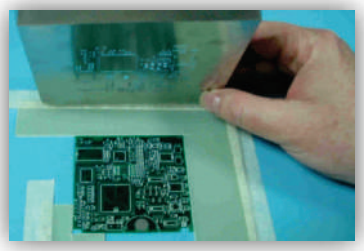
The Total Quality for The Total Precision



Each circuit board undergoes strict screening to ensure that product production is based on the highest starting point

NEXONIt has been designing and manufacturing a wide range of sensors for industrial and production process automation around the world. With many years of experience in the design, manufacturing and testing of fluid and position detection sensors, our team of engineers releases innovative new products for different applications every year. These products include various types of sensors for pressure, temperature, level, flow and position detection. Our products are developed and designed for various practical applications to help our customers improve production efficiency while reducing costs.

All products are produced using high-tech processing machinery (SMT) to ensure quality management system

An in-house testing laboratory equipped with high-tech equipment tests various products so that they meet various quality standards.

Serve:

-We are ready to serve you in many countries around the world!
-If you are willing to use telephone consultation, please do not hesitate, our professional and technical staff will be very happy to provide you with satisfactory consultation.
-We are always ready to provide you with on-site technical support.
-You can customize the sample you need and try it for free for 4 weeks.
-We do not have any restrictions on the order quantity. Even if it is one product, you will get the same thoughtful and professional service.
-If your order quantity exceeds 50 pieces, we can make special products for you according to your requirements.
-We deliver to your door by express delivery.
-If you order the wrong goods, don't worry, we guarantee to exchange them for you right away.

Telephone:
021-54880031
021-54880032
E-Mail:
info@nexonelectronic.cn
Internet:
www.nexonmeters.cn

Pre-warehousing inspection ensures that the finished products delivered to the user are of the highest quality level and functional reliability

NEXON
SENSORS & CONTROLS

HART COMMUNICATION FOUNDATION IO-Link

CSA FM APPROVED Ex IEC Ex CE

Catalog

Flow

목차

Pressure

Temperature

Level

Controller / Meter

Flow series

Flow Sensors for FluidMeasuring Technology

FGR200-Positive Displacement Flow Meter(Gear Flow Meter)

- **High pressure rating**
- **Applicable to various viscous media**
- **High repeatability and accuracy**
- **Pulse / analog output selectable**
- **Wide measuring range**

FGR200 positive displacement flow meter measures the flow on the volumetric principle, in which gearwheels is moved proportional to the flow rate. The movement of the gearwheels is measured through the enclosing housing wall by a sensor.

Immune to medium viscosity. Higher trundown ratio, accuracy, resolution and responsibility, as well as for measuring the very-low flow.

FGR200 flow meters are bi-directional and can be used to measure the cylinder position without damaging internal parts.

Assembled with journal bearings FGR200 can measure low or non-lubricating fluids, such as paints, glues, resin, sealant etc.

The FGR200 series of positive displacement flow meters have 8 measuring ranges from 0.006 ... 1L/min through 4.0 ... 450L/min. Optional pickoffs forpulse output, current analog output and voltage analog output.

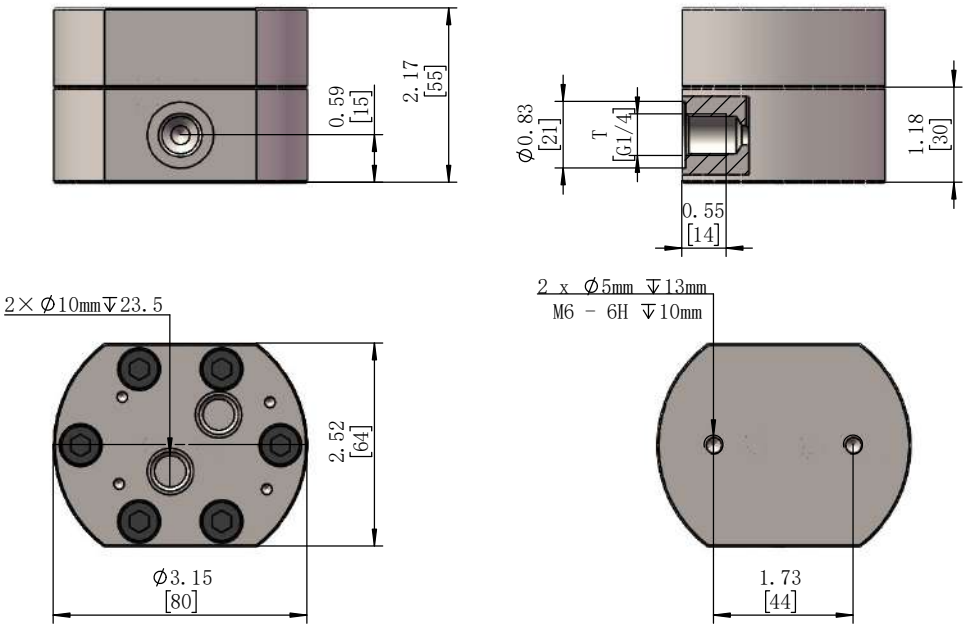
Applicable Medium	Liquids
Accuracy (at 30cst)	+0.5% of reading (turndown ratio of 1:10); +1% of reading (measuring range)
Repeatability	+0.1% of reading
Pressure Rating	420bar (stainless steel); 100bar (aluminum)
Ambient Temperature	-40...85℃
Medium Temperature	-40...100℃ (Max. 200C for high tem perature type)
Materials	
Body	316 stainless steel or aluminum
Gear	316 stainless steel
Sealing	FPM (NBR, PTFE optional)
Bearing	Stainless steel ball bearing

Applications

- Printing ink measurement
- Resin/glue/silica gel measurement
- Hydraulic oil/lubricating oil/grease measurement
- Cooling liquid measurement
- Solvent measurement
- Fuel oil measurement
- Polyurethane measurement
- Braking fluid measurement
- Cylinder position measurement

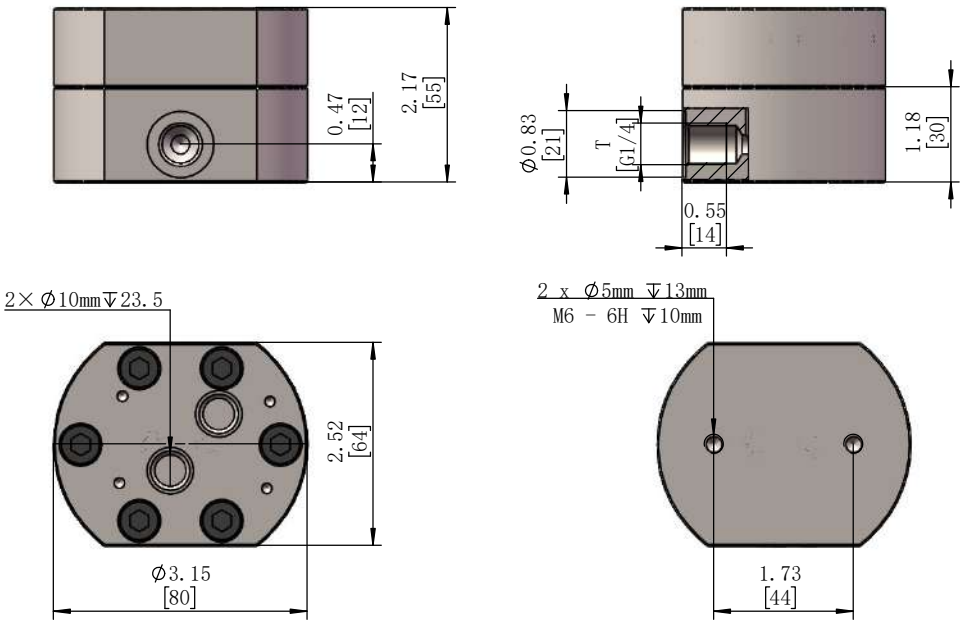
Dimensions inch[mm]

FG0002/FG1002 - 2L/Min

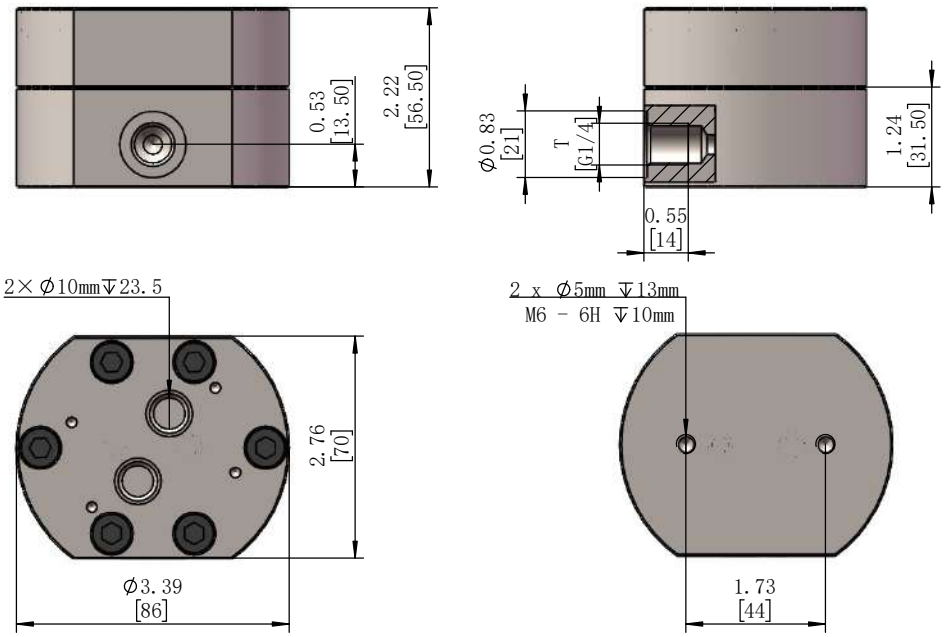


Dimensions inch[mm]

FG0003/FG1003 - 3L/Min

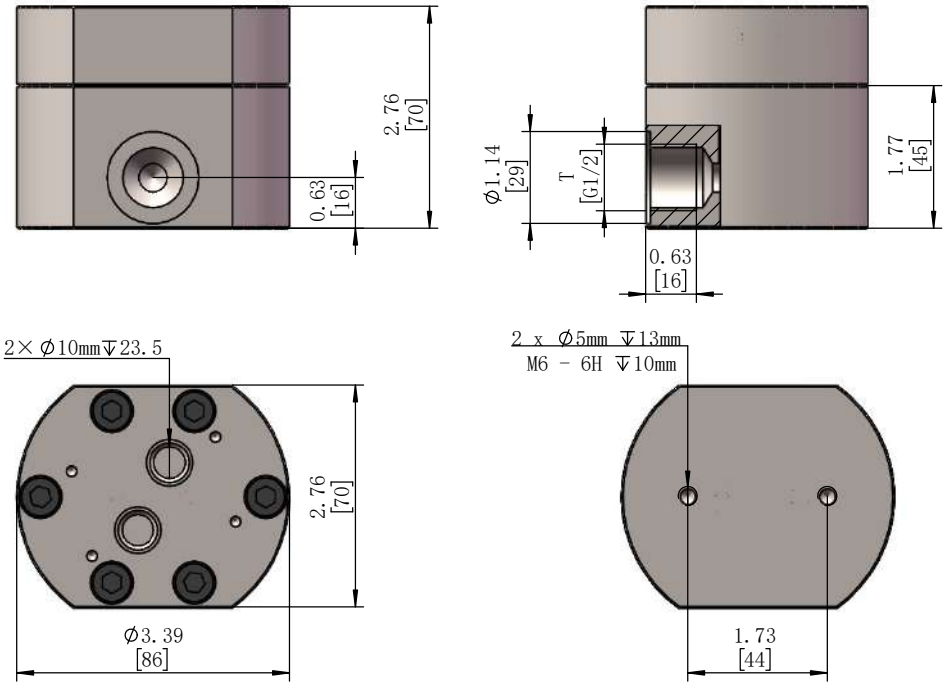


FG0008/FG1008 - 7.5L/Min

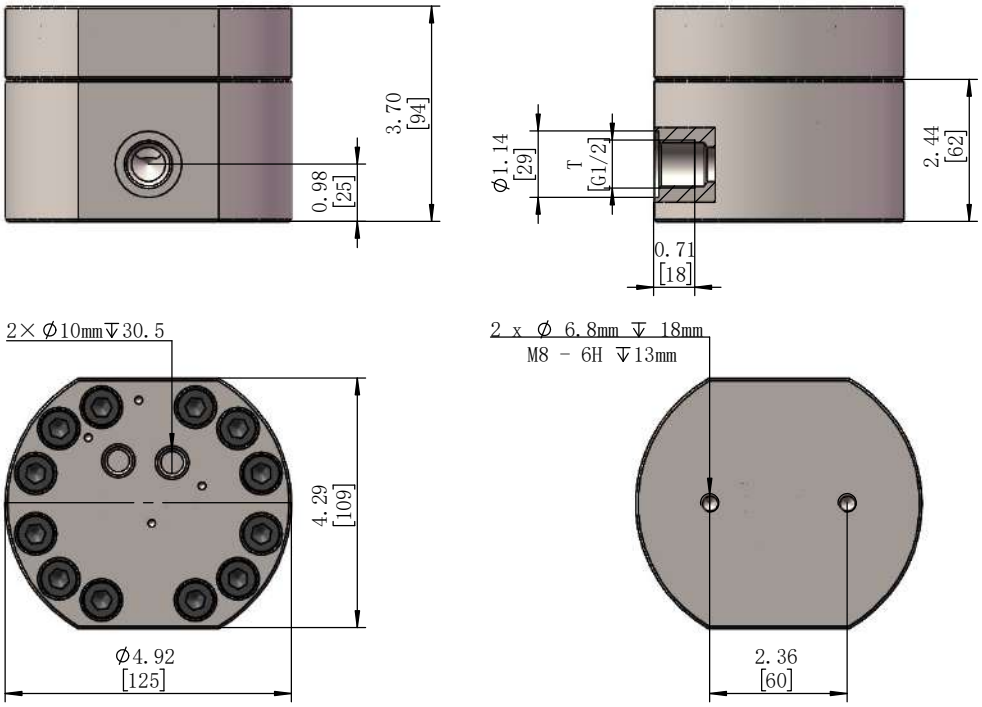


Dimensions inch[mm]

FG0025 FG1025 - 25L/Min

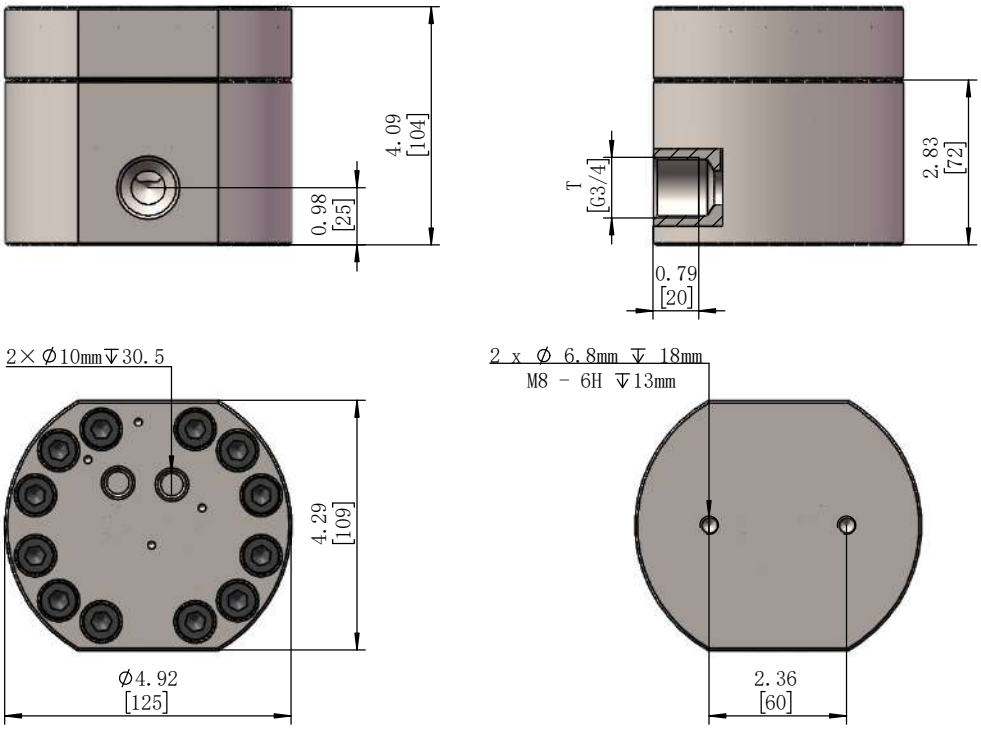


FG0040/FG1040 - 40L/Min

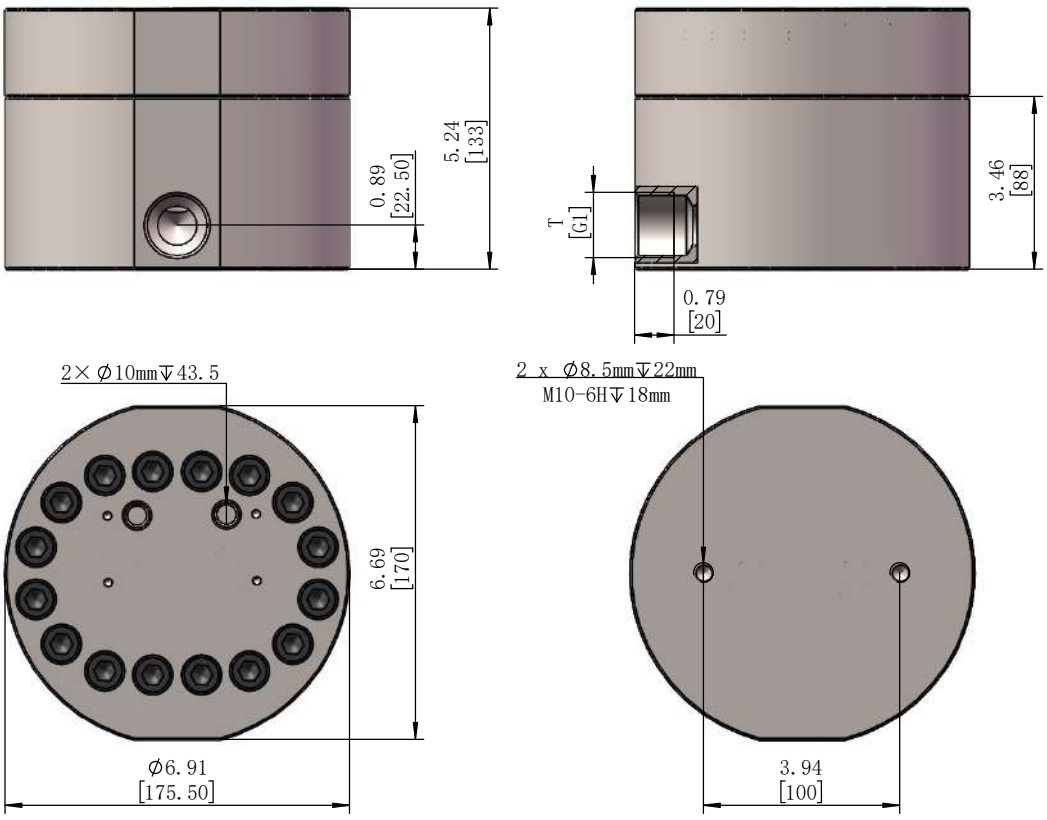


Dimensions inch[mm]

