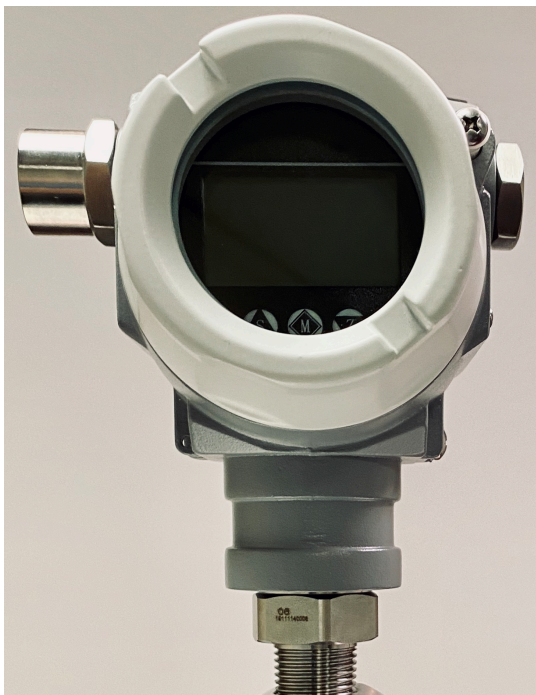


## Manual/Quick Start Guide



### Modbus,RS485 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	Modbus, RS485
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

### 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

MODBUS RTU RS485 Half Duplex  
Multiple function codes supported

## 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

## 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
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
MODBUS RTU	9-30VDC Standard/flame proof
Transmission distance	<2000m
Power consumption	$\leq 500mW @ 24VDC, 20.8mA$

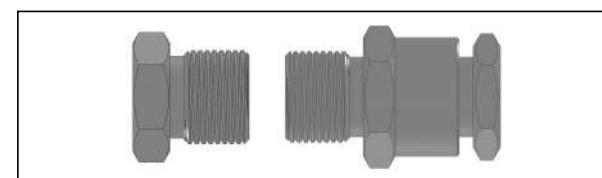
### Environment condition

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

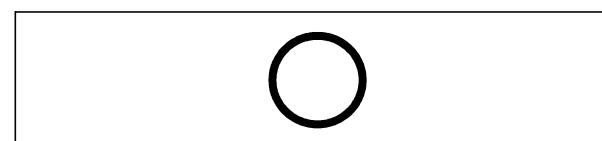
### Housing(T1)



### Flame proof cable entry protective adaptor(R2/R3)



### Seal(S)



## Product selection instruction

### Transmission module type

Output signal	Local control
MODBUS RTU	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

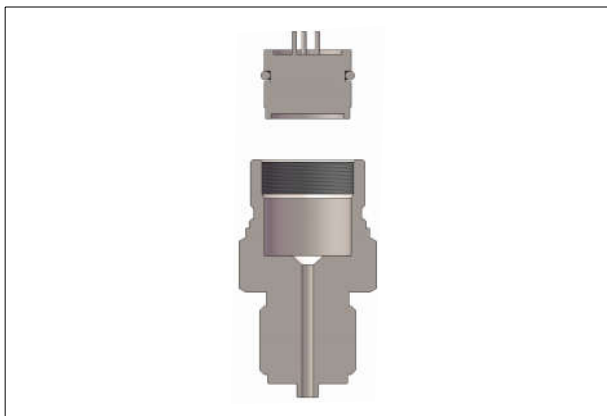
### Transmission module

Code	Items	Description
T	Output signal	Modbus RTU, power supply: 9-55VDC
C	Display	Without display
N	Display	With LCD display

### 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

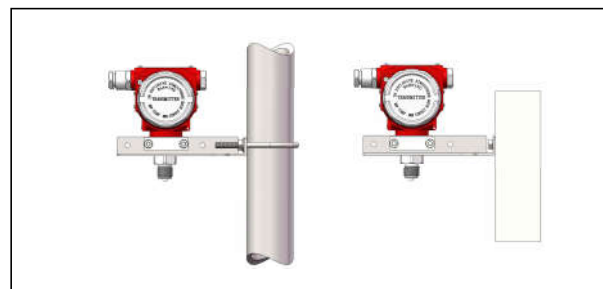
### Display module(C)



