

WTR01 Industrial Pressure Transmitter



- Piezoresistive silicon chip employed
- Perfect long term stability
- MEMS technology
- CE certificate

WTR01 industrial pressure transmitter is a standard and most popular transmitter applied in air and liquid pressure measuring. A high sensitivity silicon pressure chip is employed in the sensor. The most important specification for industry application is long term stability. The WTR01 pressure transmitter is designed for industry application with perfect long term stability.

Caution

Please specify when the operation environment has a big pressure fluctuation. The pulse-snubber should be added against cavitation and liquid hammer

Pressure

Pressure Range	10kPa, 35kPa, 70kPa, 100kPa, 250kPa, 400kPa, 600kPa, 1MPa, 1.6MPa, 2.5MPa, 4MPa, 6MPa, 10MPa, 16MPa, 25MPa, 40MPa, 60MPa, 100MPa
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Pressure Reference	Gauge pressure Absolute pressure Sealed gauge pressure
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Overpressure	300%F.S.($\leq 70\text{kPa}$) 200%F.S.($< 25\text{MPa}$) 150%F.S.($\geq 25\text{MPa}$)
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Output Signal

Output	4 to 20mA 0.5 to 4.5V 1 to 5V 0 to 5V
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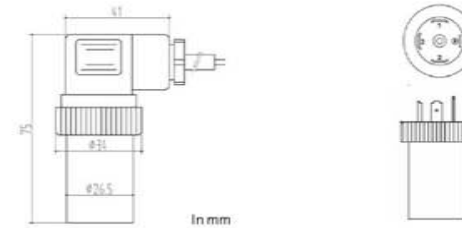
Performance

Accuracy (linearity, hysteresis and repeatability)	0.5%F.S. (Typical)
Excitation	24VDC 5VDC
Compensated Temp.	-20-85℃ (typical)
Operating Temp.	-20-85℃
Storage Temp.	-40-125℃
Zero Temp. Coefficient	$\pm 1.5\%$ F.S.max.(-20-85℃)
Span Temp. Coefficient	$\pm 1.5\%$ F.S.max.(-20-85℃)
Pressure Connection	see last page "how to order"
Protection	IP65
Housing Material	Stainless steel 304 (SS316 for sensor inside)

Long-term Stability	$\leq 0.2\%$ F.S./year
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Weight	180g(approx)
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Drawing



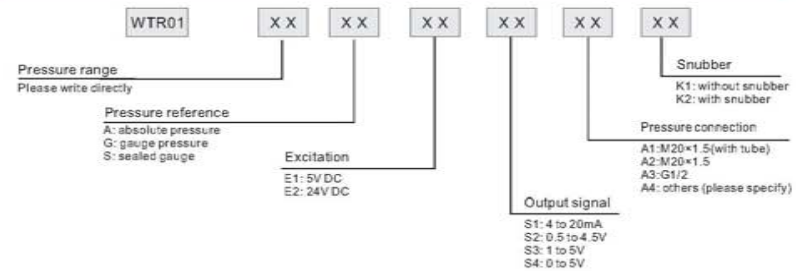
Connection

2 wire	Pin 1	+Excitation	
	Pin 2	+output	
	Pin 3	pending	
3 wire	Pin 1	+Excitation	
	Pin 2	-Excitation	
	Pin 3	+Output	

Pressure port

Thread	M20*1.5	M20*1.5	G1/2
Dimension In mm Hex27mm			
Code	A1(with tube)	A2	A3

How to order



WTR02 Flush Pressure Transmitter



- Sanitary application
- Without blockage in measuring
- Piezoresistive silicon chip employed
- MEMS technology
- CE certificate

WTR02 pressure transmitter is a standard and most economic transmitter applied in air and liquid pressure measuring. It is designed for sanitary industry and clogging free application with flush diaphragm.

Caution

1. Please do not touch the diaphragm by finger and other hard objects, or it may be damaged
2. The sensor filled with olive oil is for sanitary application. It can't work when the temperature is lower than 0°C, because the olive oil will freeze lower than 0°C.

