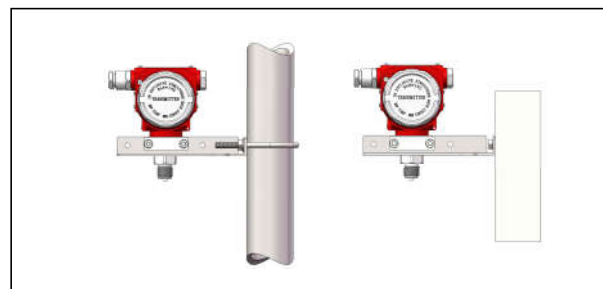
Display module(C)



Brackets

Code	Items	Instruction
B4	Fixed mounting	U-shaped bracket, 2" pipe, apply to T-structure

U-shaped mounting bracket(B4)



Model

P: Pressure Gauge

G: Gauge

A: Absolute

1: 0-30 PSI

2: 0-100 PSI

3: 0-300 PSI

4: 0-1000 PSI

5: 0-3000 PSI

6: 0-6000 PSI

7: 0-10000 PS

F: 4-20 mA

M: Modbus

L: 1-5 VDC

H: HART

Material

S: SS 316

H: Hastelloy

B4: U-Bolt

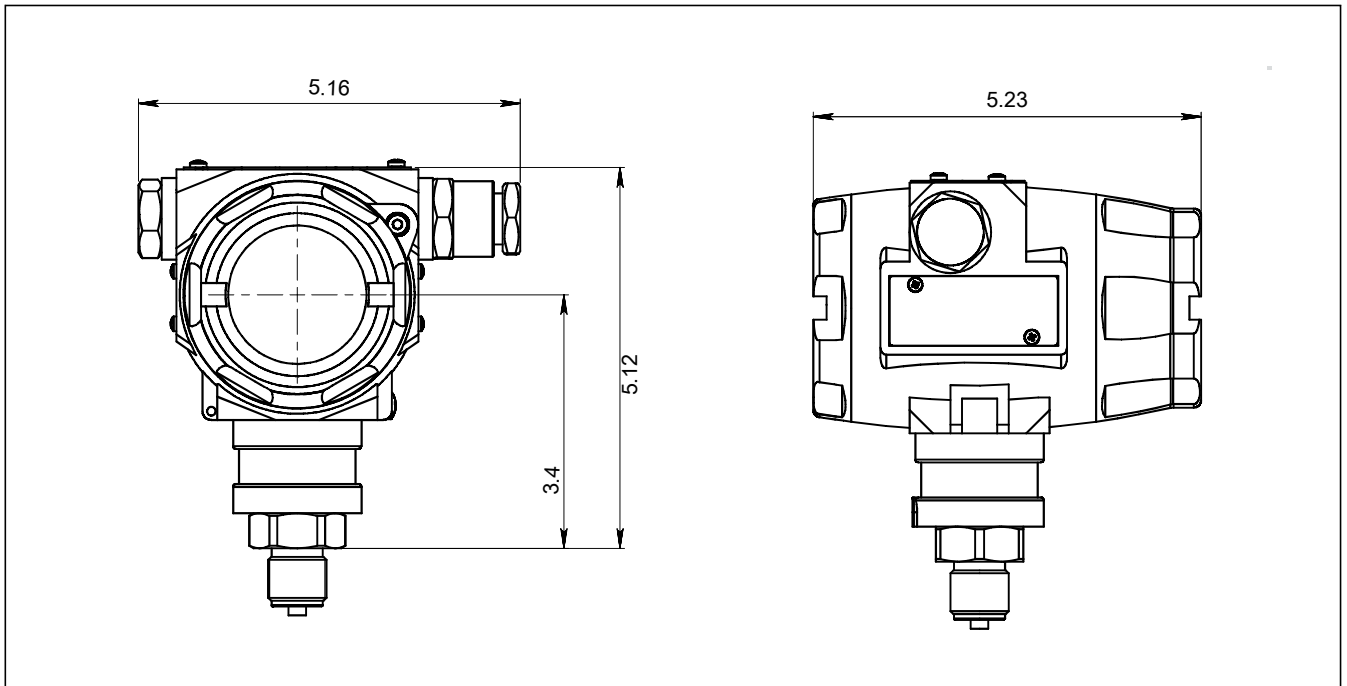
Bracket

Q1: Cal. Cert.