FG0075 FG1075 - 75L/Min

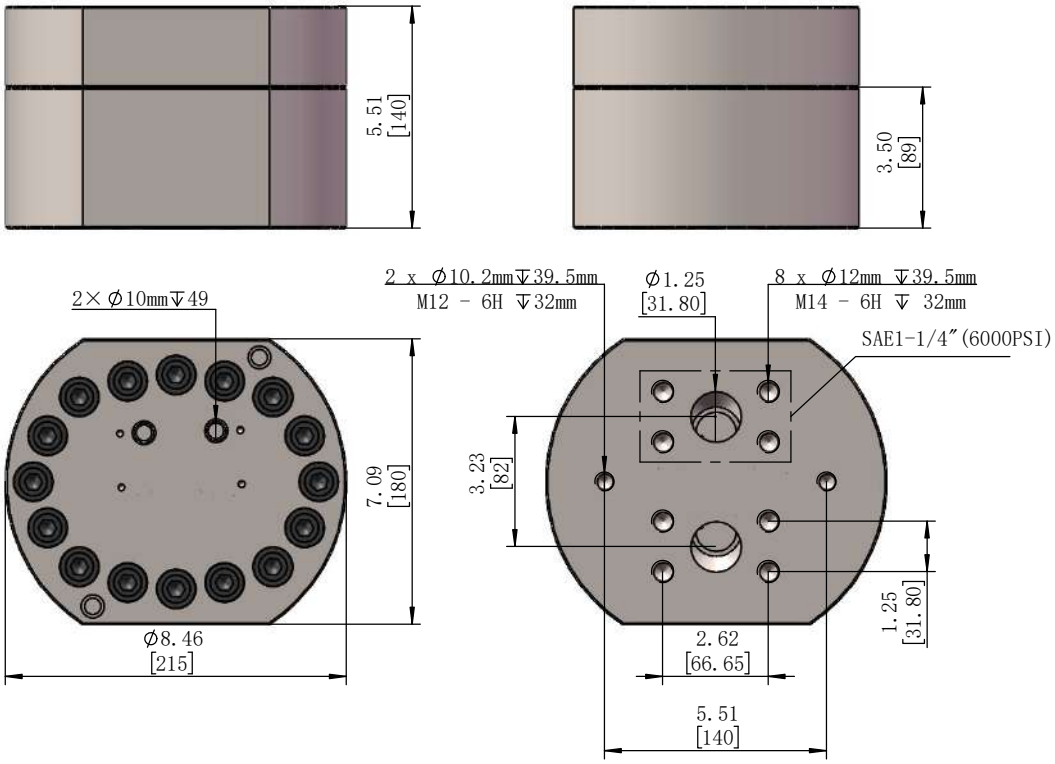


FG00FA/FG10FA - 150L/Min

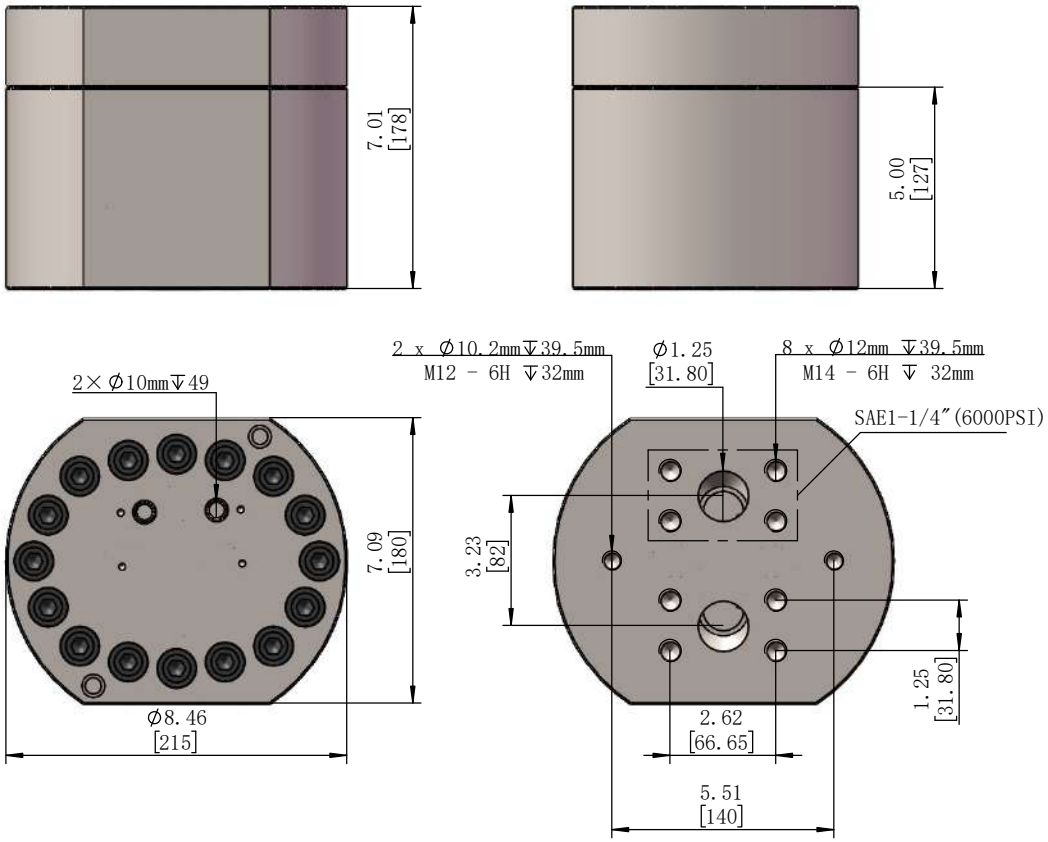


Dimensions inch[mm]

FG00FF/FG10FF - 225L/Min



FG00UF/FG10UF - 450L/Min



Model Number

OrderN0.	Type	Material	Measuring L/Min	K Coefficient IMPULSE/L	MAX pressure Bar	Connection	Max. Filter Diameter (micron)
FG0002	FGR200G1/4SBBF2L	316 stainless steel	0.006—2.0	40000	690	G1/4	30
FG0003	FGR200G1/4SBBF3L		0.02—3.0	13500	690	G1/4	30
FG0008	FGR200G1/4SBBF7.5L		0.05—7.5	4200	690	G1/4	30
FG0025	FGR200G1/2SBBF25L		0.2—25.0	1400	690	G1/2	30
FG0040	FGR200G1/2SBBF40L		0.4—40.0	840	690	G1/2	30
FG0075	FGR200G3/4SBBF75L		0.5—75.0	450	690	G3/4	200
FG00FA	FGR200G1SBBF150L		1.0—150.0	190	420	G1	200
FG00FF	FGR200S114SBBF225L		2.0—225.0	110	420	SAE1-1/4″	200
FG00UF	FGR200S114SBBF450L		3.5—450.0	55	420	SAE1-1/4″	200
FG1002	FGR200G1/4ABBF2L	Aluminum	0.006—2.0	40000	250	G1/4	30
FG1003	FGR200G1/4ABBF3L		0.02—3.0	13500	250	G1/4	30
FG1008	FGR200G1/4ABBF7.5L		0.05—7.5	4200	250	G1/4	30
FG1025	FGR200G1/2ABBF25L		0.2—25.0	1400	250	G1/2	30
FG1040	FGR200G1/2ABBF40L		0.4—40.0	840	250	G1/2	30
FG1075	FGR200G3/4ABBF75L		0.5—75.0	450	250	G3/4	200
FG10FA	FGR200G1ABBF150L		1.0—150.0	190	150	G1	200
FG10FF	FGR200S114ABBF225L		2.0—225.0	110	150	SAE1-1/4″	200
FG10UF	FGR200S114ABBF450L		3.5—450.0	55	150	SAE1-1/4″	200

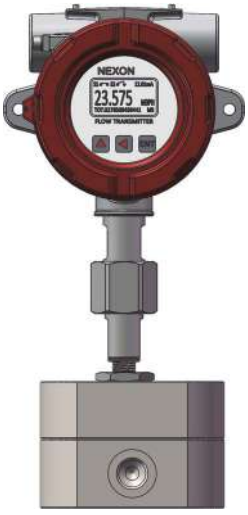
Optional sensor type

Pulse output type RS2000

Pulse output type RS2000

Analog output type VA2000
Frequency output type RF2000

DWE Digital display DW2002



BT Explosion-proof digital display type BT2002

FTB200 High Accuracy Turbine Flow Meter with Female Thread

- **High pressure resistance**
- **Low pressure loss**
- **Fast response time**
- **High repeatability and accuracy**
- **Resistant to contamination**
- **Pulse / analog output selectable**
- **Resistant to high and low temperatures**

Fluid flowing through FTB200 causes the rotor to revolve. As the rotor blade pass the pickoffs, electrical pulses are produced in which frequency is proportionai to the flow rate. The revolutions per minute and the K-factor (number of pulses/Gallon) make it possible to obtain the flow volume passing through the unit.

FTB200 series are used to measure medium or lower viscosity media, such as water,light fuel, solvent, hydraulic oil, lubricating oil etc.

Specifications

Measuring range	0.6...700L/Min
Measuring medium	Medium or lower viscosity liquids
Accuracy	Better than +1% of reading
Repeatability	+0.2% of reading
Pressure Rating	MAX.420bar
Ambient Temperature	-40...85℃
Medium Temperature	-40...120℃
Materials	
Body	304 stainless steel
Rotor Support	304 stainless steel
Turbine	304 stainless steel
Shaft	Hard Alloy Steel
Bearing	Hard alloy steel plain bearing
Process Connection	BSPP female thread, NPT female thread

Applications

- Petrochemical/energy industry
- Hydraulic /lubrication system
- Water treatment
- Oil / gas industry
- Experimental equipment
- Test systems

Electronics

The electronic part includes sensors and amplifiers. Selecting the appropriate sensors and amplifiers for different applications can ensure the measurement accuracy of the flowmeter. Sensors and amplifiers can be made in one piece or separate pieces according to user requirements.

Sensor

The sensor is divided into magnetic induction sensor and non-magnetic sensor. The difference between the two is that magnetic induction sensor adopts the principle of electromagnetic induction. The sensor is magnetic and will cause braking effect on the turbine at low flow rate, while non-magnetic sensor adopts the principle of carrier and the non-magnetic sensor has no influence on the turbine.

Magnetic sensor (V series) :

Can be used for most common applications
Measure ultra-high temperature or ultra-low temperature media (-200... 400℃)
Applications requiring output mv signals
When it is used for small flow, the flow range needs to be reduced (due to the nonlinear braking effect at ultra-low flow rate). When replacing the sensor, the flowmeter needs to be re-calibrated

Amplifier

The amplifier can be used in conjunction with magnetic or non-magnetic sensors, with V for magnetic sensor, R for non-magnetic sensor, and H for high temperature resistance.

VS, RS series pulse output amplifier - The output is a square wave signal, its frequency is proportional to the instantaneous.

RF series linearized frequency output amplifier - Extended measuring range and multi-point linearization, the output is square wave, optional 24V, 10V, 5V square wave, the frequency is proportional to the instantaneous flow value.

RA Series linearized analog output amplifiers - Output voltage or current models such as 0-10V, 0-5V, 0-20mA, 4-20mA, and the output value is proportional to the instantaneous flow value.

DW series intelligent amplifier - with digital display, optional analog output, alarm output, with the help of the operation menu for linearization correction, can be equipped with magnetic probe.

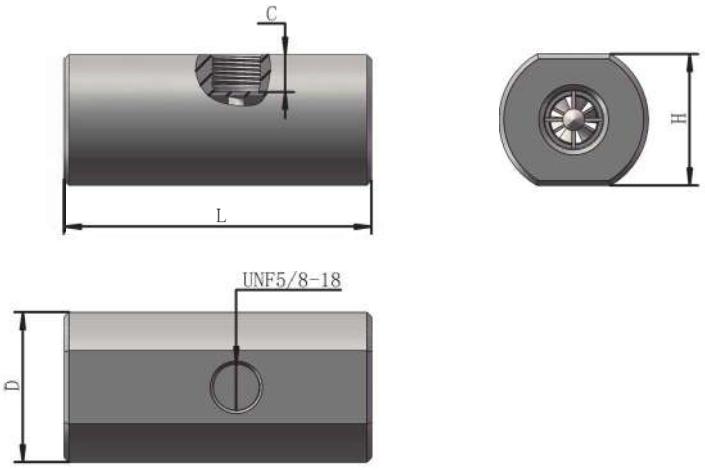
BT series explosion-proof intelligent amplifier - explosion-proof shell with digital display, optional analog output, communication output, alarm output, with the help of the operation menu for linearization correction, optional magnetic probe.

Bearings

Bearing is the core component of turbine flowmeter. The selection of bearing should consider whether the medium has lubricity, the measuring range of the flowmeter, the high and low temperature of the medium, etc.

Hard alloy steel plain bearings - Suitable for low lubricity or no lubricity media, smaller range ratio than the use of ball bearing flowmeters.

Dimensions inch[mm]



Dimensions inch[mm]

OrderN0.	L		H		D		C	
	inch	mm	inch	mm	inch	mm	inch	mm
FT2004	2.68	68	1.06	27	1.3	33	0.38	9.7
FT2006	2.68	68	1.06	27	1.3	33	0.36	9.2
FT2010	2.68	68	1.18	30	1.42	36	0.34	8.7
FT2013	3.8	96.6	1.61	41	1.85	47	0.46	11.7
FT2015	3.8	96.6	1.61	41	1.85	47	0.46	11.7
FT2020	4.53	115	1.81	46	2.05	52	0.46	11.7
FT2025	5.59	142	1.97	50	2.2	56	0.43	11
FT2032	6.46	164	2.36	60	2.6	66	0.49	12.5
FT2040	7.76	197	2.76	70	3	76	0.53	13.5
FT2050	8.27	210	2.95	75	3.26	83	0.43	11

Model Number

OrderN0.	Type	Measuring range L/Min	Extended measuring range L/Min	DN	MAX pressure Bar	Connection	Max. Filter Diameter (micron)
FT2004	FTB200GF04TCC5L	0.6-5	0.3-5	4	420	G1/4	75
FT2006	FTB200GF06TCC10L	1.6—10	0.5—12	6	420	G1/4	100
FT2010	FTB200GF10TCC20L	3.0—20	0.7—25	10	420	G3/8	150
FT2013	FTB200GF13TCC100L	3.8—38	1—38	13	420	G1/2	150
FT2015	FTB200GF15TCC100L	10—100	3—100	15	420	G1/2	150
FT2020	FTB200GF20TCC130L	13—130	5—145	20	300	G3/4	150
FT2025	FTB200GF25TCC180L	17—170	6—190	25	300	G1	200
FT2032	FTB200GF32TCC280L	25—250	9—270	32	250	G1-1/4	200
FT2040	FTB200GF40TCC350L	32—320	12—360	40	160	G1-1/2	200
FT2050	FTB200GF50TCC700L	67—670	25—700	50	150	G2	200

Optional sensor type

Pulse output type RS1000
VS1000

Analog output type VA1000、RA1000、KA1000
Frequency output type VF1000、RF1000、KF1000

DWE Digital display

DW1001
DW1002
DW1003

BT Explosion-proof digital display type
BT1001
BT1002

FTB250 High Accuracy Turbine Flow Meter with Female Thread

- High pressure resistance
- Resistant to high and low temperatures
- Low pressure loss
- Fast response time
- High repeatability and accuracy
- Resistant to contamination
- Compact structure

Fluid flowing through FTB200 causes the rotor to revolve. As the rotor blade pass the pickoffs, electrical pulses are produced in which frequency is proportionai to the flow rate. The revolutions per minute and the K-factor (number of pulses/Gallon) make it possible to obtain the flow volume passing through the unit.
FTB200 series are used to measure medium or lower viscosity media, such as water,light fuel, solvent, hydraulic oil, lubricating oil etc.

Specifications

Measuring range	0.6...700L/Min
Measuring medium	Medium or lower viscosity liquids
Accuracy	Better than +1% of reading(Level 0.5 is optional)
Repeatability	0.1%
Pressure Rating	Stainless steel 420bar
Ambient Temperature	-40...85℃
Medium Temperature	-40...120℃
Materials	
Body	304 stainless steel
Rotor Support	304 stainless steel
Turbine	304 stainless steel
Shaft	316L stainless steel
Bearing	RULON123 Plain bearing
Process Connection	BSPP Internal thread

Applications

- Petrochemical industry
- Hydraulic /lubrication system
- Water treatment
- Oil/Gas industry
- Experimental equipment
- Test systems

Electronics

The electronic part includes sensors and amplifiers. Selecting the appropriate sensors and amplifiers for different applications can ensure the measurement accuracy of the flowmeter. Sensors and amplifiers can be made in one piece or separate pieces according to user requirements.

