MANOTHERM
MT-P100TR

UNIVERAL PRESSURE TRANSMITTER

FEATURES

- SS 316L diaphragm structure
- High accuracy, all stainless steel structure
- Small size and light weight
- Storage anti-interference, good long-term stability

APPLICATIONS

- Process control
- Aerospace
- Automobile and medical Equipment
- Pipeline system

PRODUCT OVERVIEW

MT-P100TR economic pressure transmitter adopts diffused silicon pressure sensor as pressure sensing element. Through internal ASIC, the millivolt signal of sensor is transmitted into standard current signal. MT-P100TR can be directly connected with computer interface card, control instruments, intelligent meters or PLC etc. conveniently. Long-distance transmission can use current output. MT-P100TR features with small size, light weight. all stainless steel sealing structure and ability to work in corrosive environments. The product is easy to install and has extremely high vibration and shock resistance. MT-P100TR is widely used in process control, aviation, aerospace, automobile, medical equipment, HVAC and other fields.

DIMENSIONAL DRAWING

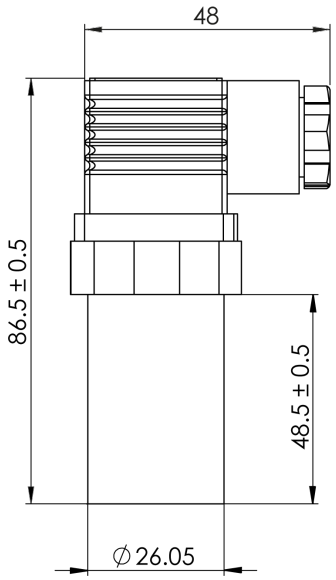
Pressure range	0~0.35...600bar
Pressure reference	Gauge pressure, Absolute pressure, Sealed gauge pressure
Accuracy	0.5% FS
Hysteresis	0.1% FS
Repeatability	0.1% FS
Temperature drift	0.35bar: ±2% FS (0°C~60°C) Other ranges: ±1.5% FS (-20°C~85°C)
Response time	≤1ms (Up to 90% FS)
Overpressure	Refer to Table for Pressure Range Selection
Service life	≥10x106 pressure cycles
Long-term stability	±0.2% of FS/year
Ambient temperature	-20°C...85°C
Process temperature	-20°C...85°C
Storage temperature	-40°C...125°C
Insulation resistance	≥100MΩ / 500V DC (200MΩ/250V DC)
Vibration resistance	Sine curve: 20g, 25HZ~2kHz; IEC 60068-2-6 Random: 7.5grms, 5Hz~1kHz; IEC 60068-2-64
Shock resistance	Shock: 200g/1ms: IEC60068-2-27 Free falling body: 1m; IEC 60068-2-32
Protection grade	IP65
Medium compatibility	All kinds of media compatible with SS316L
Hexagon	HEX27
Ex-proof grade	Intrinsically safe explosion-proof Exia CT6 (only for 4~20mA)
Net weight	~209 g

OUTPUT AND POWER SUPPLY

Output	4~20mA
Power supply	12~30V DC

ELECTRICAL CONNECTION & WIRING MODE

J5: DIN43650 / ISO 4400



Wring method (2 wire current)	Pin 1: Power supply+ (Red wire)
	Pin 2: Current output (Green wire)
Wring method (3 wire voltage)	Pin 1: Power supply+ (Red wire)
	Pin 2: Common-ground (green wire)
	Pin 3: Voltage output (yellow wire)

*All dimensions are in mm.

APPLICATION OF DAMPER

Applications

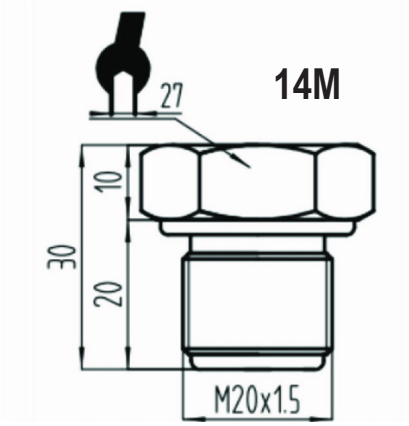
Cavitation, liquid hammer and pressure peak may occur in air or fluid systems with varying flow rates, such as the rapid closing of the valve or the start and stop of the pump.

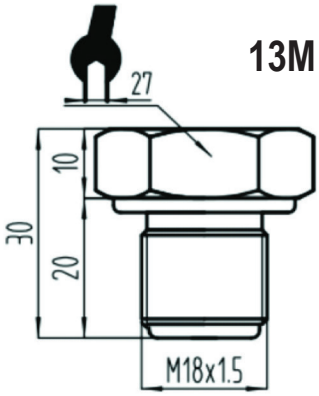
Even at relatively low operating pressures, these problems may occur at the entrance and exit.

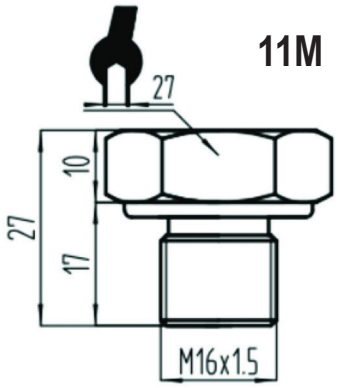
Media condition

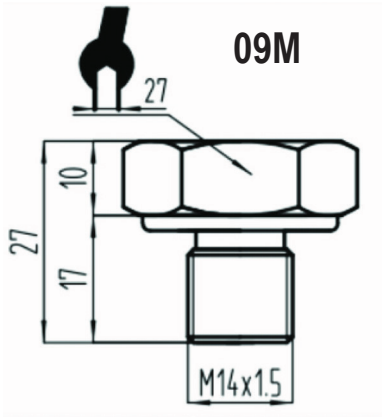
In the liquid containing particles, nozzle clogging may occur. The vertical mounting of pressure transmitter minimizes the risk of clogging because the flow of fluid happens in initial start only, the volume of the rear of the nozzle is fixed and the nozzle has a relatively large aperture (1.2mm). The effect of medium viscosity on response time is small. Even if the viscosity reaches 100 CST, the response time will not exceed 4ms.