### Brackets

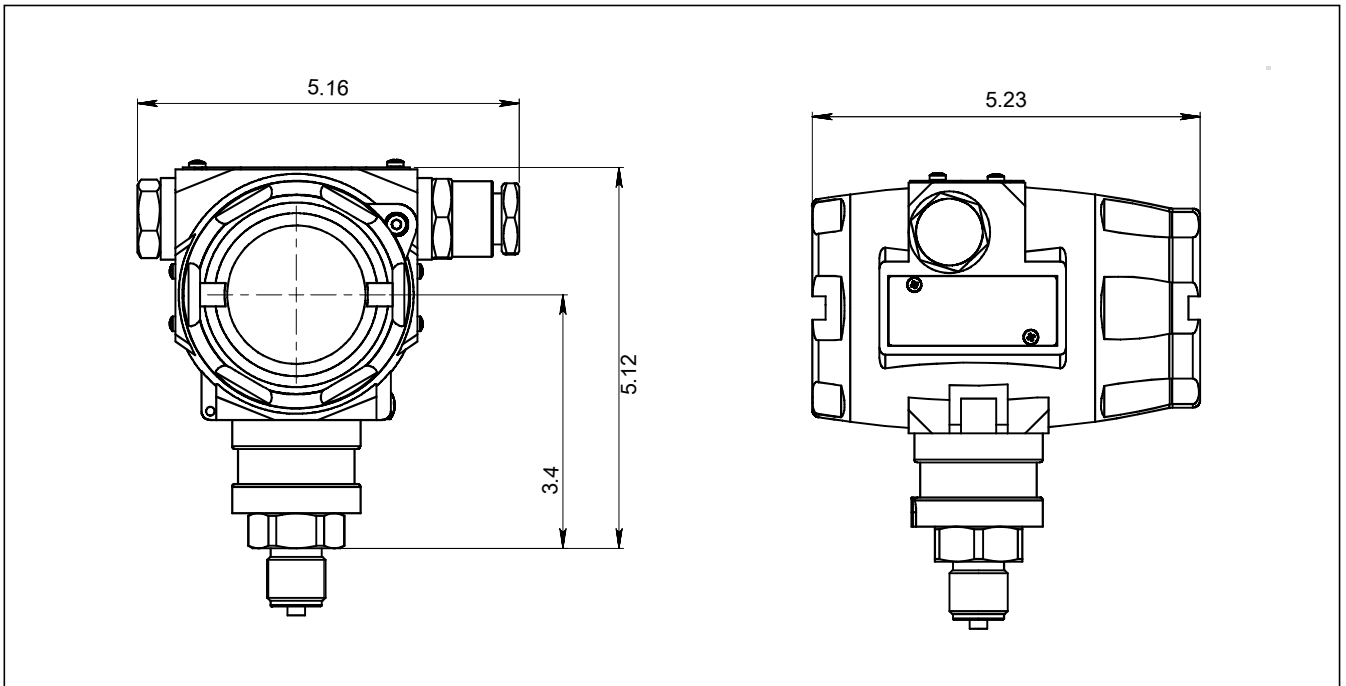
Code	Items	Instruction
B4	Fixed mounting	U-shaped bracket, 2" pipe, apply to T-structure