Sensor

The sensor is divided into magnetic induction sensor and non-magnetic sensor. The difference between the two is that magnetic induction sensor adopts the principle of electromagnetic induction. The sensor is magnetic and will cause braking effect on the turbine at low flow rate, while non-magnetic sensor adopts the principle of carrier and the non-magnetic sensor has no influence on the turbine.

Magnetic sensor (V series) :

Can be used for most common applications
Measure ultra-high temperature or ultra-low temperature media (-200... 400℃)
Applications requiring output mv signals
When it is used for small flow, the flow range needs to be reduced (due to the nonlinear braking effect at ultra-low flow rate). When replacing the sensor, the flowmeter needs to be re-calibrated

Amplifier

The amplifier can be used in conjunction with magnetic or non-magnetic sensors, with V for magnetic sensor, R for non-magnetic sensor, and H for high temperature resistance.

VS, RS series pulse output amplifier - The output is a square wave signal, its frequency is proportional to the instantaneous.

RF series linearized frequency output amplifier - Extended measuring range and multi-point linearization, the output is square wave, optional 24V, 10V, 5V square wave, the frequency is proportional to the instantaneous flow value.

RA Series linearized analog output amplifiers - Output voltage or current models such as 0-10V, 0-5V, 0-20mA, 4-20mA, and the output value is proportional to the instantaneous flow value.

DW series intelligent amplifier - with digital display, optional analog output, alarm output, with the help of the operation menu for linearization correction, can be equipped with magnetic probe.

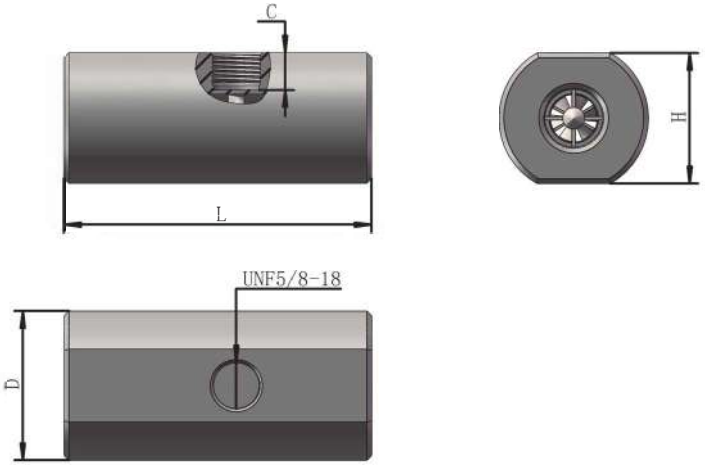
BT series explosion-proof intelligent amplifier - explosion-proof shell with digital display, optional analog output, communication output, alarm output, with the help of the operation menu for linearization correction, optional magnetic probe.

Bearings

Bearing is the core component of turbine flowmeter. The selection of bearing should consider whether the medium has lubricity, the measuring range of the flowmeter, the high and low temperature of the medium, etc.

Hard alloy steel plain bearings - Suitable for low lubricity or no lubricity media, smaller range ratio than the use of ball bearing flowmeters.

Dimensions inch[mm]



Dimensions inch[mm]

OrderN0.	L		H		D		C	
	inch	mm	inch	mm	inch	mm	inch	mm
FT2504	2.68	68	1.06	27	1.3	33	0.38	9.7
FT2506	2.68	68	1.06	27	1.3	33	0.36	9.2
FT2510	2.68	68	1.18	30	1.42	36	0.34	8.7
FT2513	3.8	96.6	1.61	41	1.85	47	0.46	11.7
FT2515	3.8	96.6	1.61	41	1.85	47	0.46	11.7
FT2520	4.53	115	1.81	46	2.05	52	0.46	11.7
FT2525	5.59	142	1.97	50	2.2	56	0.43	11
FT2532	6.46	164	2.36	60	2.6	66	0.49	12.5
FT2540	7.76	197	2.76	70	3	76	0.53	13.5
FT2550	8.27	210	2.95	75	3.26	83	0.43	11

Model Number

OrderN0.	Type	Measuring range L/Min	Extended measuring range L/Min	DN	MAX pressure Bar	Process connection	Max. Filter Diameter (micron)
FT2504	FTB250GF04TCC5L	0.6-5	0.3-5	4	420	G1/4	75
FT2506	FTB250GF06TCC10L	1.6—10	0.5—12	6	420	G1/4	100
FT2510	FTB250GF10TCC20L	3.0—20	0.7—25	10	420	G3/8	150
FT2513	FTB250GF13TCC38L	3.8—38	1—38	13	420	G1/2	150
FT2515	FTB250GF15TCC100L	10—68	3—68	15	420	G1/2	150
FT2520	FTB250GF20TCC130L	13—130	5—145	20	300	G3/4	150
FT2525	FTB250GF25TCC180L	17—170	6—190	25	300	G1	200
FT2532	FTB250GF32TCC280L	25—250	9—270	32	250	G1-1/4	200
FT2540	FTB250GF40TCC350L	32—320	12—360	40	160	G1-1/2	200
FT2550	FTB250GF50TCC700L	67—670	25—700	50	150	G2	200

Optional sensor type

Pulse output type RS1000
VS1000

Analog output type VA1000、RA1000、KA1000
Frequency output type VF1000、RF1000、KF1000

DWE Digital display
DW1001
DW1002
DW1003

BT Explosion-proof digital display type
BT1001
BT1002

FTB400 Turbine Meters With Female Threads

- **High pressure resistance**
- **Fast response time**
- **High repeatability and accuracy**
- **Range specific width is up to 50:1**
- **Compact structure**

FTB400 contains a magnetic detector and a magnetic rotor (impeller) that drives the rotor (impeller) when a medium flows in the pipe. The speed of the rotor (impeller) is proportional to the velocity of the medium. The detector detects the rotor speed and converts it into a standard industrial electrical output or display.

FTB400 can be used for measuring medium and low viscosity medium, light fuel oil, hydraulic oil,lubricating oil, etc. Optional viscosity compensation allows FTB400 to be used in media where viscosity varies with temperature.

The impeller of FTB400 has more blades than other series products, up to 12 blades, so it has faster response speed and higher resolution.

Specifications

Measuring range	6...600L/Min
Measuring medium	Medium or lower viscosity liquids
Accuracy	Better than +1% of reading
Repeatability	±0.2% of reading
Pressure Rating	MAX 420bar
Ambient Temperature	-40...85℃
Medium Temperature	-40...120℃
Materials	
Body	304 stainless steel、 Aluminum
Rotor Support	304 stainless steel
Turbine	304 stainless steel
Shaft	304 stainless steel
Bearing	Stainless steel ball bearing
Process Connection	BSPP female thread

Applications

- Petrochemical/energy industry
- Hydraulic /lubrication system
- Water treatment
- Oil / gas industry
- Experimental equipment
- Test systems

Electronics

The electronic part includes sensors and amplifiers. Selecting the appropriate sensors and amplifiers for different applications can ensure the measurement accuracy of the flowmeter. Sensors and amplifiers can be made in one piece or separate pieces according to user requirements.

Sensor

The sensor is divided into magnetic induction sensor and non-magnetic sensor. The difference between the two is that magnetic induction sensor adopts the principle of electromagnetic induction. The sensor is magnetic and will cause braking effect on the turbine at low flow rate, while non-magnetic sensor adopts the principle of carrier and the non-magnetic sensor has no influence on the turbine.

Magnetic sensor (V series) :

Can be used for most common applications
Measure ultra-high temperature or ultra-low temperature media (-200... 400℃)
Applications requiring output mv signals
When it is used for small flow, the flow range needs to be reduced (due to the nonlinear braking effect at ultra-low flow rate). When replacing the sensor, the flowmeter needs to be re-calibrated

No magnetic sensor (R series) :

Can be used for most common applications
Extended range applications
Ultra-small flow measurement
No need to re-calibrate flowmeters when changing sensors

Amplifier

The amplifier can be used in conjunction with magnetic or non-magnetic sensors, with V for magnetic sensor, R for non-magnetic sensor, and H for high temperature resistance.

VS, RS series pulse output amplifier - The output is a square wave signal whose frequency is proportional to the instantaneous flow value.

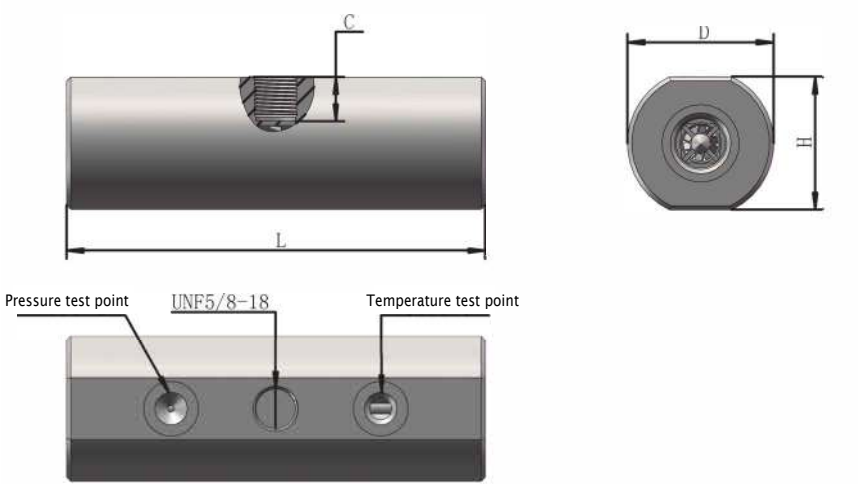
RF series linearized frequency output amplifier - Extended measuring range and multi-point linearization, the output is square wave, optional 24V, 10V, 5V square wave, the frequency is proportional to the instantaneous flow value.

RA Series linearized analog output amplifiers - Output voltage or current models such as 0-10V, 0-5V, 0-20mA, 4-20mA, and the output value is proportional to the instantaneous flow value.

DW series intelligent amplifier - with digital display, optional analog output, alarm output, linearization correction with the help of the operation menu, optional no magnetic or magnetic probe.

BT series explosion-proof intelligent amplifier - explosion-proof shell with digital display, optional analog output, communication output, alarm output, with the help of the operation menu for linearization correction, optional no magnetic or magnetic probe

Dimensions in inch[mm]



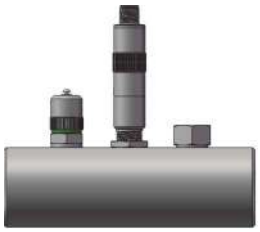
Dimensions in inch[mm]

DN	L		H		D		C	
	inch	mm	inch	mm	inch	mm	inch	mm
DN06	5.43	138	1.7	43	1.92	49	0.6	15.2
DN13	5.98	152	1.89	48	2.08	53	0.63	16
DN20	6.3	160	2.17	55	2.36	60	0.65	16.5
DN25	7.04	179	2.44	62	2.6	66	0.63	16.05

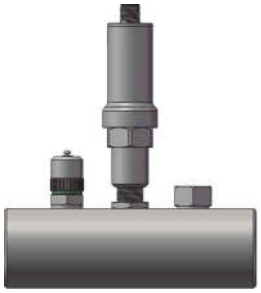
Model Number

OrderNO.	Type	Housing Material	DN	Measuring range L/Min	Connection	Max. Filter Diameter (micron)
FT4013	FTB400GF12ABBC75L	High strength Aluminium	13	6-75	G1/2	30
FT4020	FTB400GF01ABBC300L		20	25-300	G1	50
FT4025	FTB400GF114ABBC600L		25	50-600	G1-1/4	50
FT4113	FTB400GF12SBBC75L	304 stainless steel	13	6-75	G1/2	30
FT4120	FTB400GF01SBBC300L		20	25-300	G1	50
FT4125	FTB400GF114SBBC600L		25	50-600	G1-1/4	50

Optional sensor type



Pulse output
VS1000
RS1000



Analog output VA1000、RA1000、KA1000
Frequency output VF1000、RF1000、KF1000

DWE Digital display
DW1001
DW1002
DW1003

BT Explosion-proof digital display
BT1001
BT1002

FTB500 Highly Accurate Turbine Flow Meters

- **High pressure rating**
- **High and low temperature resistance**
- **Low pressure loss**
- **Fast response time**
- **High repeatability and accuracy**
- **Small structure**

FTB500 series serial flowmeters contain magnetic detectors and a magnetic turbine that drives the turbine when the medium in the pipe flows. The speed of a turbine is proportional to the velocity of the medium. The magnetic detector detects the rotor speed and converts it into a standard industrial electrical signal output or display.
FTB500 series can be used for measuring medium and low viscosity media, such as water, light fuel, solvent, hydraulic oil,Lubricating oil, etc. Optional viscosity compensation allows FTB500 series to be used in media where viscosity varies with temperature.

The maximum range ratio of the FTB500 series is up to 100:1, and the accuracy of the ultra-high precision model is up to 0.1%

Specifications

Measuring range	External thread type 0.05... 1300L/Min, Flange type 0.05... 1700L/Min
Measuring medium	Medium or lower viscosity liquids
Accuracy	±0.5%
Repeatability	±0.06%
Pressure Rating	MAX 550bar
Response Time	Fastest2mS
Ambient Temperature	-40...90℃
Medium Temperature	-100...232℃
Materials	
Body	316 stainless steel
Rotor Support	316 stainless steel
Turbine	17-4 PH
Shaft	316 stainless steel
Bearing	Special compound ball bearing
Process Connection	ANSI Flange, AN Thread (600#)

Applications

- Petrochemical/Energy industry
- Hydraulic/Lubrication system
- Water treatment
- Oil/Gas industry
- Experimental equipment
- Test systems
- Food/Medical equipment

Order Numbers of AN series

Order No.	Type	Standard measuring range L/Min		Extended measuring range L/Min		Max Pressure Bar	Process connection ANThread	Max. Filter Diameter (micron)
		Magnetic sensor	Non-magnetic sensor	Magnetic sensor	Non-magnetic sensor			
FT5002	FTB500AN02BBBE	0.5-5.0	0.5-5.0	0.4-5.5	0.05-5.5	540	AN02	10
FT5004	FTB500AN04BBBE	1.2-12	1.0-12	0.4-13	0.13-13	540	AN04	10
FT5006	FTB500AN06BBBE	2.0-20	1.9-20	0.5-24	0.24-24	450	AN06	10
FT5008	FTB500AN08BBBE	3.3-33	2.8-33	0.6-38	0.38-38	410	AN08	10
FT5010	FTB500AN10BBBE	6.0-60	4.5-60	1.1-70	0.70-70	410	AN10	10
FT5012	FTB500AN12BBBE	9.0-90	7.6-90	1.9-120	1.2-120	410	AN12	10
FT5016	FTB500AN16BBBE	22-220	19-220	3.8-240	2.4-240	350	AN16	20
FT5020	FTB500AN20BBBE	40-400	34-400	6.0-490	4.9-490	350	AN20	20
FT5024	FTB500AN24BBBE	70-700	57-700	10-820	8.2-820	250	AN24	50
FT5032	FTB500AN32BBBE	110-1100	83-1100	13-1300	13-1300	250	AN32	50

Order Numbers of ANSI 600# flange series

Order No.	Type	Standard measuring range L/Min		Extended measuring range L/Min		Max Pressure Bar	Process connection ANSI 600#Flange	Max. Filter Diameter (micron)
		Magnetic sensor	Non-magnetic sensor	Magnetic sensor	Non-magnetic sensor			
FT5102	FTB500F302BBBE	0.5-5.0	0.5-5.0	0.4-5.5	0.05-5.5	100	95mm	10
FT5104	FTB500F304BBBE	1.2-12	1.0-12	0.4-13	0.13-13	100	95mm	10
FT5106	FTB500F306BBBE	2.0-20	1.9-20	0.5-24	0.24-24	100	95mm	10
FT5108	FTB500F308BBBE	3.3-33	2.8-33	0.6-38	0.38-38	100	95mm	10
FT5110	FTB500F310BBBE	6.0-60	4.5-60	1.1-70	0.70-70	100	118mm	10
FT5112	FTB500F312BBBE	9.0-90	7.6-90	1.9-120	1.2-120	100	118mm	10
FT5116	FTB500F316BBBE	22-220	19-220	3.8-240	2.4-240	100	124mm	20
FT5120	FTB500F320BBBE	40-400	34-400	6.0-490	4.9-490	100	133mm	20
FT5124	FTB500F324BBBE	57-700	57-700	10-820	8.2-820	100	156mm	50
FT5132	FTB500F332BBBE	83-1100	83-1100	13-1300	13-1300	100	165mm	50
FT5140	FTB500F340BBBE	150-1500	150-1500	19-1700	17-1700	100	191mm	50

ANSI 600# Flange standard for detailed dimensions

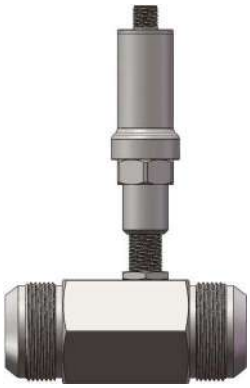
Dimensions of AN type

Order No.	A(mm)	B(mm)	C(mm)
FT5002	62.2	23	6.72
FT5004	62.2	23	6.72
FT5006	62.2	23	5.83
FT5008	62.2	23	5.45
FT5010	69.2	32	8.65
FT5012	83.0	32	7.86
FT5016	90.5	36	5.8
FT5020	103.0	41	6.5
FT5024	116.5	50	6.82
FT5032	154.0	65	8.76

Optional sensor type

Instrument and sensor selection see related pages!