Pressure

Pressure Range	10kPa, 35kPa, 70kPa, 100kPa, 250kPa, 400kPa, 600kPa, 1MPa, 1.6MPa, 2.5MPa, 4MPa, 6MPa, 10MPa
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Pressure Reference	Gauge pressure Absolute pressure Sealed gauge pressure
Overpressure	300% F.S.(≤70kPa) 200% F.S.(≤10MPa)

Output Signal

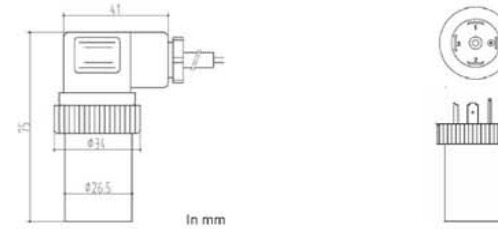
Output	4 to 20mA 0.5 to 4.5V 4 to 20mA 1 to 5V 0 to 5V
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Performance

Accuracy (including linearity, hysteresis and repeatability)	0.5%F.S. (Typical)
Excitation	24VDC 5VDC
Compensated Temp.	-20-85℃ (typical)
Operating Temp.	-40-125℃
Storage Temp.	-40-125℃
Zero Temp. Coefficient	±1.5%F.S.max. (-20-85℃)
Span Temp. Coefficient	±1.5%F.S.max. (-20-85℃)
Pressure Connection	see last page "how to order"
Protection	IP65
Housing Material	Stainless steel 304 (SS316 for sensor inside)

Long-term Stability	≤0.2%F.S./year
Weight	180g(approx)

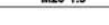
Drawing



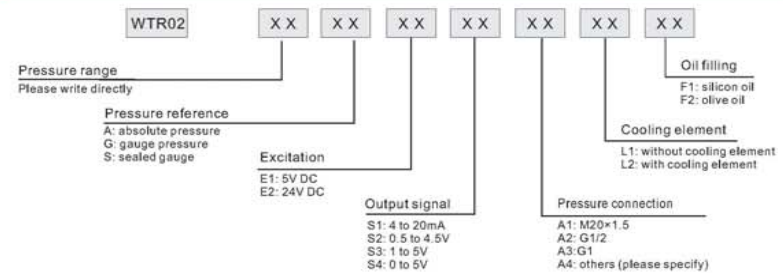
Connection

2 wire	Pin 1	+Excitation	
	Pin 2	+output	
	Pin 3	pending	
3 wire	Pin 1	+Excitation	
	Pin 2	-Excitation	
	Pin 3	+Output	

Pressure port

Thread	M20*1.5	M20*1.5	G1/2
Dimension in mm Hex27mm			
Code	A1	A2	A3

How to order



WTR04 Differential Pressure Transmitter



- Piezoresistive silicon chip employed
- Perfect long term stability
- MEMS Technology
- CE certificate

WTR04 differential pressure transmitter is a standard product for differential pressure measuring. A high sensitivity silicon pressure chip is employed in the sensor. The most important specification for industry application is long term stability. The WTR04 is designed for industry application with perfect long-term stability.

Caution

We mark "H" at positive pressure end and "L" at negative pressure end on the sensor body. It can not be connected reversely.

Pressure

Pressure Range	35kPa, 70kPa, 100kPa, 250kPa, 400kPa, 600kPa, 1MPa, 1.6MPa, 2.5MPa		
Overpressure	Range	Positive Overpressure	Negative Overpressure
	35kPa	70kPa	35kPa
	70kPa	150kPa	70kPa
	100kPa	200kPa	100kPa
	250kPa	500kPa	250kPa
	400kPa	800kPa	400kPa
	600kPa	1200kPa	600kPa
	1MPa	2MPa	1MPa
	1.6MPa	3.2MPa	1MPa
	2.5MPa	5MPa	1MPa

Output signal

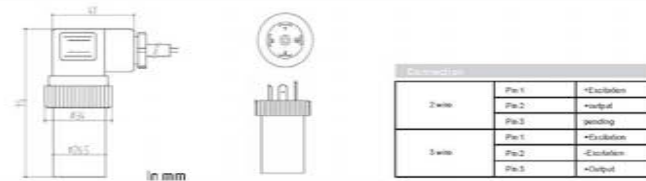
Span Output	4-20mA (typical)
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Specification

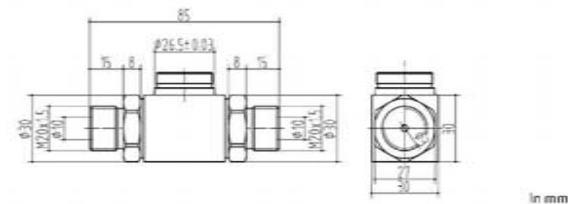
Accuracy (linearity, repeatability and hysteresis)	0.25% F.S. (Typical)
Excitation	24VDC (Typical)
Compensated Temp.	0-60°C (typical)
Operating Temp.	-40-125°C
Storage Temp.	40-125°C
Insulation Resistance	>100Mohm/250VDC