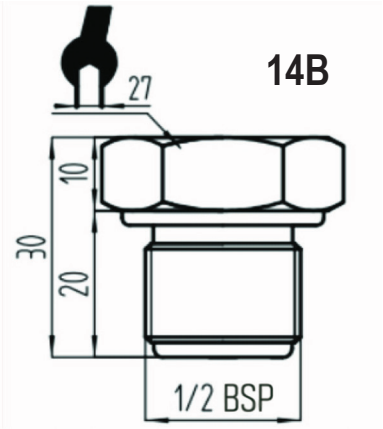
PRESSURE CONNECTION

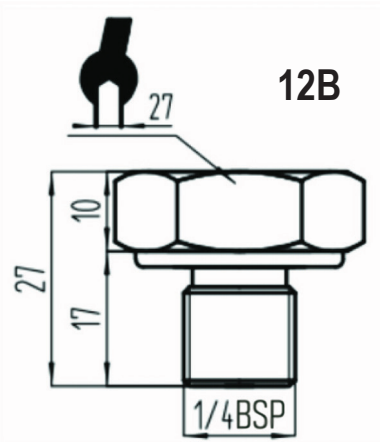


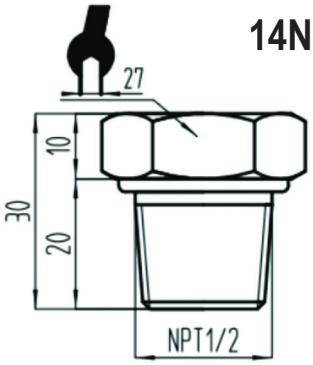


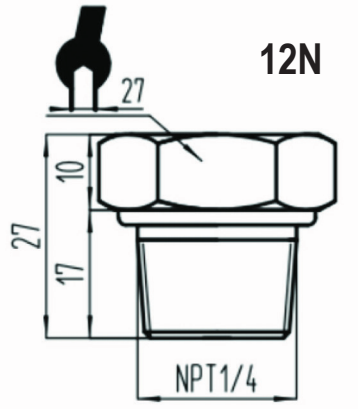












*All dimensions are in mm.
NOTE:The torque depends on all kinds of factors, such as gasket material, kitting material, thread lubrication and pressure.

ORDERING CODES

1. APPROVAL	NA
NA	Non-hazardous area

2. ACCURACY	CL3
CL3	0.5% FS

3. RANGE	XXX
XXX	Refer Range Table (Page 05)

4. OUTPUT SIGNAL	HC
HC	4~20mA

5. PRESSURE TYPE	GA
GA	Gauge
AS	Absolute
SE	Sealed gauge

6. ELECTRICAL CONNECTION	ND2
ND2	DIN 43650

7. PROCESS CONNECTION	XL
14M	M20x1.5 mm (M)
13M	M18x1.5 mm (M)
11M	M16x1.5 mm (M)
09M	M14x1.5 mm (M)
14B	½″ BSP (M)
12B	¼″ BSP (M)
14N	½″ NPT (M)
12N	¼″ NPT (M)

Ordering Example:
MT-P100TR-NA-CL3-XXX-HC-GA-ND2-XL

NOTES
1. Do not touch the diaphragm with hard objects, which may cause damage to the diaphragm.
2. Please read the Instruction Manual of the product carefully before installation and check the relevent information of the product.
3. Strictly follow the wiring method for wiring, otherwise it may cause product damage or other potential faults.
4. Misuse of the product may cause danger or personal injury.
5. Do not misuse documentation.
6. The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
7. Complete installation, operation, and maintenance information is provided in the instructions of the product.

STANDARD RANGES

Pressure Range Code	Pressure Reference	Pressure Range	Overpressure	Burst Pressure
F11	G	0...100mbar	300%FS	600%FS
F14	G	0...200mbar	300%FS	600%FS
F16	G,A	0...350mbar	300%FS	600%FS
F20	G	0...700mbar	300%FS	600%FS
B02	G,A	0...1bar	200%FS	500%FS
B03	G,A	0...1.6bar	200%FS	500%FS
B05	G,A	0...2.5bar	200%FS	500%FS
B06	G,A	0...4bar	200%FS	500%FS
B07	G,A	0...6bar	200%FS	500%FS
B09	G,A	0...10bar	200%FS	500%FS
B11	G,A,S	0...16bar	200%FS	500%FS
B13	G,A,S	0...25bar	200%FS	500%FS
B16	S	0...40bar	200%FS	400%FS
B17	S	0...60bar	200%FS	400%FS
B19	S	0...100bar	200%FS	400%FS
B21	S	0...160bar	200%FS	400%FS
B24	S	0...250bar	150%FS	400%FS
B27	S	0...400bar	150%FS	300%FS
B29	S	0...600bar	150%FS	300%FS

NOTES
1. G stands for gauge pressure, A, absolute pressure, S, sealed gauge pressure.
2. select the non-oil filling pressure sensor, and the measurement medium must be clean gas.