Pulse output type
VS1000
RS1000



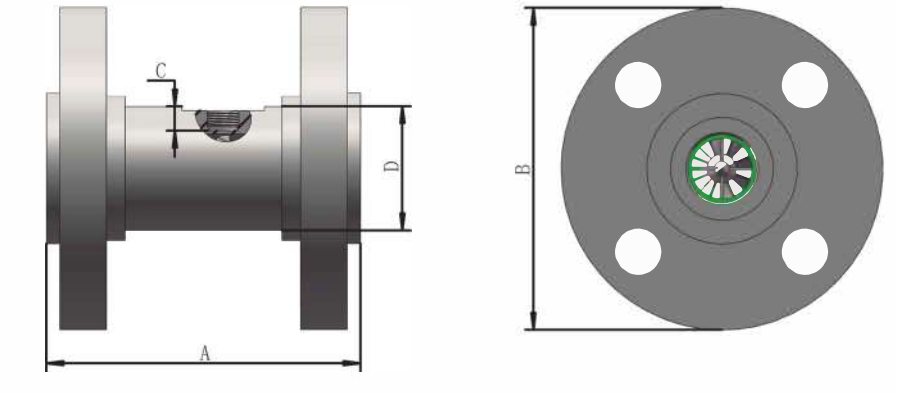
Analog output type
RA1000
VA1000
KA1000
Frequency output type
RF1000
VF1000
KF1000

DWE Digital display
DW1001
DW1002
DW1003

BT Explosion-proof digital display type
BT1001
BT1002

BT split explosion-proof digital display type
BT0001

Dimensions of flange type
ANSI 600#

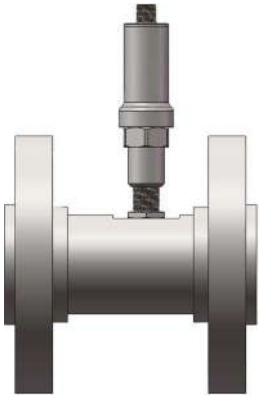


Order NO.	A(mm)	B(mm)	C(mm)	D(mm)
FT5102	107	117	11.72	33
FT5104	107	117	11.72	33
FT5106	107	117	10.83	33
FT5108	107	117	10.45	33
FT5110	110.8	124	11.65	38
FT5112	126.8	124	10.86	38
FT5116	135.5	133	11.3	47
FT5120	154	133	9.5	47
FT5124	152	155	11.82	60
FT5132	165	165	11.26	70
FT5140	229	191	13.15	89

Optional sensor type

Instrument and sensor selection see related pages

Pulse output type
VS1000
RS1000

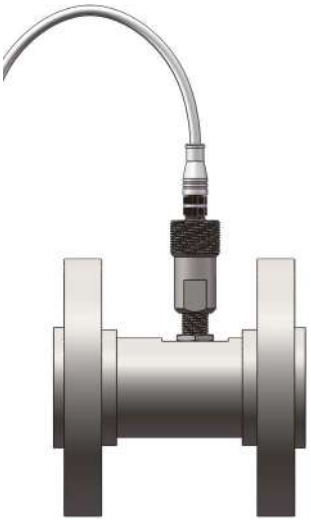


Analog output type
RA1000
VA1000
KA1000
Frequency output type
RF1000
VF1000
KF1000

DWE Digital display
DW1001
DW1001
DW1001

BT Explosion-proof digital display type
BT1001
BT1002

BT split explosion-proof digital display type
BT0001



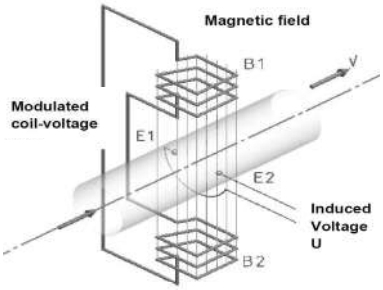
Pessure drop(The following results were obtained by testing medium with a viscosity of 1.2 mm2/s)

Order NO.	Pessure drop(bar)%measuring range						
	10%	25%	40%	55%	70%	85%	100%
FT5002, FT5102	0.00	0.01	0.03	0.05	0.08	0.11	0.15
FT5004, FT5104	0.01	0.03	0.06	0.16	0.19	0.27	0.35
FT5006, FT5106	0.01	0.02	0.06	0.11	0.16	0.23	0.32
FT5008, FT5108	0.01	0.05	0.11	0.20	0.30	0.46	0.61
FT5010, FT5110	0.06	0.12	0.23	0.41	0.61	0.92	1.22
FT5012, FT5112	0.06	0.13	0.24	0.42	0.64	0.93	1.22
FT5016, FT5116	0.06	0.09	0.16	0.27	0.39	0.57	0.74
FT5020, FT5120	0.06	0.13	0.24	0.43	0.62	0.96	1.31
FT5024, FT5124	0.07	0.16	0.32	0.60	0.89	1.32	1.74
FT5032, FT5132	0.07	0.08	0.14	0.24	0.34	0.51	0.66
FT5140	0.03	0.06	0.13	0.21	0.40	0.45	0.61

FMI100 – Electromagnetic Flow Meter

- **No moving parts - easy to maintain; No pressure drop due to no choked flow parts.**
- **Wide measuring range: DN10... DN500**
- **Suitable for measuring all kinds of acid, alkali, salt and mud, pulp, pulp and other media**
- **Digital LCD displays instantaneous and cumulative quantities**
- **Wide temperature range: -20℃... 180 ℃**
- **High reliability, output can be used directly in PLC**
- **Full digital processing, strong anti-interference ability, reliable measurement, high precision**

FMI100 electromagnetic flowmeter is designed based on Faraday's law of electromagnetic induction: When the conductive liquid cuts the magnetic force in the magnetic field, the conductive potential is generated in the conductor. When the flow rate is measured, the conductive liquid flows through the magnetic field perpendicular to the flow direction at the speed of V. The conductive liquid flow induces a voltage that is proportional to the average flow rate. And through the cable to the converter through intelligent processing, to achieve the instantaneous fluid flow, accumulated flow display and flow data and communication between the control system.



Specifications

Applicable medium	Liquid with conductivity > 5us /cm
Velocity range	0.25...10m/s
Nominal diameter	DN25...DN500
Accuracy	±0.5%of reading (±0.2% optional)
Repeatability	+0.15% of flow rate
Operating voltage	18-36VDC
Output signal	Current:4...20mA
	Pukse:frequency0...1KHz
Operating pressure	DN10...DN65:≤2.5Mpa
	DN80...DN150:≤1.6Mpa
	DN200...DN500:≤1.0Mpa(Customization available)
Electrode material	316 stanless steel
Lining material	Neoprene CR
	PTFE F4
Housing, flange material	Carbon Steel(standard)
Excitation method	Low frequency rectangle wave, High frequency excitation
Medium Temp	-20℃...90℃...130℃...180℃(Refer to lining material
Ambient Tmep	Sensor-40℃...80℃; Converter-15℃...60℃
Ambient humidity	≤85%RH(20℃)
Power consumption	less than 20W
Structure	Integral type, Remote type
Electrical connection	M12X1.5
Grounding	Grounding ring, grouding electrode , gronding pipe
EX-proof	Exd ib Ⅱ BT4
Process connection	Flange
Protection class	IP65

Applications

- Tap water supply field
- Industrial wastewater field
- Strong acid liquid industrial field
- Food industry
- Paper industry

Detail the main technical parameters

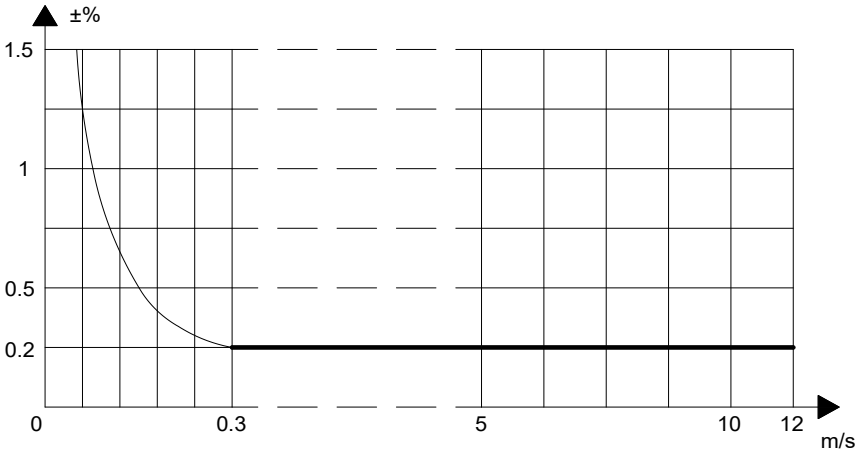
Applicable medium: Conductive liquids are liquids with a conductivity > 5us/cm in normal measurement. Generally, the conductivity of distilled water is 5us/cm, and that of tap water is 100us/cm.
The conductivity of other acids, bases and salts can be referred to the following table:

Liquid	Conductivity(S/CM)	Liquid	Conductivity(S/CM)
Hydrochloric acid(40%)	$51.52X10^{-2}$	Potassium chloride(21%)	$28.1X10^{-2}$
Nitric acid(62%)	$49.04X10^{-2}$	Potassium iodide(55%)	$42.26X10^{-3}$
Phosphoric acid(70%)	$14.73X10^{-2}$	Potassium nitrate(22%)	$16.25X10^{-2}$
Sulfuric acid(85%)	$98.5X10^{-3}$	Potassium hydroxide(42%)	$42.12X10^{-2}$
Ethanol(95%)	$2.6X10^{-7}$	Potassium sulphate(5%)	$45.8X10^{-3}$
Acetic acid(70%)	$2.35X10^{-4}$	Sodium carbonate(15%)	$83.6X10^{-3}$
Propanoic acid(70%)	$8.5X10^{-7}$	Sodium chloride(26%)	$21.51X10^{-2}$
Butyric acid(70%)	$5.6X10^{-7}$	Sodium nitrate(30%)	$16.06X10^{-2}$
Formic acid(40%)	$98.4X10^{-4}$	Sodium hydroxide(50%)	$82X10^{-3}$
Hydrofluoric acid(30%)	$34.11X10^{-2}$	Sodium sulfate(15%)	$88.6X10^{-3}$
Hydriodic acid(5%)	$13.32X10^{-2}$	Ammonium hydroxide(30%)	$1.93X10^{-4}$
Cupric chloride(35%)	$69.9X10^{-3}$	Ammonium chloride(25%)	$40.25X10^{-2}$
Cupric nitrate(35%)	$10.62X10^{-2}$	Ammonium nitrate(50%)	$36.33X10^{-2}$
Copper sulfate(17.5%)	$45.8X10^{-3}$	Ammonium sulfate(31%)	$23.21X10^{-2}$

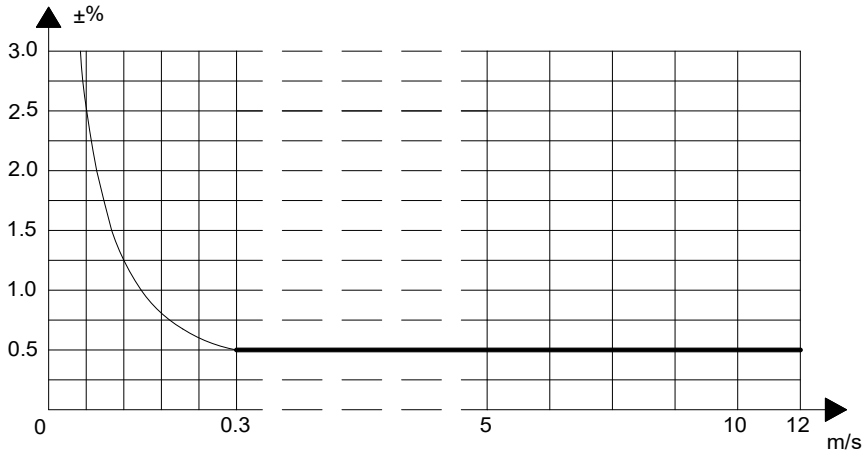
Accuracy:≤±0.25%，≤± 0.5% under reference conditions

Reference conditions for precision calibration:	
Item	Parameters
medium temperature	20℃±3℃
ambient temperature	21℃±3℃
pressing	1 bar
supply voltage	24±1%
settling time	25min
Straight pipe section (inlet)	10XDN(DN≤1200/48")
	5XDN(DN＞1200/48")
Straight pipe section (outlet)	5XDN(DN≤1200/48")
	3XDN(DN＞1200/48")
Fluid state	Uniform flow distribution

Accuracy Curve of electromagnetic flowmeter system (±0.25%)



Accuracy Curve of electromagnetic flowmeter system (±0.25%)



Caliber selection

DN	Measurable m^3/h	Useful measuring m^3/h	DN	Measurable m^3/h	Useful measuring m^3/h
DN10	0.0142~3.3912	0.0848~2.862	DN300	12.717~3052	76.302~2543
DN15	0.0318~7.6302	0.1908~6.3585	DN350	17.31~4154	103.86~3461
DN20	0.0566~13.5648	0.3392~11.304	DN400	22.61~5425	135.65~4521
DN25	0.0883~21.195	0.5298~17.6625	DN450	28.62~6867	171.68~5722
DN32	0.1447~34.7258	0.8682~29.9382	DN500	35.33~8478	211.95~7065
DN40	0.2661~54.2592	1.3565~45.216			
DN50	0.3533~84.78	2.1195~70.65			
DN65	0.5970~143.28	3.5819~119.39			
DN80	0.9044~217.03	5.4259~180.86			
DN100	1.413~339.12	8.478~282.6			
DN125	2.2079~529.87	13.2468~441.56			
DN150	3.1793~763	19.0755~635.85			
DN200	5.652~1356	33.912~1130.4			
DN250	8.8313~2119	52.9875~1766			

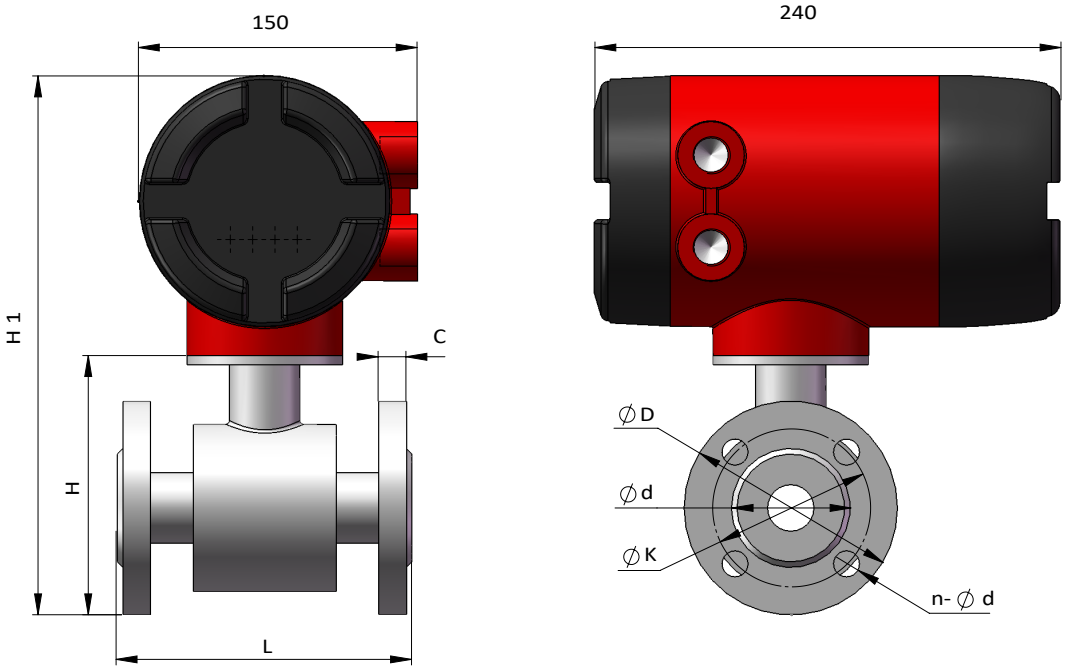
Lining material selection

Lining material	Symbol	Property	Maximum Temperature	Applicable liquid	Applicable caliber
Neoprene	CR	Medium wear resistance, resistance to acid, alkali and salt solution of general concentration	＜60℃	Tap water, industrial water, sea water	≥DN50
PTFE	F4	Chemical stability, resistance to boiling hydrochloric acid, sulfuric acid, aqua regia, concentrated alkali corrosion	＜160℃	Caustic acid, alkali and salt solution	≥DN10

Electrode material selection

Material	Corrosion resistance
316L	Application: 1. For industrial water, domestic water, sewage and other corrosive medium 2. Weakly corrosive acid, alkali, salt solution

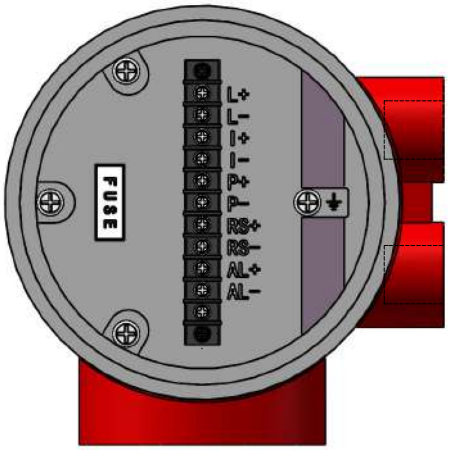
Dimensional drawing (mm)



Flange Dimensions in inches (mm)

DN	L (mm)	H	H1	H2	D	K	n-¢d	C	Pressure	Kg
DN10	160	130	247	180	95	65	4-¢14	14	PN4.0	6.6
DN15		135	252	185	95	65	4-¢14	14		6.5
DN20		143	260	193	105	75	4-¢14	16		6.4
DN25	160	123	240	173	115	85	4-¢14	16		6.2
DN32	165	150	267	200	140	100	4-¢18	18		7.2
DN40	195	160	277	210	150	110	4-¢18	18		8.3
DN50	200	173	290	223	165	125	4-¢18	20		10.0
DN65	195	183	300	233	185	145	4-¢18	20	PN1.6	10.5
DN80	200	206	323	256	200	160	8-¢18	20		11.4
DN100	245	225	342	275	235	180	8-¢18	22		14.5
DN125	250	255	372	305	250	210	8-¢18	22		17.5
DN150	300	287	405	337	285	240	8-¢22	24		23.0
DN200	350	344	461	395	340	295	12-¢22	26		32.0
DN250	400	396	512	446	395	350	12-¢22	26	PN1.0	44.0
DN300	500	450	565	500	445	400	12-¢22	28		56.0
DN350		510	625	560	500	460	16-¢22	30		71.0
DN400	600	560	675	610	565	515	16-¢26	32		94.0
DN450		610	725	660	615	565	20-¢26	35		106.0
DN500		660	775	710	670	620	20-¢26	38		129.0