Zero Temp. Coefficient	±1.5% F.S. max. (-20-85°C)			
Span Temp. Coefficient	±1.5% F.S. max. (-20-85°C)			
Bridge Resistance	min.	Max.	Unit	
	2600	5500	ohm	
Long Term Stability	0.3% F.S./year			
Static Pressure	10MPa (Max.)			
Vibration	20g (20-5000HZ)			
Oil Filling	Silicon oil (typical)			
	Olive oil available for sanitary application			
O-ring	NBR, Viton			
Housing And Diaphragm	Stainless steel 316L			
Wire	39x0.015, Silicon shielded, 200°C bearing			
	4 wire (typical) 5 wire (available)			
Weight	470g (approx)			

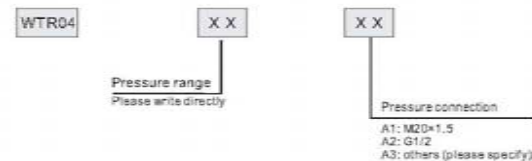
Drawing



Pressure connection



How to order



WTR07 Industrial Pressure Transmitter



- Piezoresistive silicon chip employed
- Perfect long term stability
- MEMS technology
- CE certificate
- Compact size

WTR07 industrial pressure transmitter is a standard and most economic transmitter applied in air and liquid pressure measuring.

Caution

Please specify when the operation environment has a big pressure fluctuation. The pulse-snubber should be added against cavitation and liquid hammer.

Pressure

Nominal Range	20kPa, 35kPa, 70kPa, 100kPa, 250kPa, 400kPa, 600kPa, 1MPa, 1.6MPa, 2.5MPa, 4MPa, 6MPa, 10MPa, 16MPa, 25MPa
Pressure Reference	Gauge pressure Absolute pressure Sealed gauge pressure
Overpressure	300% F.S. (<70kPa) 200% F.S. (<25MPa)

Output Signal

Output	4 to 20mA 0.5 to 4.5V 1 to 5V 0 to 5V
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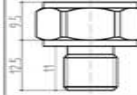
Performance

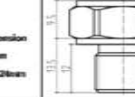
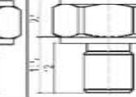
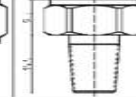
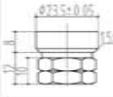
Accuracy (including linearity, hysteresis and repeatability)	0.5% F.S. (Typical)
Excitation	24VDC 12VDC 5VDC
Compensated Temp.	-20-85°C (typical)
Operating Temp.	-40-125°C
Storage Temp.	-40-125°C
Zero Temp. Coefficient	±1.5% F.S. max. (-20-85°C)
Span Temp. Coefficient	±1.5% F.S. max. (-20-85°C)
Pressure Port	see last page "how to order"
Housing Material	Stainless steel 304 (SS316 for sensor inside)
Protection	IP65
Weight	95g (approx)

Electrical Connector

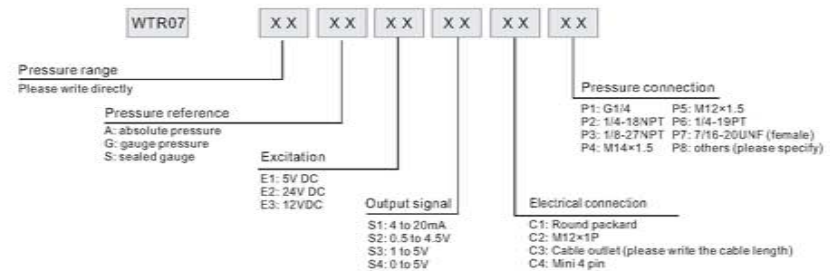
Round Packard	M12x1P	Cable outlet	Mini 4 pin
			
in mm	in mm	in mm	in mm
C1	C2	C3	C4
Current (2 wire)	Current (2 wire)	Current (2 wire)	Current (2 wire)
Voltage (3 wire)	Voltage (3 wire)	Voltage (3 wire)	Voltage (3 wire)
Pin 1: Excitation	Pin 1: Excitation	Pin 1: Excitation	Pin 1: Excitation
Pin 2: Output	Pin 2: Output	Pin 2: Output	Pin 2: Output
Pin 3: Ground	Pin 3: Ground	Pin 3: Ground	Pin 3: Ground
Pin 4: Reading	Pin 4: Reading	Pin 4: Reading	Pin 4: Reading

Pressure port

Thread	G1/4	1/4-18NPT	1/8-27NPT
			
Dimension in mm	11.5	11.5	11.5
Hex 24mm	24	24	24
Code	P1	P2	P3

Thread	M14x1.5	M12x1.5	1/4-18NPT	7/16-20UNF (female)
				