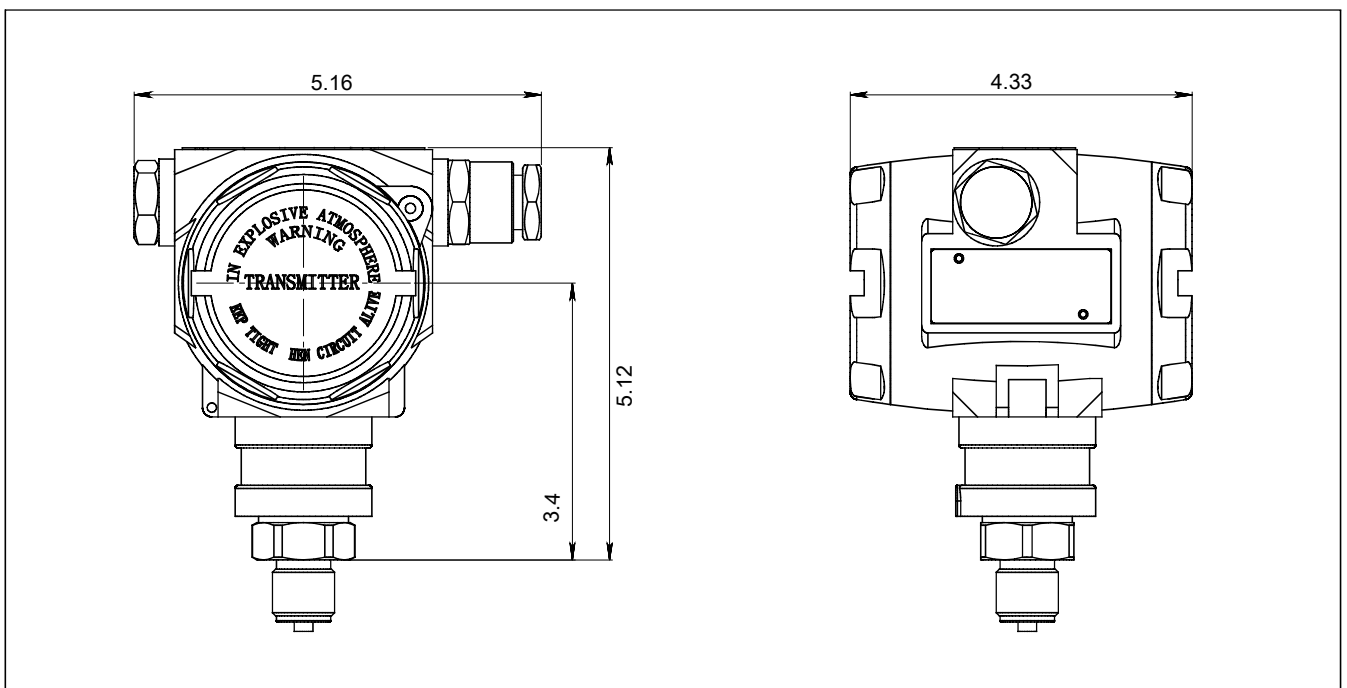


Product drawing and dimension

Drawing and dimension with display(N)(unit: in)