Wiring



Serial number	Symbol	Description	Comments
1	L+or L	DC24V+ or AC85~265V Power supply	Power the DC24 or AC220
2	L-or N	DC24V+ or AC85~265V Power supply	Power the DC24 or AC221
3	I+	4 to 20MA Output +	Load resistance ⩽500Ω
4	I-	4 to 20MA Output -	
5	P+	Pulse+	Frequency or pulse output is passive load current ⩽20mA
6	P-	Pulse-	
7	RS+	RS485+	
8	RS-	RS485-	
9	AL+	Alarm	
10	AL-	Alarm	

Model Number

OrderNO.	Type	DN
Lining material:Neoprene CR		mm
FM10010	FMI100DN10KCCOBDP	10
FM10015	FMI100DN15KCCOBDP	15
FM10020	FMI100DN20KCCOBDP	20
FM10025	FMI100DN25KCCOBDP	25
FM10032	FMI100DN32KCCOBDP	32
FM10040	FMI100DN40KCCOBDP	40
FM10050	FMI100DN50KCCOBDP	50
FM10065	FMI100DN65KCCOBDP	65
FM10080	FMI100DN80KCCOBDP	80
FM10100	FMI100DN100KCCOBDP	100
FM10125	FMI100DN125KCCOBDP	125
FM10150	FMI100DN150KCCOBDP	150
FM10200	FMI100DN200KCCOBDP	200
FM10250	FMI100DN250KCCOBDP	250
FM10300	FMI100DN300KCCOBDP	300
FM10350	FMI100DN350KCCOBDP	350
FM10400	FMI100DN400KCCOBDP	400
FM10450	FMI100DN450KCCOBDP	450
FM10500	FMI100DN500KCCOBDP	500

OrderNO.	Type	DN
Lining material:PTFE F4		mm
FM11010	FMI100DN10KFCOBDP	10
FM11015	FMI100DN15KFCOBDP	15
FM11020	FMI100DN20KFCOBDP	20
FM11025	FMI100DN25KFCOBDP	25
FM11032	FMI100DN32KFCOBDP	32
FM11040	FMI100DN40KFCOBDP	40
FM11050	FMI100DN50KFCOBDP	50
FM11065	FMI100DN65KFCOBDP	65
FM11080	FMI100DN80KFCOBDP	80
FM11100	FMI100DN100KFCOBDP	100
FM11125	FMI100DN125KFCOBDP	125
FM11150	FMI100DN150KFCOBDP	150
FM11200	FMI100DN200KFCOBDP	200
FM11250	FMI100DN250KFCOBDP	250
FM11300	FMI100DN300KFCOBDP	300
FM11350	FMI100DN350KFCOBDP	350
FM11400	FMI100DN400KFCOBDP	400
FM11450	FMI100DN450KFCOBDP	450
FM11500	FMI100DN500KFCOBDP	500

FMI200-Mini Electromagnetic Flow Meters

- **Compact design saves installation space**
- **Corrosion resistance sensor technology**
- **All electronic design with no moving parts**
- **Automatic viscosity temperature compensation**
- **Pulse output/analog output is optional**
- **Low pressure loss**
- **Resistant to contamination**

According to Faraday's principle of electromagnetic induction when a conductor passes vertically through magnetic field B, it will induce a voltage. U In the measurement of the flowmeter, the moving conductor is a flowing conducting medium, and the magnetic field B is emitted from the direction perpendicular to the flowing medium. The induced electromotive force U on the two electrodes E1 and E2 is directly proportional to the velocity V of the medium.

U=K×B×V×D

K- meter constant

D- Internal probe spacing

The induced electromotive force U is further processed and converted into a standard electrical signal for output or display

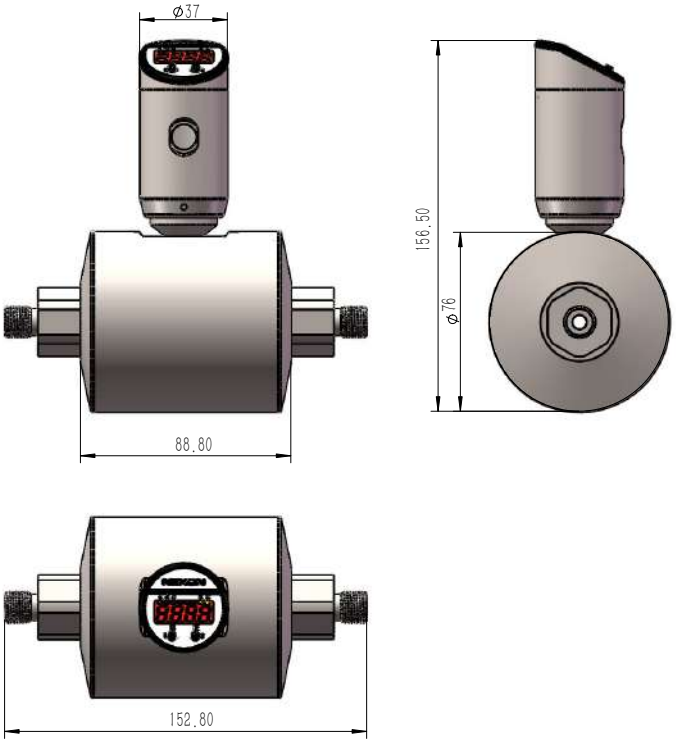
Specifications

Measuring Range	0.01...100L/Min
Nominal diameter	DN6...DN25(See selection table)
Applicable medium	Conducting liquid (conductivity > 20uS/cm)
Accuracy	≤±1% range
Repeatability	≤±0.2% range
Proof pressure	16 bar
Operating voltage	24±10%Vdc
Current consumption	≤80mA
Electrical Protection	Reverse polarity protection, short circuit protection
Output	
Pulse output	NPN output, pull up resistor 2K
Analog output	4... 20mA, current limit 26mA, load resistance < 250Ω
Response Time	＜500ms
Ambient Temperature	-25...85℃
Medium Temperature	-40...100 No hot or cold shock
Materials	
Electrode	Stainless Steel 316TI
Process Connection	Stainless Steel 316TI
Measuring tube	PEEK
Seal	EPDM
Housing	Stainless Steel 304
Electrical Connection	M12×1 Plug
Process Connection	G External thread, 25.4 chuck, 50.5 chuck

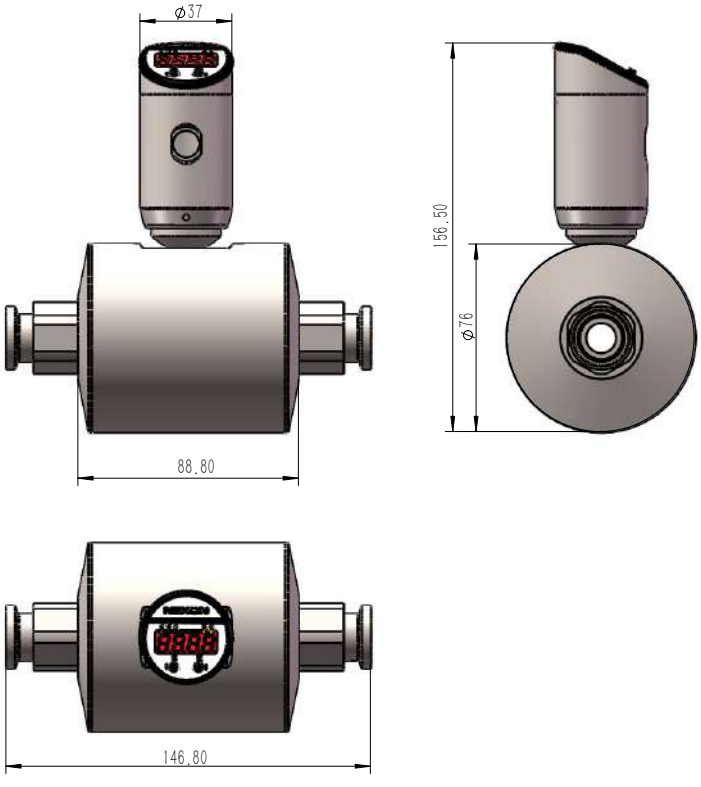
Applications

- Circulating water detection
- Coolant monitoring
- Other conducting liquid monitoring

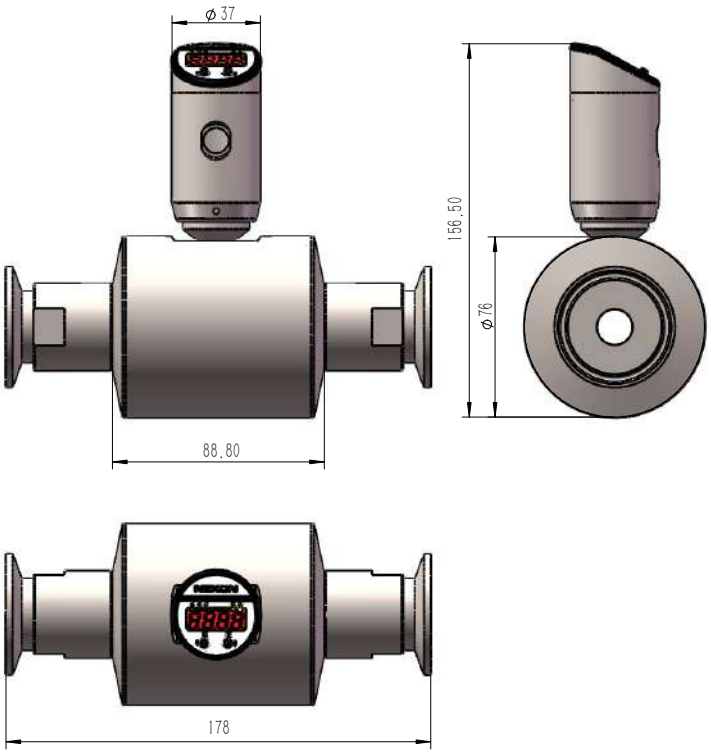
External thread connection



25.4 Sanitary Chuck Connection

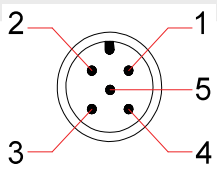


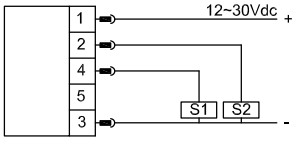
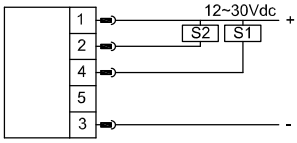
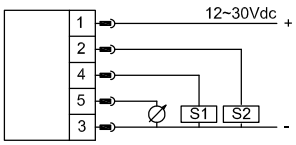
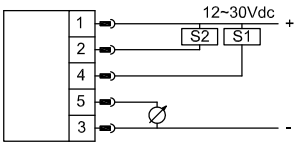
50.5 Sanitary chuck connection



Wiring

Signal	Plug	Cable
U+	1	Brown
U-	3	Blue
Switch output 1	4	Black
Switch output 2	2	White
Analog output (voltage or current)	5	Gray



PNP	NPN
2x PNP 	2x NPN 
2x PNP + analog output 	2x NPN + analog output 

Model Number

OrderNO.	Type	Process connection	Measuring range L/Min	DN
FM2006	FMI200GM06	G1/4	0.01-3 L/min	6
FM2015	FMI200GM15	G1/2	0.25-25L/min	15
FM2020	FMI200GM20	G3/4	0.5-50L/min	20
FM2025	FMI200GM25	G1	1-100 L/min	25
FM2106	FMI200TR106	25.4 Sanitary chuck	0.01-3 L/min	6
FM2115	FMI200TR115	25.4 Sanitary chuck	0.25-25L/min	15
FM2120	FMI200TR220	50.5 Sanitary chuck	0.5-50L/min	20
FM2125	FMI200TR225	50.5 Sanitary chuck	1-100 L/min	25

FMI300-Mini electromagnetic flow meters

- **Compact design saves installation space**
- **Corrosion resistance sensor technology**
- **All electronic design with no moving parts**
- **Automatic viscosity temperature compensation**
- **Pulse output/analog output is optional**
- **Low pressure loss**
- **Strong anti-fouling ability**
- **Air traffic control measurement function**
- **Temperature resistance -40~100 degrees Celsius**

According to Faraday's principle of electromagnetic induction when a conductor passes vertically through magnetic field B, it will induce a voltage. U In the measurement of the flowmeter, the moving conductor is a flowing
conducting medium, and the magnetic field B is emitted from the direction perpendicular to the flowing medium. The induced electromotive force U on the two electrodes E1 and E2 is directly proportional to the velocity V of the medium.
U=K×B×V×D
K-meter constant
D-Internal probe spacing

The induced electromotive force U is further processed and converted into a standard electrical signal for output or display

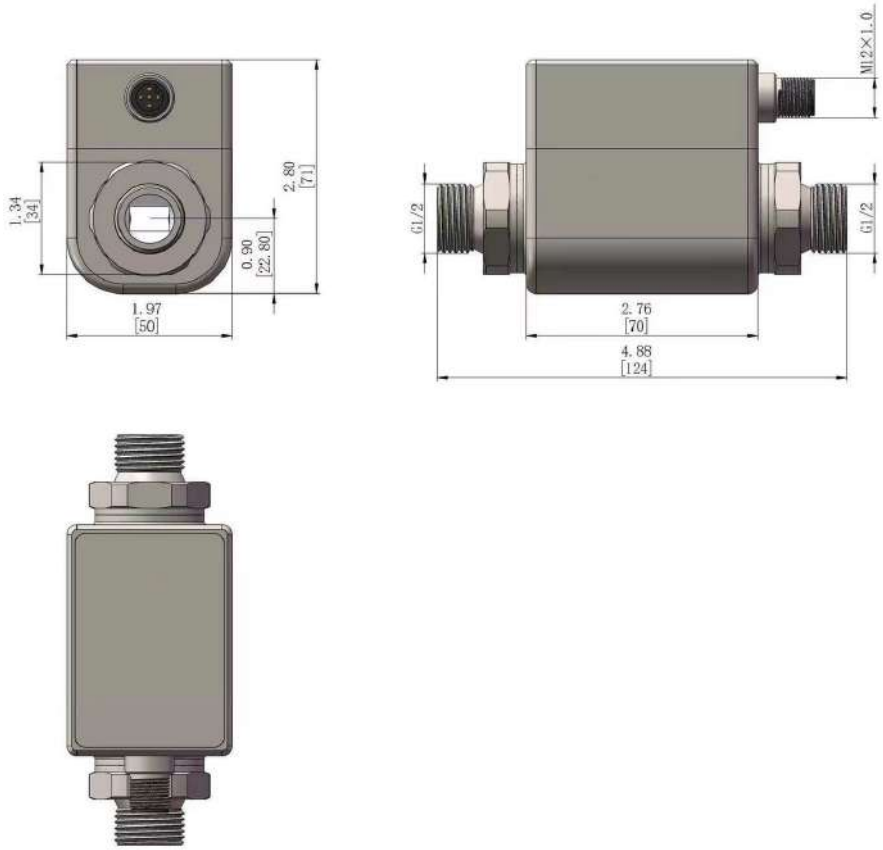
Specifications

Measuring Range	0.04...120L/Min
Nominal diameter	DN6...DN15
Applicable medium	Liquid with conductivity > 10us /cm
Accuracy	≤±1% range, 0.5% range (optional)
Repeatability	≤±0.2% range
Proof pressure	16 bar
Operating voltage	24±10%Vdc
Current consumption	≤80mA
Electrical Protection	Reverse polarity protection, short circuit protection
Output	
Pulse output	NPN output, pull up resistor 2K
Analog output	4... 20mA, current limit 26mA, load resistance < 250?
Response Time	＜500ms
Ambient Temperature	-25…85℃
Medium Temperature	-40...100℃
Materials	
Electrode	Stainless Steel 316TI
Process Connection	Stainless Steel 316TI
Measuring tube	PEEK
Seal	EPDM
HousingHousing	Stainless Steel 304
Electrical Connection	M12×1 Plug
Process Connection	G External thread, 25.4 chuck, 50.5 chuck

Applications

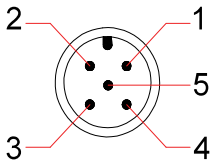
- Circulating water detection
- Coolant monitoring
- Other conducting liquid monitoring

External thread connection



Wiring

Signal	Plug	Cable
U+	1	Brown
U-	3	Blue
Pulse output	4	Black
Analog output (voltage or current)	2	White



Flow Range L/min

Optional procedure connection			Measuring range l/min	DN
G1/4	1/4" NPT	25.4Sanitary chuck	0.05-15	DN6
G1/2	1/2" NPT	25.4Sanitary chuck	0.2-50	DN10
G3/4	3/4" NPT	50.5Sanitary chuck	0.5-120	DN15

Model Number

OrderNO.	Type	Process connection G External thread/chuck	Measuring range L/Min	DN
FM3006	FMI300GM06	G1/4	0.04-15 L/min	6
FM3010	FMI300GM10	G1/2	0.1-50L/min	10
FM3015	FMI300GM15	G3/4	0.24-120L/min	15
FM3106	FMI300TR106	25.4 Sanitary chuck	0.04-15 L/min	6
FM3110	FMI300TR110	25.4 Sanitary chuck	0.1-50L/min	10
FM3115	FMI300TR215	50.5 Sanitary chuck	0.24-120L/min	15

FMI400-High and low temperature electromagnetic flowmeter

- **Compact design saves installation space**
- **Corrosion resistance sensor technology**
- **All electronic design with no moving parts**
- **Automatic viscosity temperature compensation**
- **Pulse output/analog output is optional**
- **Low pressure loss**
- **Strong anti-fouling ability**
- **Empty pipe measurement function**
- **Temperature resistance -40~100 degrees Celsius**

According to Faraday's principle of electromagnetic induction, when a conductor passes vertically through magnetic field B, it will induce a voltage. U In the measurement of the flowmeter, the moving conductor is a flowing conductive medium, the magnetic field B is emitted from the direction perpendicular to the flowing medium, and the induced electromotive force U on the two electrodes E1 and E2 is directly proportional to the flow rate V of the medium.