Dimension in mm	11.5	11.5	11.5	11.5
Hex 24mm	24	24	24	24
Code	P4	P5	P6	P7

How to order



WTR11 Sanitary Pressure Transmitter



- 1.5" and 2" Tri-Clamp connections
- 4 to 20mA 2-wire output, others available
- CE certificate

WTR11 meets the sanitary standard for pressure and level measurement in food, pharmaceutical, cosmetic, and beverage industries. It is designed for "clean in place"(CIP), and "sterilize in place" (SIP) maintenance

Pressure

Nominal Range	35kpa, 70kpa, 100kpa, 250kpa, 400kpa, 600kpa, 1MPa, 1.6MPa, 2.5MPa, 4MPa, 6MPa, 10MPa
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Pressure Reference	Gauge pressure Absolute pressure Sealed gauge pressure
Overpressure	300%F.S.(≤70kPa) 200%F.S.(≤10MPa)

Output Signal

Output	4 to 20mA
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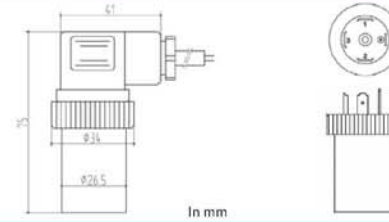
Performance

Accuracy (including linearity, hysteresis and repeatability)	0.5%F.S. (Calibrated in vertical mounting position)
Excitation	24VDC
Compensated Temp.	-20-85℃ (typical)
Ambient Temp.	-20-85℃
Media Temp.	-40-125℃
Storage Temp.	-40-125℃
Zero Temp. Coefficient	±1.5%F.S.max.(-20-85℃)
Span Temp. Coefficient	±1.5%F.S.max.(-20-85℃)
Pressure Port	see last page "how to order"
Protection	IP65
Housing Material	Stainless steel 304 (SS316 for sensor inside)
Long-term Stability	≤0.2%F.S./year
Weight	280g(approx)

Caution

1. Please do not touch the diaphragm by finger and other hard objects, or it may be damaged
2. The sensor filled with olive oil is for sanitary application. It can't work when the temperature is lower than 0℃, because the olive oil will freeze below 0℃.
3. Tri-clamp size is determined by the outside diameter of the pipe, not the outside diameter of the ferrule.

Electrical Connector



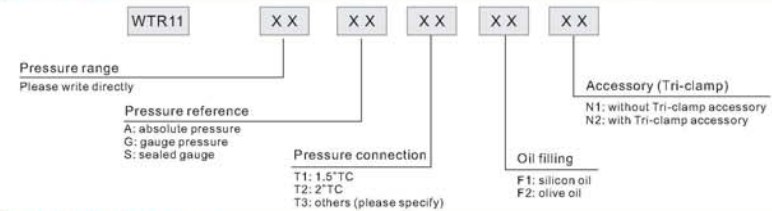
Connection

2 wire	Pin 1	+Excitation	
	Pin 2	+output	
	Pin 3	pending	
3 wire	Pin 1	+Excitation	
	Pin 2	-Excitation	
	Pin 3	+Output	

Connection

	1.5" TC	2" TC
Dimension in mm	30.2	30.2
	Ø50.8	Ø61
Code	T1	T2

How to order



Accessory (Tri-clamp)



Note: The accessory is not included in the shipment except ordering.

WTR12 Sanitary Pressure Transmitter



- Flange DN25 and DN50 connection available
- 4 to 20mA 2-wire output, others available
- CE certificate

WTR12 meets the sanitary standard for pressure and level measurement in food, pharmaceutical, cosmetic, and beverage industries. It is designed for "clean in place"(CIP), and "sterilize in place" (SIP) maintenance

Caution

1. Please do not touch the diaphragm by finger and other hard objects, or it may be damaged
2. The sensor filled with olive oil is for sanitary application. It can't work when the temperature is lower than 0°C, because the olive oil will freeze lower than 0°C.

Pressure

Pressure Range	1MPa, 1.6MPa, 2.5MPa, 4MPa, 6MPa, 10MPa, 16MPa, 25MPa
Pressure Reference	Gauge pressure Absolute pressure Sealed gauge pressure
Overpressure	200%F.S.