### U-shaped mounting bracket(B4)

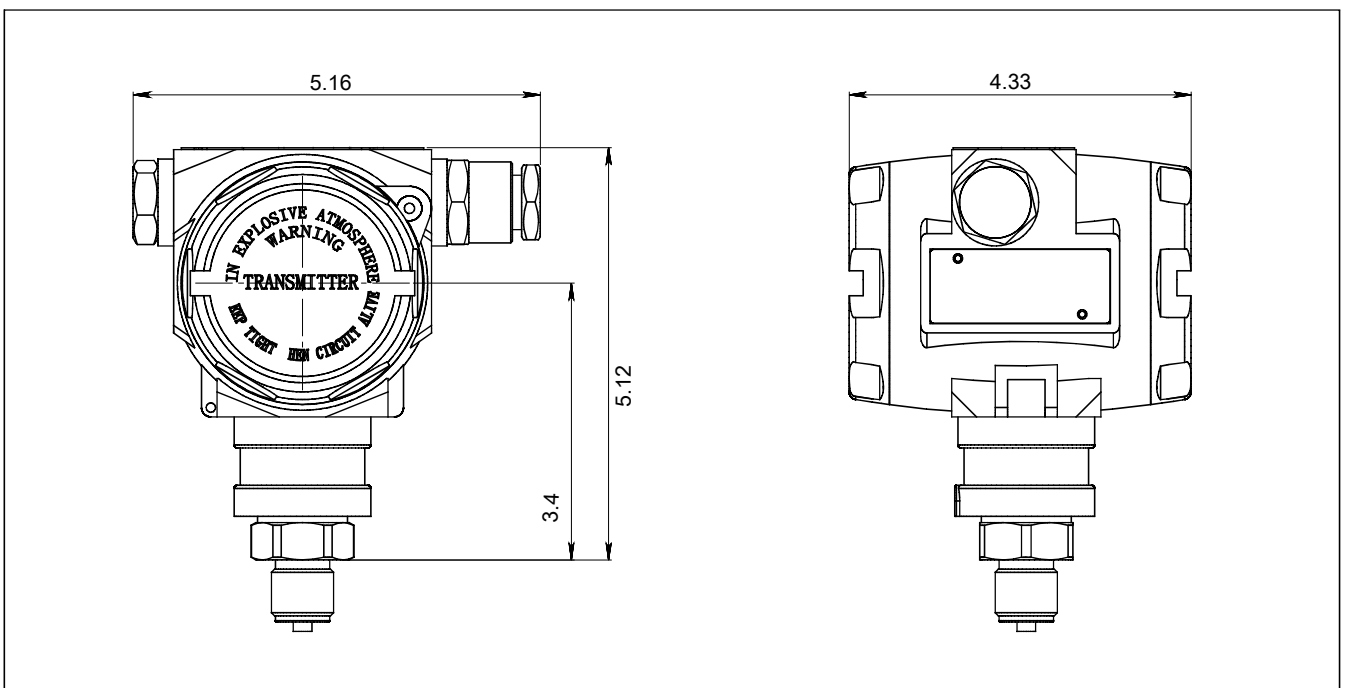


Product drawing and dimension

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

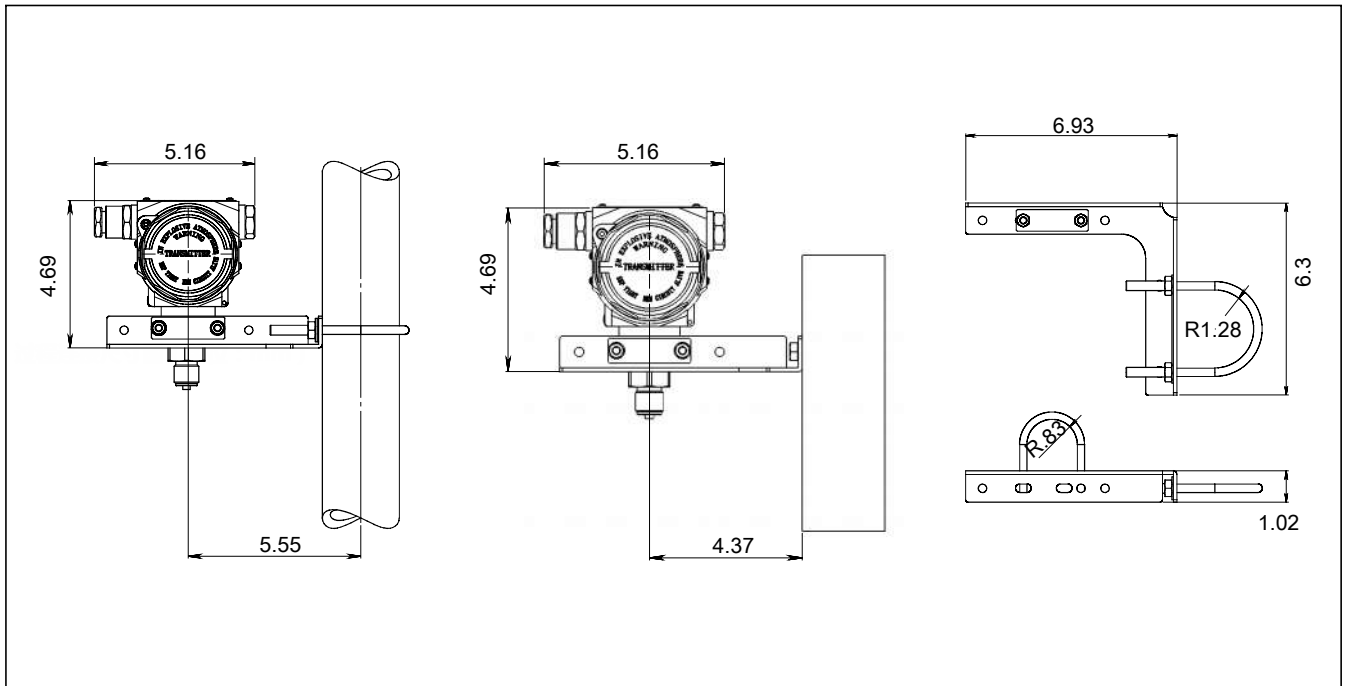


Drawing and dimension without display(C)( unit: in)

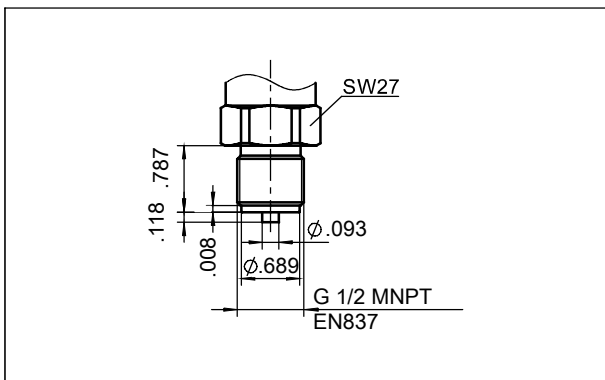


## Product drawing and dimension

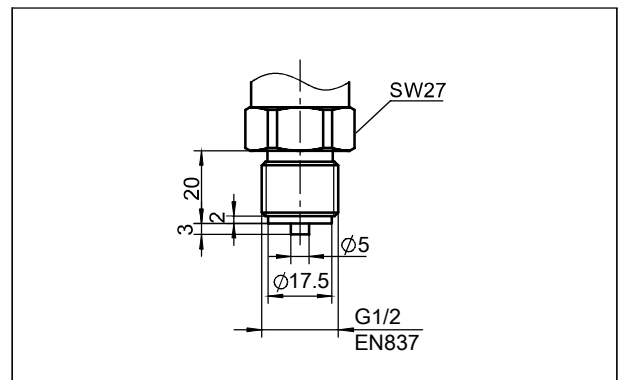
### Drawing and dimension with U-shaped bracket(B4)(unit: in)



### Process connection(M01)(unit: in)



### Process connection(G01) (unit: mm)



## Factory settings and parameters

Item	Menu mark	Factory setting value
Baud Rate	BT	19.2K
Address	DE	2
Parity	ODDP	N
Stop Bits	STOP	1

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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