U=K×B×V×D

K- Meter constant

D- Internal probe spacing

After further processing, the induced electromotive force U is converted into a standard electrical signal output or display

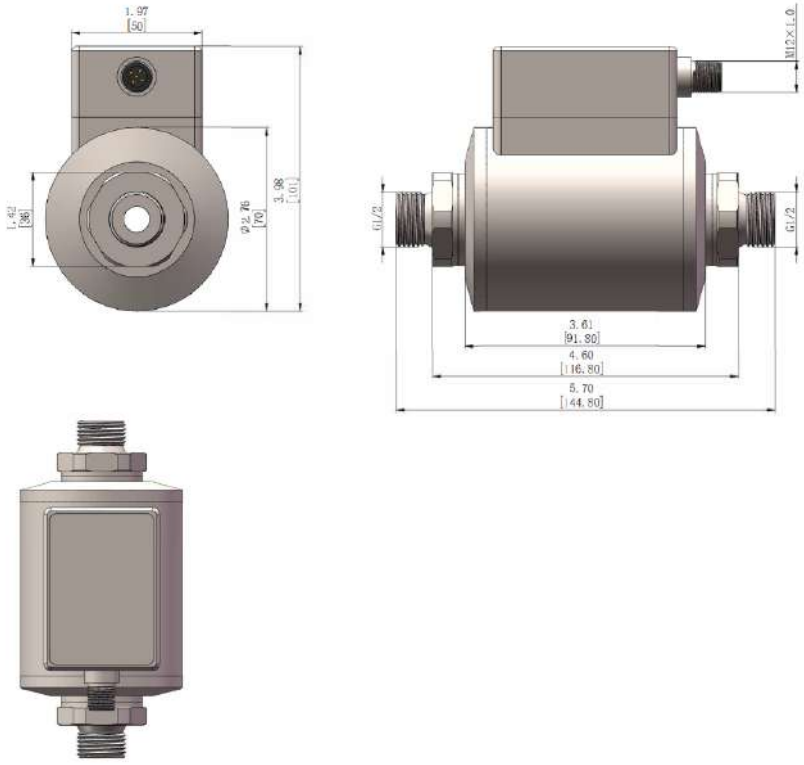
Specifications

Measuring Range	0.04...120L/Min
Nominal diameter	DN6...DN15
Measuring Medium	Liquid with conductivity > 10us /cm
Accuracy	≤±1% range, 0.5% range (optional)
Repeatability	≤±0.2% range
Proof pressure	16 bar
Operating voltage	24±10%Vdc
Current consumption	≤80mA
Electrical Protection	Reverse polarity protection, short circuit protection
Output	
Pulse output	NPN output, Pull up resistor 2K
Analog output	4... 20mA, current limit 26mA, load resistance < 250Ω
Response Time	＜500ms
Ambient Temperature	-25...85℃
Medium Temperature	-40...120℃, -40...150℃（optional）
Materials	
Electrode	Stainless Steel 316TI
Process Connection	Stainless Steel 316TI
Measuring tube	PEEK
Seal	EPDM
Housing	Stainless Steel 304
Electrical Connection	M12×1 Plug
Process Connection	G External thread, 25.4 chuck, 50.5 chuck

Applications

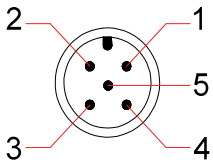
- Circulating water detection
- Coolant monitoring
- Other conducting liquid monitoring

External thread connection



Wiring

Signal	Plug	Cable
U+	1	Brown
U-	3	Blue
Pulse output	4	Black
Analog output (voltage or current)	2	White



Flow Range L/min

Optional procedure connection			Measuring range l/min	DN
G1/4	1/4" NPT	25.4 Sanitary chuck	0.04-15	DN6
G1/2	1/2" NPT	25.4 Sanitary chuck	0.1-50	DN10
G3/4	3/4" NPT	50.5 Sanitary chuck	0.24-120	DN15

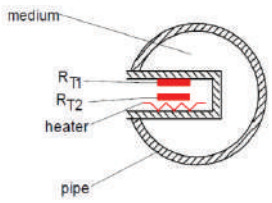
Model Number

OrderNO.	Type	Process connection G External thread/chuck	Measuring range L/Min	DN
FM4006	FMI400GM06	G1/4	0.04-15 L/min	6
FM4010	FMI400GM10	G1/2	0.1-50L/min	10
FM4015	FMI400GM15	G3/4	0.24-120L/min	15
FM4106	FMI400TR106	25.4 Sanitary chuck	0.04-15 L/min	6
FM4110	FMI400TR110	25.4 Sanitary chuck	0.1-50L/min	10
FM4115	FMI400TR215	50.5 Sanitary chuck	0.24-120L/min	15

FCR08-Thermal Flow Sensor

- **Wide measuring range**
- **Setting point or measuring range programmable through keys**
- **More parameters programmable through hand-hold device or computer**
- **8 LEDs display for switching status and flow trend**
- **Compact design (diameter 36mm)**
- **PNP/NPN/Relay output selectable**
- **Protection level IP67**

Based on thermodynamic principle, FCR08 features 2 temperature sensors inside the probe: onefor medium temperature, the other one is heated a few degrees up compared to the medium intowhich it projects. When the medium flows, the heat generated in the sensor is conducted away by the medium. The difference between these two sensors can be measured to get the flow rate.All-metal housing; 8 LEDs for switching status and flow trend display; No moving parts tominimize maintenace; Applicable to various medium.



Specifications

Measuring Range	
Water	1…200cm/s
Oil	3…300cm/s
Air	20…2000cm/s
Applicable Medium	Water, oil and gas which is compatible with stainless steel
Repeatability	1%@<0.6m/s; 3%@<1.5m/s; 10%@>1.5m/s
Pressure Rating	100bar
Initialization Time	1…8s
Response Time	2s typical
Power Supply	18...30Vdc
Current Consumption	≤40mA(power supply 24Vdc, no-load)
Switching Output(NC+NO)	
Output type	PNP/NPN/relay output optional, NC/NO programmable
Load capacity	500mA (power supply 24Vdc, NPN/PNP output),
Wiring Protection	Reverse polarity, overvoltage and short-circuit
Display	
	3 red LEDs (flow velocity < switch point)
	1 yellow LED (flow velocity = switch point)
	4 green LEDs (flow velocity > switch point)
Temperature	
Operating/storing	-40…85℃
Medium	-20…85℃
Material	
Housing	304stainless steel
Probe	304stainless steel
Protection Class	IP67
Electrical Conhection	M12×1plug

Applications

- Hydraulic /Lubrication
- Pump protection
- Cooling System
- Ventilation system
- Water treatment
- Leaking test

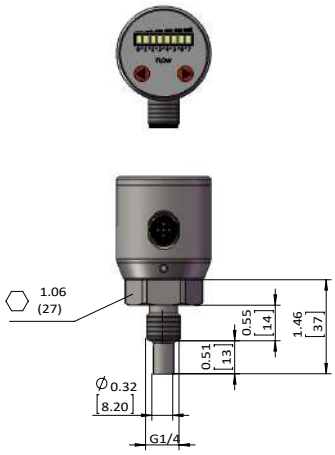
LED Function & Setup

■■■□□□□□	Red LED indicates that current flow is less than switch point.
■■■■□□□□	Yellow LED indicates that switch point was reached and switch state changes.
■■■■■■□□	Green LED indicates that current flow is higher than switch point, switch keeps state. More green LEDs indicate higher flow rate.

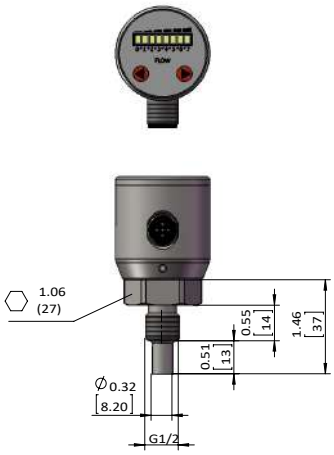
Install the switch properly and set the flow rate to what you want to monitor, adjust the switch using the magnetic bar tomake the first green light on. Once done, switch state changes if flow rate is lower than current flow.

Setup through Magnectic bar, hand-hold device or computer

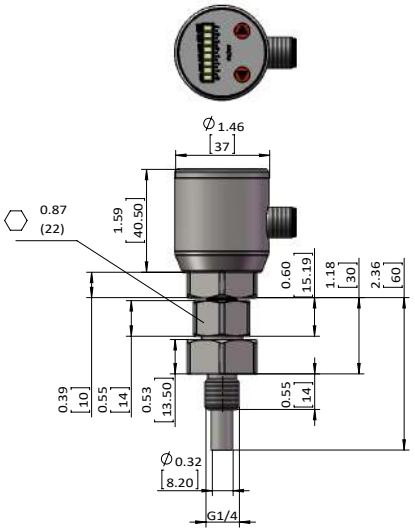
Dimensions in inch[mm]



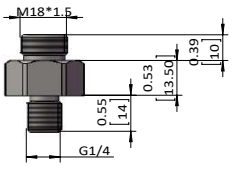
G1/4 Probe



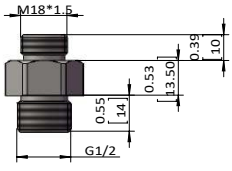
G1/2Probe



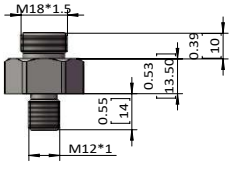
F18 Probe



FG14 Accessory



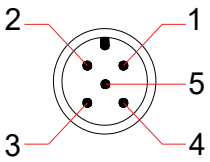
FG12 Accessory

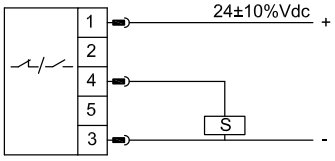
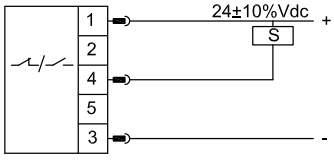


FM12 Accessory

Wiring

Signal	Plug	Cable
U+	1	Brown
U-	3	Blue
Output 1	4	Black
Output 2	2	White
Communication	5	Gray



PNP Output	NPN Output
	

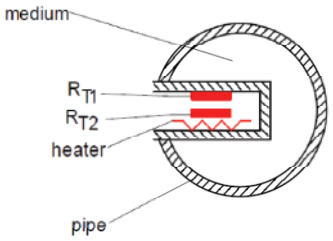
Model Number

OrderNO.	Type	Rod length mm	Process connection
FC8000	FCR08/RG14MSM027	27	G1/4
FC8001	FCR08/RG12MSM027	27	G1/2
FC8002	FCR08/RF18SM060	60	M18 union

FN3000 -Thermal Flow Switch with LED Digital Display

- 4-digit LEDs
- Flow velocity/percentage display
- Wide measuring range
- Measuring span programmable
- PNP / NPN programmable
- 4..20mA/0...20mA/1...5V/0...5V output programmable
- Rotatable indicator, easy to read, robust display

Based on thermodynamic principle, FN300 features 2 temperature sensors inside the probe: onefor medium temperature, the other one is heated a few degrees up compared to the mediuminto which it projects.When the medium flows, the heat generated in the sensor is conductedaway by the medium.The difference between these two sensors can be measured to get theflow rate.Compared to traditional products, FN3000 offers wider measuring range, lesstemperature drifting, as well as percentage or flow velocity display.All metal housing.highlighted digital LED, dual-key and user-friendly interface, multiple process connections.330˚ rotatable indicator.



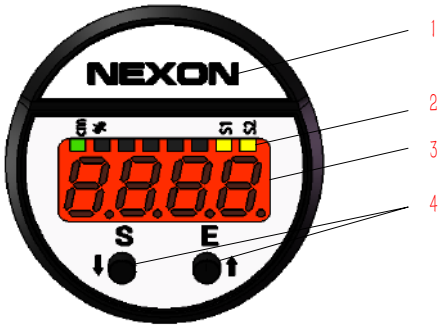
Specifications

Measuring Range	
Water	1...200cm/s
Oil	3...300cm/s
Air	20...2000cm/s
Applicable Medium	Water, oil and gas which is compatible with stainless steel
Repeatability	1%@<0.6m/s;3%@<1.5m/s;10%@>1.5m/s
Pressure Rating	100bar
Initialization Time	1...8s
Response Time	2s typical
Power Supply	18...30Vdc
Current Consumption	≤500mA(power supply 24Vdc, no-load)
Switching Output(NC+NO)	
Output	Push-pull (compatible with PNP I NPN); NC / NO configurable
S1, S2 Output Current	<500mA
Voltage Drop	<1V
Current Analog Output	
Output	3-wire 0...20mA / 4...20mA programmable
Load RA	RA≤0.5KΩ
Wiring Protection	Reverse polarity, overvoltage and short-circuit
Display	
Design	8mm height, red 4-digit LED
Display Range	-1999...9999
Temperature	
Operating	-40...85℃
Medium	-20...85℃
Material	
Housing	304stainless steel
Probe	304stainless steel
Protection Class	IP67
Electrical Conhection	M12×1 plug

Applications

- Hydraulic /Lubrication
- Pump protection
- Cooling water monitoring
- Ventilation system
- Leaking test
- Machinery manufacture
- Water treatment
- Engineering project

Set Panel



1- LOGO
2- 8 state lights
3- 4-digit LED display window
4- Keys

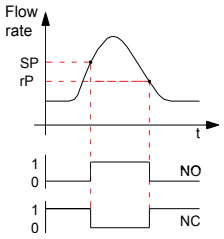
S + E	Press and hold for 2 seconds to entersetting mode/verification
S	Shift down the menu / change values
E	Shift up the menu / Change values

Functional Specifications

Hysteresis Mode

The hysteresis keeps the switching output stable if the flow velocity fluctuates around the setpoint. Output switches when rising flow velocity reaches set point (SP1); As flow velocity falls, the output switches back only if the reset point(rP1) is reached.

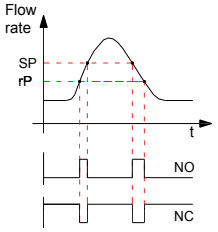
Hysteresis Mode



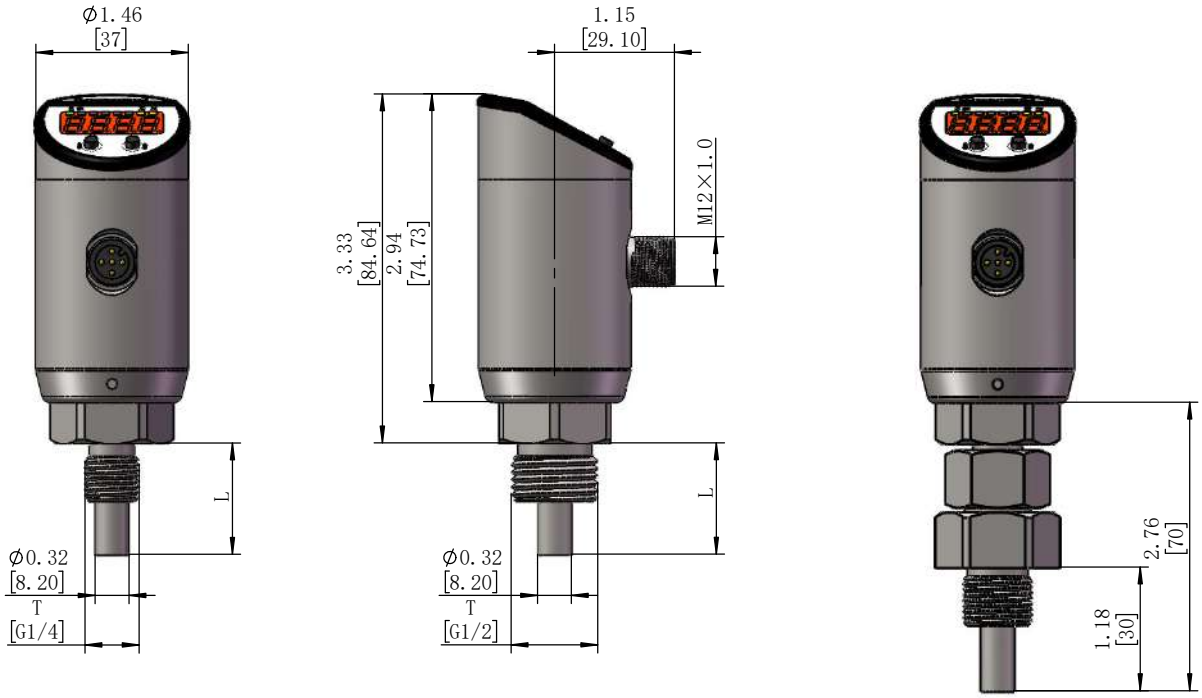
Window Mode

The window function allows the monitoring of a defined range. If the flow velocity is between set point (SP1) and reset point (rP1), the output is activated (NO), otherwise it is deactivated(NC).