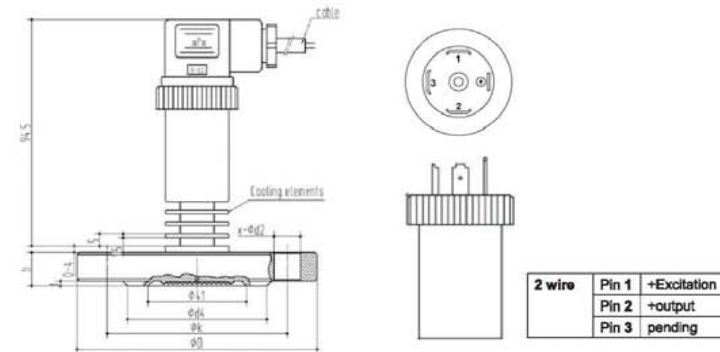
Output Signal

Output	4 to 20mA
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Performance

Accuracy (including linearity, hysteresis and repeatability)	0.5%F.S. (Calibrated in vertical mounting position)
Excitation	24VDC
Compensated Temp.	-20-85°C (typical)
Ambient Temp.	-20-85°C
Media Temp.	-40-125°C
Storage Temp.	-40-125°C
Zero Temp. Coefficient	±1.5%F.S.max. (-20-85°C)
Span Temp. Coefficient	±1.5%F.S.max. (-20-85°C)
Pressure Port	see last page "how to order"
Protection	IP65
Housing Material	Stainless steel 304 (SS316 for sensor inside)
Long-term Stability	≤0.2%F.S./year
Weight	1000g(approx)

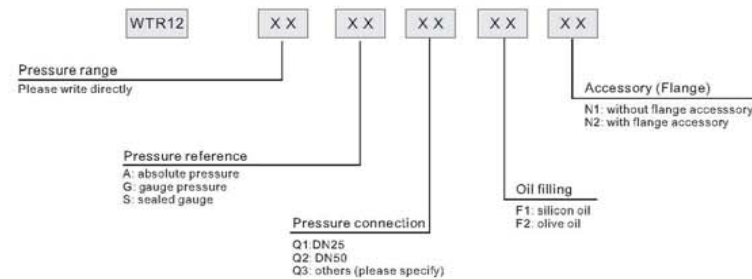
Drawing



Flange Connection

DN in mm	Pressure	Mb	D	b	k	d	n	Raised face	
								f	d4
DN25	1 ~4 MPa	41	115	18	85	14	4	2	68
	6 ~10 MPa	41	140	24	100	18	4	2	68
DN50	1 ~4 MPa	41	165	20	125	18	4	2	102
	6 MPa	41	180	26	135	22	4	2	102
	10 MPa	41	195	28	145	26	4	2	102
	16 MPa	41	195	30	145	26	4	2	102
	25 MPa	41	200	38	150	26	8	2	102

How to order



WTR15 Pressure Transmitter with Display



- Piezoresistive pressure chip employed
- High sensitivity
- MEMS technology
- Hart protocol selectable
- Short delivery
- CE certificate

WTR15 industrial pressure transmitter is a standard and most economic transmitter applied in air and liquid pressure measuring. It can meet nearly all the applications in industry. There is a high sensitive piezoresistive silicon pressure sensor inside.

Caution

Please specify when the operation environment has a big pressure fluctuation. The pulse-snubber should be added against cavitation and liquid hammer.

Pressure Range

Nominal Range	35kPa, 70kPa, 100kPa, 250kPa, 400kPa, 600kPa, 1MPa, 1.6MPa, 2.5MPa, 4MPa, 6MPa, 10MPa, 16MPa, 25MPa, 40MPa, 60MPa, 100MPa
Pressure Reference	Gauge pressure Absolute pressure Sealed gauge pressure
Overpressure	300%F.S.(≤70kPa) 200%F.S.(≤25MPa) 150%F.S.(≥25MPa)

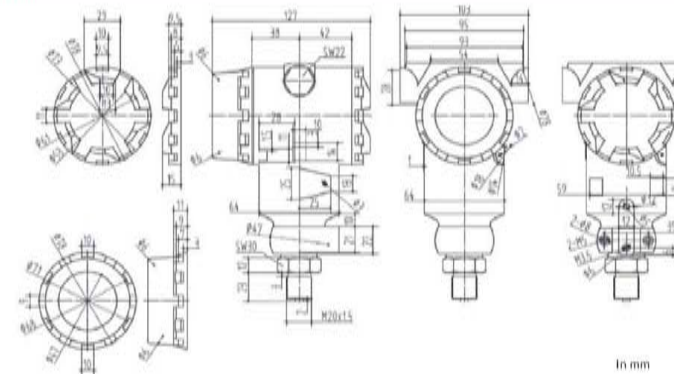
Output Signal

Output	4 to 20mA (Hart protocol selectable)
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Performance