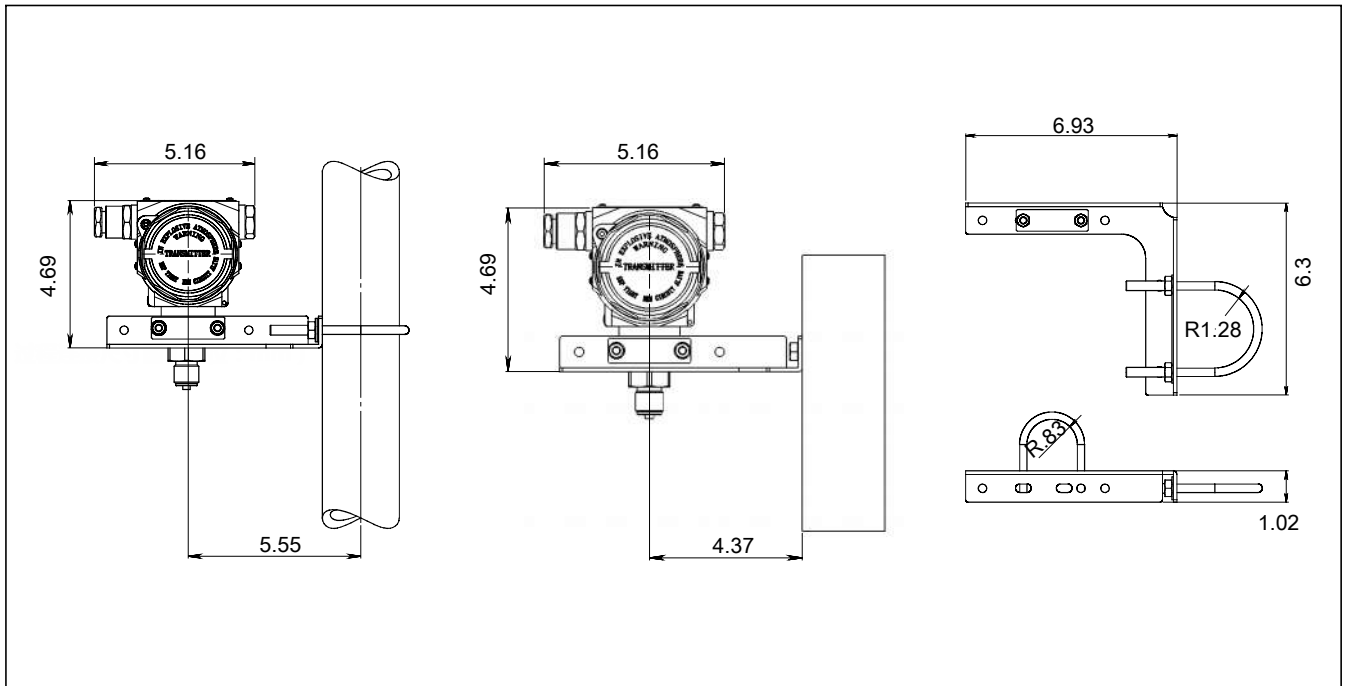


Drawing and dimension without display(C)(unit: in)

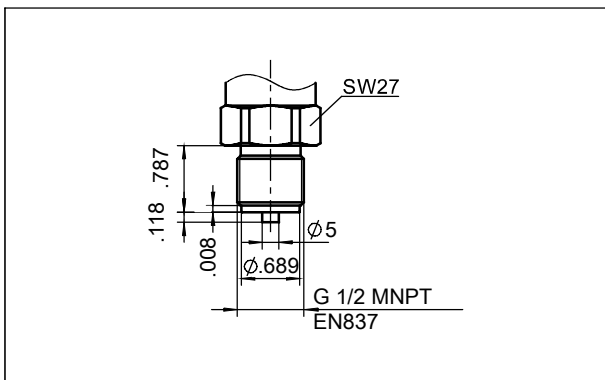


Product drawing and dimension

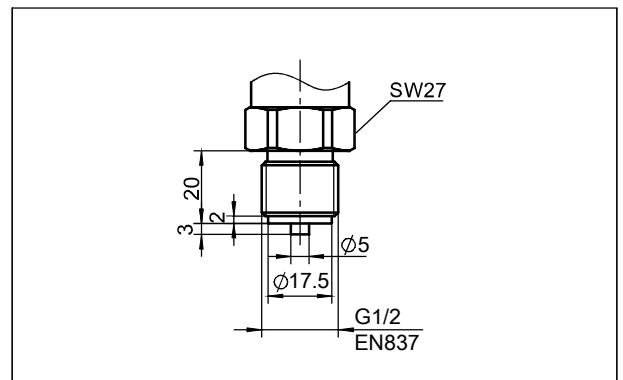
Drawing and dimension with U-shaped bracket(B4)(unit: in)



Process connection(M01)(unit: in)



Process connection(G01) (unit: mm)



Factory settings and parameters

Item	Menu mark	Factory setting value
Damping value	DAMP	0(No specific settings)
Lower range value	LRV	According to the order
Upper range value	URV	According to the order
Process unit	U	According to the order

Approvals

Factory certificate

Certification organization	Intertek
Quality management system	ISO9001-2008
Scope of certification	Design and production of pressure transmitter
Registration number	110804039

Intrinsic safety certificate

Certification organization name	NEPSI
License range	DMP305X series pressure/ differential pressure transmitter
Explosion-proof mark	ExialICT4
Ambient temperature	-40-+60°C
Medium maximum temperature	+120°C
Registration number	GYB16.1962X
Intrinsically safe parameter description	Maximum input voltage: 28VDC
	Maximum input current: 100mA
	Maximum input power: 0.7w
	Maximum internal equivalent parametersCi(uF): 0
	Maximum internal equivalent parametersLi(mH): 0.01

CE

Certificate organization	ISET
License scope	DMP305X series pressure/ differential pressure transmitter
Mark	EU
EMC instruction	2014/30/EU
Standard	AC/0100708
Registration number	IT041353LG161207

Flame proof certificate

Certificate organization	NEPSI
License scope	DMP305X series pressure/ differential pressure transmitter
Explosion-proof mark	ExdIICT6
Working environmental temperature	-25-+60°C
Maximum medium temperature	+80°C
Registration number	GYB16.1254X



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