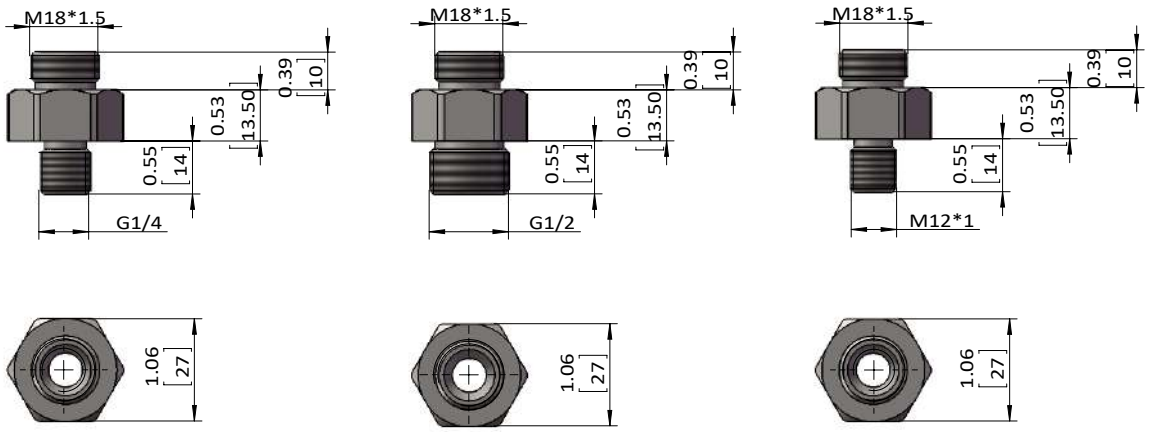
Window Mode



Dimensions in inch[mm]



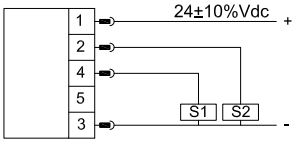
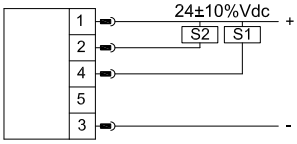
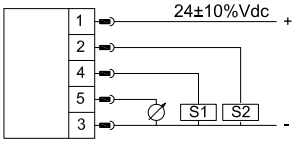
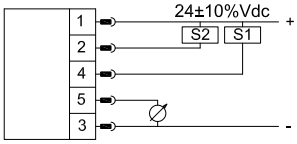
Dimensions in inch[mm]



Note: One of the connectors FG12, FM12 or FG14 must be ordered for sealing purpose if probe is F18

Wiring

Signal	Plug	Cable
U+	1	Brown
U-	3	Blue
Switching output S1	4	Black
Switching output S2	2	White
Analog output (Currentor Voltage)	5	Gray

PNP output	NPN output
2x PNP 	2x NPN 
2x PNP + analog output 	2x NPN + analog output 

Model Number

OrderNO.	Type	Rod length mm	Process connection
FN3000	FN3000/G14M21M027S	27	G1/4
FN3001	FN3000/G12M21M027S	27	G1/2
FN3002	FN3000/G1821M060S	60	M18 union

FCM50 - Thermal Gas Mass Flowmeter

- Tube Diameter:DN10...DN300
- Used for gas flow measurement, but also for process control
- No temperature and pressure compensation
- No moving parts
- Range ratio wide, high precision, high reliability
- Simple installation and easy operation
- Low pressure loss

The thermal mass flowmeter adopts the principle of thermal diffusion, which is a technology with excellent performance and high reliability under harsh conditions. Typical sensing elements include two thermal resistors (platinum RTD), a speed sensor and a temperature sensor that automatically compensates for changes in gas temperature. When the two RTDS are placed in a medium, where the velocity sensor is heated to a constant temperature above the ambient temperature, the other temperature sensor is used to sense the medium temperature. The mass flow of gas through the velocity sensor is calculated by the heat transfer of the sensing element. As the gas velocity increases, the heat carried away by the medium increases. The temperature of the sensor decreases accordingly. In order to maintain a constant temperature, the working current through the sensor must be increased, and this increased portion of the current is not proportional to the velocity of the medium.

Specifications

Inner diameter DN	DN10...DN300
Applicable Medium	Air, natural gas, hydrogen, oxygen, chlorine, nitrogen, argon, ammonia, methane, gas, phosgene, flue gas, etc
Measuring Range	0.4...100m/s
Accuracy	Level 1, Level 1.5
Repeatability	±0.25% of the measured value
Power supply	220VAC±10%；24VDC±10%
Output	Current:4...20mA，HART,RS485 Pulse:Frequency0-1KHZ
Working pressure	DN10—DN50：≤4.0Mpa DN65—DN200：≤1.6Mpa DN250—DN300：≤1.0Mpa
Sensor Materials	316SS(1.4404)、Ceramics
Junction box shell material	Cast aluminium
Flange, Housing Material	Carbon steel, Stainless steel (custom)
Response Time	＜100ms
Responsivity	＜0.05m/s
Medium Temperature	-20℃...120℃,-20℃...250℃
Ambient Temperature	Sensor -25℃~60℃；
Ambient Humidity	≤85%RH（20℃）
Power Consumption	<20W
Structure	One piece, two pieces
Electrical Conhection	M20×1.5
Earthing mode	Pipe grounding
Explosion-proof	EXd ⅡCT2...6
Process Connection	Flange connection (according to international GB9115-88)
Protection Class	IP65

Applications

- Air/gas/natural gas measurement
- Water treatment
- Petrochemical industry
- Power plant
- Metallurgical industry
- Oil/Gas industry

Medium

Gas

Limitation of hot gas flowmeter

- Thermal gas mass flowmeters are not suitable for measuring liquids
- For more water content of the gas can not be accurately measured

Structural style

All-in-one:
Sensor does not convert to form a whole, easy wiring, and no cable outside interference is small. But it is not suitable for installation in high or is not easy to view and high temperature or large vibration occasions

Split:
The sensor is installed separately on the pipeline, and the converter is installed several meters or even more than 100 meters apart, which is suitable for harsh environment site

Advantages of hot gas flowmeter

There are no moving parts in the measuring tube for easy maintenance and management, so the service life of the sensor is long: open flow parts, so no pressure loss
The thermal gas mass flowmeter is a kind of instrument to measure volume flow. The measurement results are independent of velocity distribution, fluid pressure, temperature, density, viscosity and other physical parameters
Hot gas mass flowmeter is a kind of volume flow meter, can measure corrosive media, body material and probe can choose tantalum material
Diverse structure, flexible installation, convenient loading and unloading, easy to use
Anti-explosion and anti-corrosion design, suitable for harsh environment and dangerous occasions
The converter has reliable performance, high precision, low power consumption, zero stability, convenient parameter setting, LCD display, can display the cumulative flow, flow rate, flow percentage and other parameters of high sensitivity, especially suitable for large diameter, low flow rate measurement
High definition backlit LCD display, all Chinese menu operation, easy to use, simple operation, easy to learn and understand
The 16-bit embedded microprocessor is adopted, which has fast computation speed, high precision, programmable frequency and low frequency rectangular wave excitation, which improves the stability of flow measurement and low power consumption
Full digital processing, strong anti-interference ability, reliable measurement, high precision, flow measurement range can reach 1000:1
Ultra-low EMI switching power supply, wide range of power supply voltage, good anti-EMC
With RS485, RS232, Hart and Modbus digital communication signal output

Detail the main technical parameters

Applicable medium:

Air, natural gas, hydrogen, oxygen, chlorine, nitrogen, argon, ammonia, methane, gas, phosgene, flue gas, etc

Gas	Density（kg/m3）
Air (dry)	1.2928
Nitrogen	1.2506
Oxygen	1.4289
Fluorine	1.784
neon	0.9
Ammonia	0.771
Carbon Monoxide	1.2504
Carbon Dioxide	1.977
Acetylene	1.1717

Gas	Density（kg/m3）
Ethylene	1.2604
Propylene	1.914
Methan	0.7176
Ethane	0.3567
Propyne	2.005
Butyne	2.703
Natural gas	0.802
Coal gas	0.802

Detail the main technical parameters

Measuring range: 0.4-60m /s

Under normal circumstances, the selection of mass flow timing should make the flow rate v in 1... The measurement range of 50 m/s is ideal.

Under the condition that the range Q has been determined, the diameter D of the flowmeter can be determined according to the above range of flow velocity V. The formula for calculating the flow velocity is as follows:

(1) v = 1273. 24 * Q / DN2

Unit:

v： [m /s]

Q： [l/s]

DN： [mm]

(2) v = 353.68 * Q / DN2

Unit:

V： [m /s]

Q： [m 3/h]

DN： [mm]

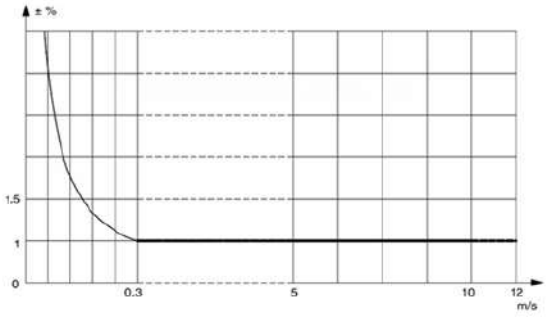
Note: Q: flow rate; DN: pipe diameter; V: flow rate

Accuracy: ≤±1%, ≤±1.5% reference conditions are as follows

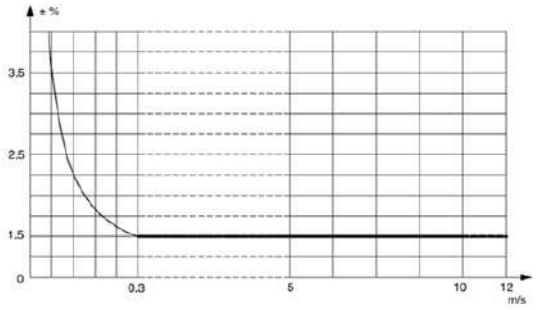
The reference conditions for precision calibration are as follows:

Project	Parameter
Medium temperature	20 ˚C ± 3 ˚C
Ambient temperature	21 ˚C ± 3 ˚C
Pressuring	1 bar
Power Supply	24±1%
Stabilization time	25 minutes
Straight pipe section (inlet)	10 x DN (DN ≤ 1200/48") 5 x DN (DN > 1200/48")
Straight pipe section (outlet)	5 x DN (DN ≤ 1200/48") 3 x DN (DN > 1200/48")
Fluid state	Uniform flow distribution

Accuracy Curve of mass flowmeter system (±1%)

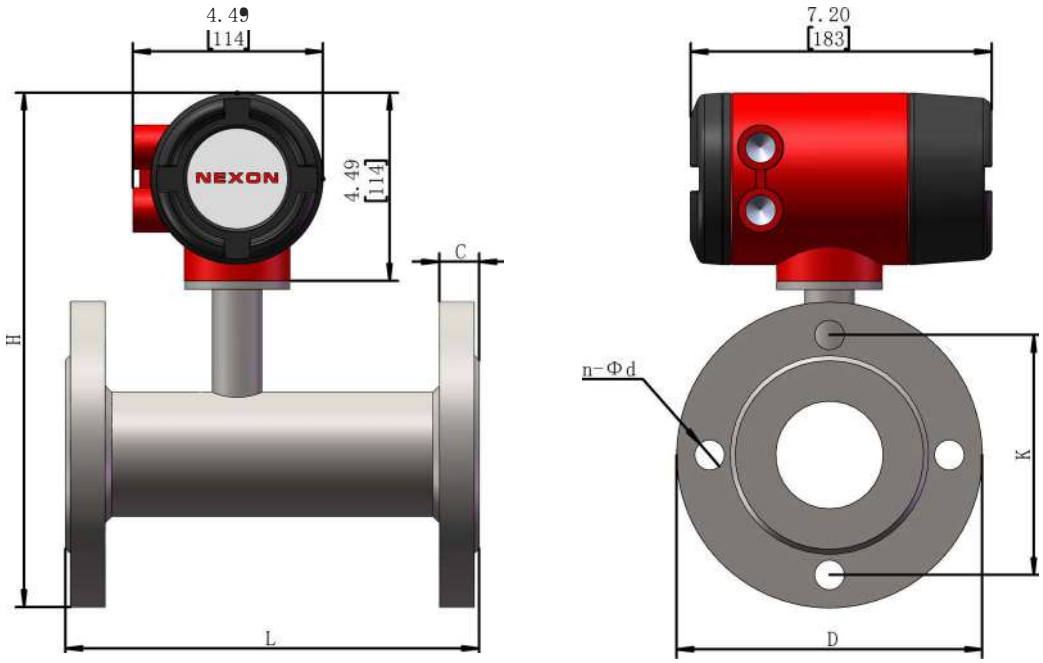


Accuracy Curve of mass flowmeter system (±1.5%)



Dimensions

One-piece dimensional drawing（mm）



Dimensions

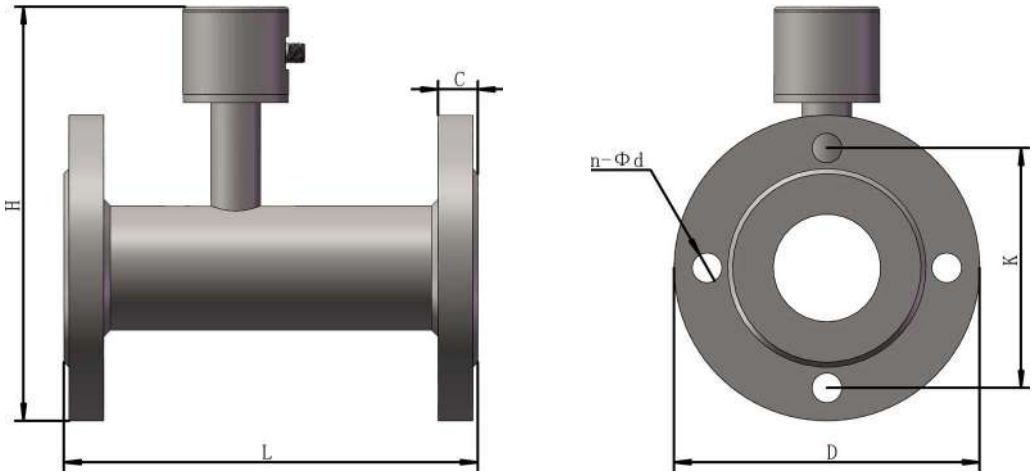
DN	L	H	D	K	n-Ød	C
DN10	200	210	90	60	4-Ø14	14
DN15	200	215	95	65	4-Ø14	14
DN20	200	225	105	75	4-Ø14	16
DN25	245	231	115	85	4-Ø14	16
DN32	245	245	140	100	4-Ø18	18
DN40	245	254	150	110	4-Ø18	18
DN50	245	296	165	125	4-Ø18	20
DN65	300	324	185	145	4-Ø18	20
DN80	300	339	200	160	8-Ø18	20
DN100	300	366	235	180	8-Ø18	22
DN125	300	386	250	210	8-Ø18	22
DN150	350	416	285	240	8-Ø18	24
DN200	350	469	340	295	12-Ø22	26
DN250	400	547	395	350	12-Ø22	26
DN300	500	599	445	400	12-Ø22	28

Model Number

OrderNO.	Type	DN	Measuring range Nm^3/h	Pressure Mpa
FC0010	FCM50/DN10ACBKS400ADP	10	0.12...28	4
FC0015	FCM50/DN15ACBKS400ADP	15	0.3...60	
FC0020	FCM50/DN20ACBKS400ADP	20	0.5...110	
FC0025	FCM50/DN25ACBKS400ADP	25	0.7...175	
FC0032	FCM50/DN32ACBKS400ADP	32	1.2...290	
FC0040	FCM50/DN40ACBKS400ADP	40	2...450	
FC0050	FCM50/DN50ACBKS400ADP	50	3...700	
FC0065	FCM50/DN65ACBKS160ADP	65	5...1200	1.6
FC0080	FCM50/DN80ACBKS160ADP	80	8...1800	
FC0100	FCM50/DN100ACBKS160ADP	100	12...2800	
FC0125	FCM50/DN125ACBKS160ADP	125	20...4400	
FC0150	FCM50/DN150ACBKS160ADP	150	30...6300	
FC0200	FCM50/DN200ACBKS160ADP	200	50...11300	
FC0250	FCM50/DN250ACBKS100ADP	250	100...17600	1
FC0300	FCM50/DN300ACBKS100ADP	300	150...254000	

Dimensions

Split dimensional drawing



Dimensions inch[mm]

DN	L	H	D	K	n-Ød	C
DN10	200	153	90	60	4-Ø14	14
DN15	200	158	95	65	4-Ø14	14
DN20	200	168	105	75	4-Ø14	16
DN25	245	174	115	85	4-Ø14	16
DN32	245	188	140	100	4-Ø18	18
DN40	245	197	150	110	4-Ø18	18
DN50	245	207	165	125	4-Ø18	20
DN65	300	217	185	145	4-Ø18	20
DN80	300	222	200	160	8-Ø18	20
DN100	300	259	235	180	8-Ø18	22
DN125	300	279	250	210	8-Ø18	22
DN150	350	309	285	240	8-Ø18	24
DN200	350	352	340	295	12-Ø22	26
DN250	400	440	395	350	12-Ø22	26
DN300	500	492	445	400	12-Ø22	28

Model Number

OrderNO.	Type	DN	Measuring range Nm^3/h	Pressure Mpa
FC1010	FCM50A/DN10ACBKS400ADP	10	0.12...28	4
FC1015	FCM50A/DN15ACBKS400ADP	15	0.3...60	
FC1020	FCM50A/DN20ACBKS400ADP	20	0.5...110	
FC1025	FCM50A/DN25ACBKS400ADP	25	0.7...175	
FC1032	FCM50A/DN32ACBKS400ADP	32	1.2...290	
FC1040	FCM50A/DN40ACBKS400ADP	40	2...450	
FC1050	FCM50A/DN50ACBKS400ADP	50	3...700	
FC1065	FCM50A/DN65ACBKS160ADP	65	5...1200	1.6
FC1080	FCM50A/DN80ACBKS160ADP	80	8...1800	
FC1100	FCM50A/DN100ACBKS160ADP	100	12...2800	
FC1125	FCM50A/DN125ACBKS160ADP	125	20...4400	
FC1150	FCM50A/DN150ACBKS160ADP	150	30...6300	
FC1200	FCM50A/DN200ACBKS160ADP	200	50...11300	
FC1250	FCM50A/DN250ACBKS100ADP	250	100...17600	1
FC1300	FCM50A/DN300ACBKS100ADP	300	150...254000	

FVX700S-Sanitary Vortex Flow Meter

- **Applicable to food and pharmaceutical industry**
- **Standard tri-clamp connection**
- **Stainless steel structure**
- **Operating temperature up to 250℃**
- **Optional 4...20 mA current output and pulse output**

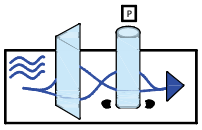
FVX700S is based on Karman vortex effect to work. A columnar object that goes through the entire cross-section of the meter tube creates a vortex when a flow ispresent. The frequency of the vortex is proportional to flow. FVX700S is specially designed for food sanitation industry and widely used in gas, steam and liquid applications. No moving part; Integral display for instantaneous and tatal flow;4...20mA or pulse output.