Accuracy (including linearity, hysteresis And repeatability)	0.5%F.S.(Typical)
Excitation	24VDC(typical)
Compensated Temp.	-10-70℃ (typical)
Medium Temp.	-30-100℃
Ambient Temp.	-40-85℃
Storage Temp.	-40-125℃
Zero Temp. Coefficient	±1.5%F.S.max.(-20-85℃)
Sensitivity Temp. Coefficient	±1.5%F.S.max.(-20-85℃)
Material In Media Contact	Stainless steel 316L, Viton
Pressure Connection	see last page "how to order"
Protection	IP65
Weight	Approx.(1500g)

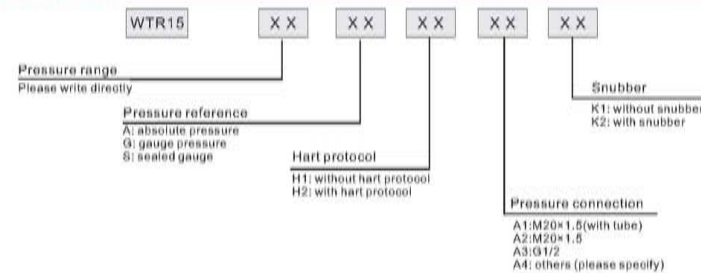
Drawing



Pressure port

Thread	M20*1.5	M20*1.5	G1/2
Dimension In mm Hex 27mm			
Code	A1 (with tube)	A2	A3

How to order



WTR16 Digital Manometer



- Battery powered
- LC display
- Piezoresistive silicon chip employed
- Perfect long term stability
- CE certificate

WTR16 digital manometer has automatic turn-off function. LC display indicates the measurement value as well as the unit. This product is for indoor operating only.

Caution

Please specify when the operation environment has a big pressure fluctuation. The pulse-snubber should be added against cavitation and liquid hammer.

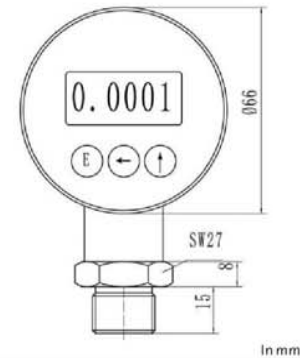
Pressure Range

Nominal Range	35kPa, 70kPa, 100kPa, 250kPa, 400kPa, 600kPa, 1MPa, 1.6MPa, 2.5MPa, 4MPa, 6MPa, 10MPa, 16MPa, 25MPa, 40MPa, 60MPa, 100MPa
Pressure Reference	Gauge pressure Absolute pressure Sealed gauge pressure
Overpressure	300%F.S.(≤70kPa) 200%F.S.(<25MPa) 150%F.S.(≥25MPa)

Performance

Accuracy (including linearity, hysteresis and repeatability)	0.5%F.S.(Typical)
Excitation	3.6V battery
Compensated Temp.	-10-70℃ (typical)
Operating Temp.	-40-125℃
Storage Temp.	-40-125℃
Zero Temp. Coefficient	±1.5%F.S.max.(-20-85℃)
Sensitivity Temp. Coefficient	±1.5%F.S.max.(-20-85℃)
Pressure Port	see last page "how to order"
Housing Material	Stainless steel 304 (SS316 for sensor inside)
Protection	IP65
Weight	350g(approx)

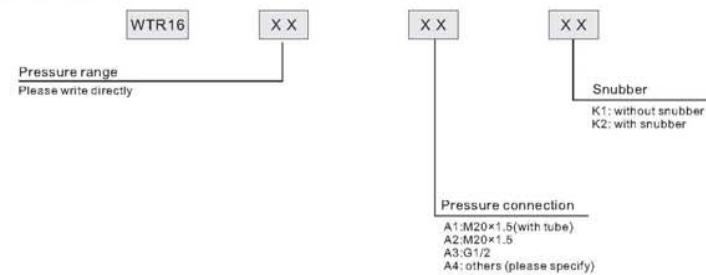
Drawing



Pressure port

Thread	M20*1.5	M20*1.5	G1/2
Dimension in mm Hex 27mm			
Code	A1(with tube)	A2	A3

How to order



WTE02 Explosion-proof Pressure Transmitter



- Piezoresistive silicon chip employed
- MEMS technology
- EXIA IIC T6

WTE02 is designed for hazardous area application. It is used for explosion-proof industry widely.

Advantages

Hazardous area application
Isolation explosion-proof
Good long term stability
Excellent linearity

Pressure Range

Nominal Range	100kPa, 250kPa, 400kPa, 600kPa, 1MPa, 1.6MPa, 2.5MPa, 4MPa, 6MPa, 10MPa, 16MPa, 25MPa, 40MPa, 60MPa, 100MPa
Pressure Reference	Gauge pressure Absolute pressure Sealed gauge pressure
Overpressure	200%F.S. (<25MPa) 150%F.S. (≥25MPa)

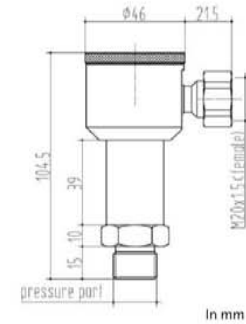
Output Signal

Output	4 to 20mA (Typical)
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Performance

Accuracy (including linearity, hysteresis and repeatability)	0.5%F.S. (Typical)
Excitation	24VDC
Compensated Temp.	-20-85℃
Operating Temp.	-20-85℃
Storage Temp.	-40-125℃
Zero Temp. Coefficient	±1.5%F.S. (-20-85℃)
Span Temp. Coefficient	±1.5%F.S. (-20-85℃)
Pressure Connection	see last page "how to order"
Protection	IP65
Housing Material	Stainless steel 304 (SS316 for sensor inside)
Long-term Stability	≤0.2%F.S./year
Isolation Ex-proof	EXIA IIC T6

Drawing



Pressure port

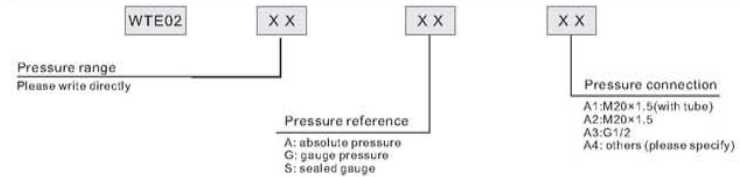
Thread	M20*1.5	M20*1.5	G1/2
Dimension In mm Hex 27mm			
Code	A1(with tube)	A2	A3

Wire connection



Note: The wire connection is non-polarity 2-wire connection. The excitation and output can be connected with any side of the wire connecting terminal. No matter which terminal side the excitation or output connects with, the effect is the same.

How to order



WTL01 Submersible Level Transmitter



- Piezoresistive Silicon Chip Employed
- MEMS Technology
- Cable Ventilated
- Excellent long term stability
- Hart protocol selectable
- CE certificate

WTL01 level transmitter is a standard and most economic transmitter applied in liquid level measuring. A high sensitivity piezoresistive silicon pressure chip is employed in the transmitter.

Typical Application

Depth and level measurement in

- Wells
- Reservoirs
- Lakes
- Rivers
- Sewage treatment plant
- Water tank
- Ground water monitoring
- Surface water monitoring

Pressure Range

Nominal Range 1m, 2m, 5m, 10m, 20m, 50m, 100m, 200m H₂O

Output Signal

Output 4 to 20mA|0.5 to 4.5V|1 to 5V

Performance

Accuracy (including Linearity, Hysteresis And Repeatability) 0.5%F.S.(Typical)

Overpressure 200%F.S.

Excitation 24V DC|5V

Compensated Temp. 0-70° C

Medium Temp. 0-60° C

Storage Temp. -40-125° C

Zero Temp. Coefficient ≤ 0.03%F.S./° C

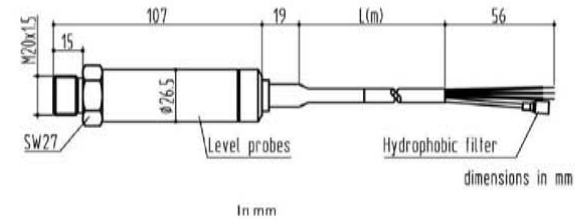
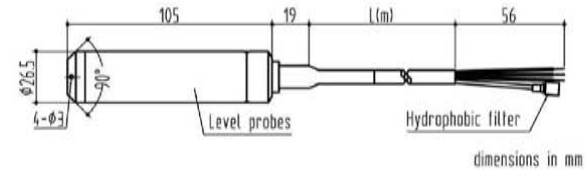
Span Temp. Coefficient ≤ 0.03%F.S./° C

Long Term Stability <0.2%F.S./year

Protection IP68

Weight 245g(approx.)

Drawing



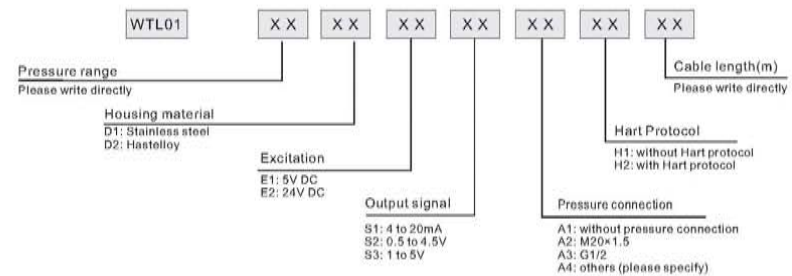
Current (2 wire)

Wire	Connection
red	excitation+
green	Output+

Voltage (3 wire)

Wire	Connection
red	excitation+
blue	excitation-
yellow	output+

How to order



WTW01 Industrial Temperature Transmitter



- Perfect long term stability
- RTD component
- Compact design
- Resistant against vibration and temperature shocks

Temperature measurement is one of the most important parameters which determine product quality, security and reliability. WTW01 industrial temperature transmitter is a standard and most popular transmitter applied in temperature measuring.

Temperature range

Temperature Range -50℃ to 600℃ (other temperature range available)

Output Signal

Output 4 to 20mA (typical)

Performance

Accuracy 0.3% F.S., ±0.5% F.S.

Excitation 24VDC (12VDC to 36VDC)

Environment Temp. -40~85℃

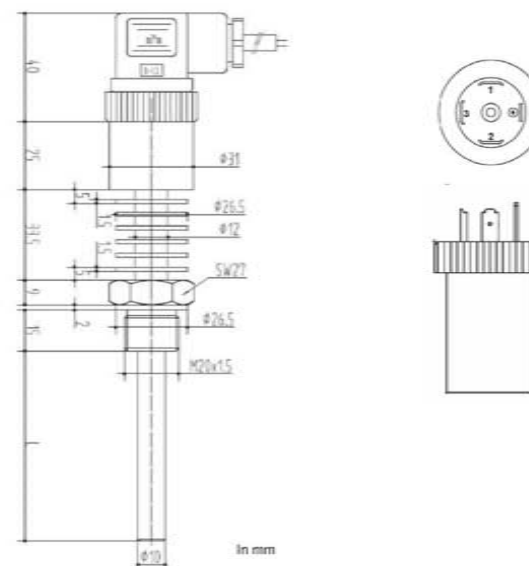
Long Term Stability <0.03% F.S.

Pressure Connection see last page "how to order"

Insertion Length 30mm to 2500mm

Protection IP65

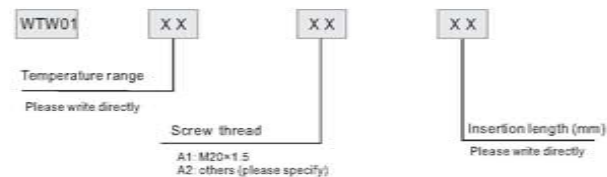
Drawing



Connection

2 wire	Pin 1	+Excitation	
	Pin 2	+output	
	Pin 3	pending	
3 wire	Pin 1	+Excitation	
	Pin 2	-Excitation	
	Pin 3	+Output	

How to order



Glass to metal seal

Applications

- Aerospace
- Automotive
- Battery Feedthrough
- Electronic and Photonic Package
- High Vacuum
- Medical
- Military
- Sensor Housing

Hermetic sealing is a part of design of many products. Glass to metal sealing is a popular method to hermetic sealing with low cost. In addition to providing seal, the glass act as an insulator between one pin to another and housing.

We are the biggest glass to metal sealing company in China. We focus on customize services. The photos bellow show some glass to metal parts customized for customers.



Lithium battery lid

We manufactured the battery lid for some biggest lithium battery manufacturer continuously in China. The ER series employ stainless steel 304 and CR series employ ST1 material.

Name	Model	Outside diameter	Rod length
ER series	ER10	9.6mm	41
	ER14NJ	13.5	7.5
	ER14250	13.5	21
	ER14335	13.5	28
	ER14505	13.5	46
	ER17505	15.8	46
	ER18505	17.5	46
	ER26500	24.5	46
	ER34615	31.5	57
	ER2450	23.1	6.5
	ER1860	17.5	6.5
CR series	ER32	31.5	3
	CR14	13.3	8.5
	CR15	14.4	8.5
	CR16	15.1	8.5
	CR17	15.9	8.5
	CR18	17.5	8.5



Air compressor part

Glass to metal sealing is the necessary part for air conditioning and compressor manufacturing.



Photonic Package

The housing employs Kovar material or #10 stamping stainless steel.



Customized seal

Tell me your specifications or drawing, we will manufacture samples for you. Please indicate the following requirements before manufacturing:

1. Insulation
2. Proof voltage
3. Proof pressure
4. Weldability
5. Surface requirements
6. Quantity

Product Development Flow