Specifications

Measuring Range	0.9-38m3/h
Applicable Medium	Water
Linearity	Waters≤0.7% of measuring range
Repeatability	≤±0.5% of measuring range
Power Supply	10...25Vdc
Current Consumption	≤20mA
Analog output	2-wire 4...20mA
Wiring Protection	Reverse polarity
Ambient Temperature	-20...70℃
Medium Temperature	-40...250℃
Pressure Rating	25bar
Protection Class	IP65
Materials	
Electrical Housing	316L stainless steel
Connection Thread	316L stainless steel
Body	316L stainless steel
Sensor	316L stainless steel
O-ring	NBR
Electrical Conhection	M12x1 plug

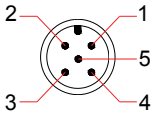
Applications

- Food industry
- Pharmaceutical in dustry
- Brewing industry



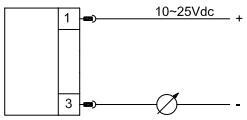
Wiring Diagram 2 Analog Output

Wiring	4...20mA output

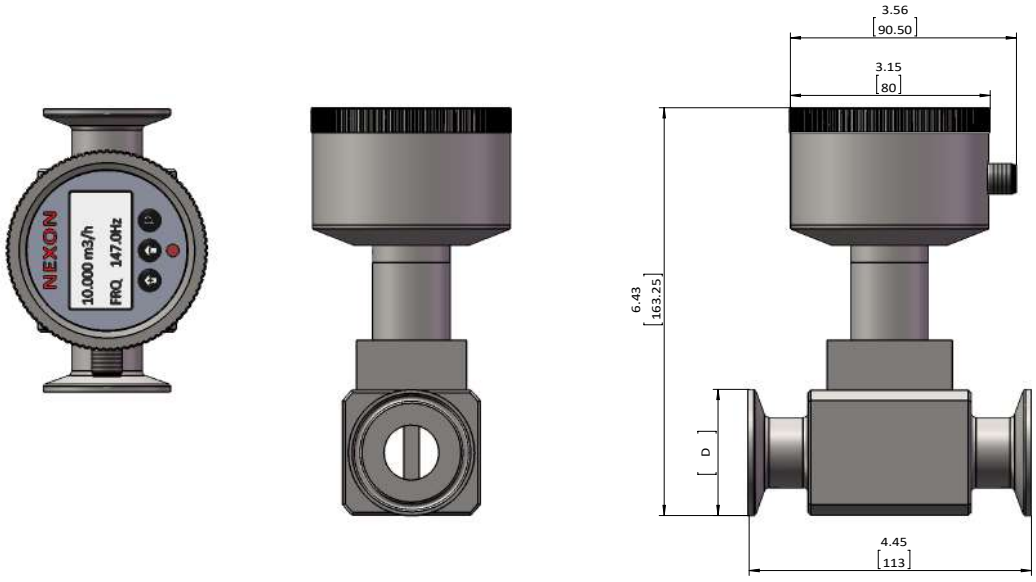


M12 pulg

Signal	Plug	Cable
U+	1	Brown
U-	3	Blue



Dimensions in inch[mm]



Model Number

OrderNO.	Type	DN	Measuring range m3/h	Process connection ChuckD
FV7025	FVX700SDN25-01ASL010	1"(DN25)	0.9-10m3/h	50.5 Sanitary chuck
FV7040	FVX700SDN40-112ASL026	1-1/2"(DN40)	2.5-26m3/h	50.5 Sanitary chuck
FV7050	FVX700SDN50-02ASL038	2"(DN50)	3.5-38m3/h	64 Sanitary chuck

VN series Coriolis force mass flowmeter

- **Measurement of liquids, slurries and high density gases**
- **Micro-bending design, compact structure, easy to self-emptying**
- **Double temperature compensation, high pressure compensation technology, improve the field performance**
- **Dynamic vibration balance (DVB) matching technology to improve system stability**
- **ASIC circuit with full digital closed loop control (DLC) to expand the range of gas-liquid two-phase flow applications**

VN series Coriolis mass flowmeter is NEXON's new generation of micro-curved double flow tube Coriolis mass flowmeter. It is equipped with an electronic conversion device based on digital signal processing (DSP), which integrates the digital closed-loop vibration control (DLC), signal processing, calculation and diagnostic function of the sensor, and has the advantages of high measurement accuracy, wide range ratio and high reliability. It can communicate with the manual operator through HART or PC through Modbus, and directly perform online node configuration, fault diagnosis and data recording.
The volumetric flow rate, cumulative mass, cumulative volume and component ratio of the fluid can be calculated while measuring the mass flow rate, density and temperature of the fluid in real time.

Specifications

Accuracy	Liquid：±0.10%，±0.15%，±0.20% optional
	Gas：±0.5%
Repeatability	Liquid:≤0.05%；Gas:≤0.25%
Proof Pressure	Provide suitable solutions according to working conditions
Caliber	DN02-DN50
Temperature Range	
Measuring Range	-50℃~180℃
Medium Temperature	-40℃~180℃
Storage Temperature	-50℃ ~ 70℃
Ambient Temperature	-25℃ ~ 60℃（Have a display）；-40℃ ~ 85℃（no display）
Materials	
Flow tube	316 Stainless Steel
Current diverter	316 Stainless Steel
Flange	316 Stainless Steel
Sensor	304 Stainless Steel
Transducer	Cast aluminium alloy
Separate junction box	Cast aluminium alloy
Protection class	IP65 , IP67，IP68（Separate sensor optional）
Approval and Certification	CSA，CE，PCEC，ExdibIICT6Gb

Applications

- Process control
- Material ratio
- Concentration measurement
- Batch filling

Performance

Pressure correction factor table

Specification	Influence of pressure on flow rate Kiq		Effect of pressure on density Kiρ	
	Pressure unit psi	Pressure unit bar	Pressure unit psi	Pressure unit bar
NE0002	not have	not have	not have	not have
NE0005	not have	not have	not have	not have
NE0010	not have	not have	not have	not have
NE0015	not have	not have	not have	not have
NE0025	not have	not have	not have	not have
NE0040	0.00014	0.002	0.014	0.2
NE0050	0.00042	0.006	0.014	0.2

Proof Pressure

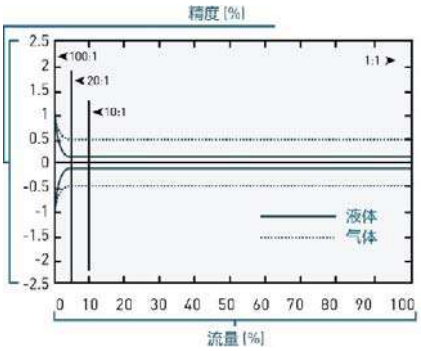
Specification	Zero stability	
	lb/min	kg/h
NE0002	0.00011	0.003
NE0005	0.0011	0.03
NE0010	0.0036	0.10
NE0015	0.0333	0.30
NE0025	0.0555	0.90
NE0040	0.111	1.50
NE0050	0.333	3.00

Specification	Range		K-Gas factor
	lb/min	kg/h	
NE0002	3.66	100	40
NE0005	18.3	500	60
NE0010	36.6	1000	60
NE0015	660	18000	70
NE0025	1100	30000	70
NE0040	2200	60000	80
NE0050	6600	1800000	80

Description: Gas flow range = liquid flow range x gas working density (unit: kg/m3) /K

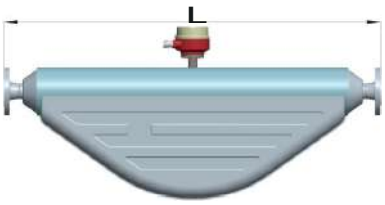
pressure loss

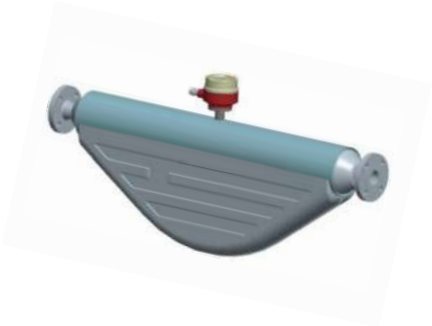
Range ratio	500:1	100:1	20:1	10:1	1:1
Liquid accuracy(±%)	2.5	0.8	0.1	0.1	0.1
Gas accuracy(±%)	2.5	1.5	0.5	0.5	0.5
Pressure loss					
liquid (psi)	~0	~0	0.1	0.25	14.5
liquid (bar)	~0	~0	0.01	0.02	1.00
Gas (psi)	0	0	0.1	0.35	15.0
Gas (bar)	0	0	0.01	0.02	1.03



Dimensions

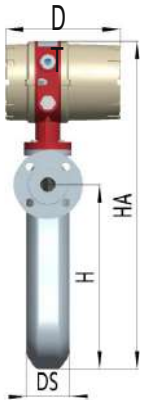
V-type flowmeter inch / mm





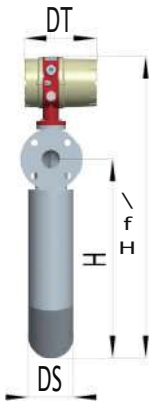
Type	Length of flange end face		Flange center height		Overall height HA		Sensor thickness DS		Junction box diameter	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
NE0002	14.48	368	4.21	107	10.74	273	1.93	49	4.6	117
NE0005	14.48	368	4.21	107	10.74	273	1.93	49	4.6	117
NE0010	15.23	387	5.59	142	12.12	308	1.93	49	4.6	117

T-type flowmeter inch / mm



Type	DN	Length of flange end face		Flange center height		Overall height HA		Sensor thickness DS		Transmitter thickness DT	
		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
NE0015	15	10.07	256	9.05	230	18.11	460	2.52	64	9.44	240

T-type flowmeter inch / mm



Type	Length of flange end face		Flange center height		Overall height HA		Sensor thickness DS		Transmitter thickness DT	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
NE0025	22.6	574	20.55	522	31.26	794	4.76	121	7.56	192
NE0040	24.48	622	21.33	542	32.16	817	4.76	121	7.56	192
NE0050	27.63	702	25.9	658	36.85	936	5.9	150	7.56	192

Model Number

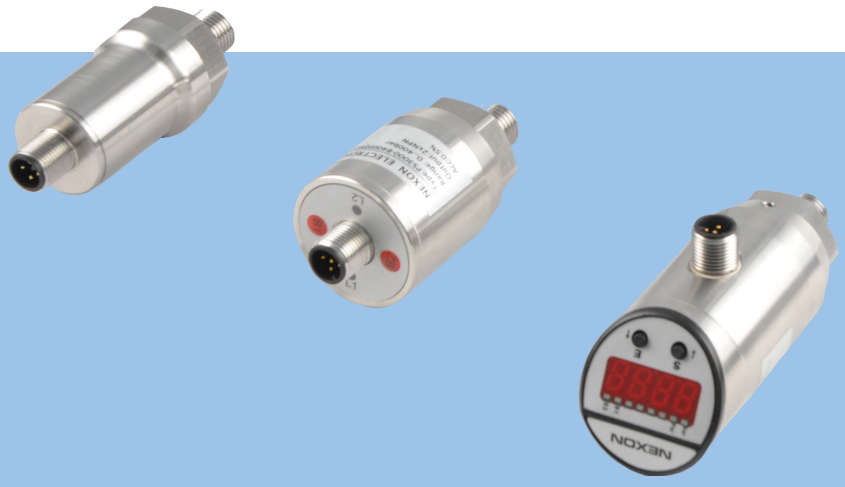
OrderNO.	STPY	DN	Measuring range Kg/H	Process connection
NE0002	Slightly curved body type	DN02	100	DN15 Flange EN 1092-1 (DIN) PN 100
NE0005		DN05	500	DN15 Flange EN 1092-1 (DIN) PN 100
NE0010		DN10	1000	DN15 Flange EN 1092-1 (DIN) PN 100
NE0015	Triangular monotypy	DN15	6000	DN15 Flange EN 1092-1 (DIN) PN 100
NE0025	U-shape	DN25	18000	DN25 Flange EN 1092-1 (DIN) PN 100
NE0040		DN40	30000	DN40 Flange EN 1092-1 (DIN) PN 100
NE0050		DN50	60000	DN50 Flange EN 1092-1 (DIN) PN 100

U-shape

△-shape

V-shaped body type

Pressure series



Pressure Sensors for Fluid Measuring Technology

PA1000 - Compact Pressure Transmitter

- **Compact design**
- **Housing diameter Φ22**
- **Measuring range from 0...4barG to 0...400barG**
- **High shock reslstance**
- **2-wire 4...20mA output**
- **Ceramic thick film sensing element**

Equipped with a ceramic thick film sensing element, PA1000 converts the measured pressure to 4...20mA as output. All-metal housing makes it suitable for various working conditions while multiple process connections makes installation easier.

Specifications

Power Supply	
Current output	10...30Vdc
Current Consumption	
2-wire	Same as current output(4...20mA)
Current Analog Output	
Output	2-wire 4...20mA
LoadRA(Ω)	RA (Us-10)V/0.02A
Linearity	≤±0.5% of F.S.
Response Time	≤1ms
Repeatability	≤±0.1% of F.S.
Accuracy	≤±0.5% of F.S.
Stability(Drift/Year)	≤±0.3% of F.S.
Temperature	
Medium	-20...+85℃
Ambient	-20...+85℃
Material	
Housing	304 stainless steel
Wetted Parts	304 stainless steel
Protection Class	IP67(M12×1 plug)
Wiring method	M12×1plug
Electrical Connection	G1/4 ED seal with male thread

Applications

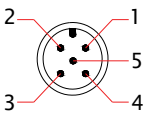
- Hydraulics and pneumatics
- Machine tools
- Machinery manufacturing
- Pumps and compressors
- Test equipment
- Construction automation

Technical Data

Pressure Range	bar	4	6	10	16	25	40	60	100	160	250	400
Overload Pressure		Pressure Range×2.0										
Burst Pressure		Pressure Range×5.0										<1500bar

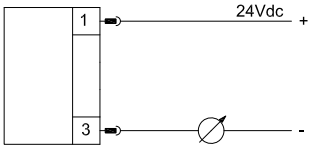
Wiring

Wiring	2-wire

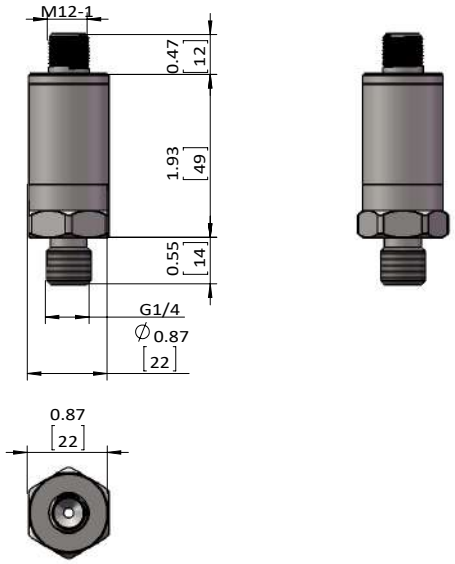


M12plug

Signal	Plug	Cable
U+	1	Brown
U-	3	Blue



Dimensions in inches (mm)



Model Number

OrderNO.	Type	Range Bar	Pressure type	Output type mA
PA00001	PA1000/B001P0242G14MS	0...1	Positive Pressure	Current Output 2-wire(4...20mA)
PA00004	PA1000/B004P0242G14MS	0...4		
PA00006	PA1000/B006P0242G14MS	0...6		
PA00010	PA1000/B010P0242G14MS	0...10		
PA00016	PA1000/B016P0242G14MS	0...16		
PA00025	PA1000/B025P0242G14MS	0...25		
PA00040	PA1000/B040P0242G14MS	0...40		
PA00060	PA1000/B060P0242G14MS	0...60		
PA00100	PA1000/B100P0242G14MS	0...100		
PA00160	PA1000/B160P0242G14MS	0...160		
PA00250	PA1000/B250P0242G14MS	0...250		
PA00400	PA1000/B400P0242G14MS	0...400		

PA1500-Compact Strong Pressure Transmitter

- **All stainless steel structure compact diameter 22mm**
- **Measuring range from 0...2000bar**
- **High shock reslstance**
- **2-wire 4...20mA output**
- **High accuracy up to 0.5%FS**
- **Operating temperature range -40-125℃**

PA1500 series adopts sputtering film technology, specially designed for hydraulic machinery and construction machinery. Full metal casing, hydraulic shock resistance, and wide temperature range enable the series to be used in a variety of harsh work scenarios. A variety of output types and connections are available to meet specific installation needs.

Specifications

Power Supply	
Current output	10...30Vdc
Current Consumption	
2-wire	Same as current output(4...20mA)
Current Analog Output	
Output	2-wire 4...20mA
LoadRA(Ω)	RA(Us-10)V/0.02A
Linearity	≤±0.25% of F.S.
Voltage Analog Output	
Output	2-wire 0...5V
LoadRA(Ω)	RA≥5K
Linearity	≤±0.25% of F.S.
Accuracy	≤±0.5% of F.S.
Stability(Drift/Year)	≤±0.2% of F.S.
Temperature	
Medium	-40...+125℃
Ambient	-20...+85℃
Material	
Housing	304 stainless steel
Wetted Parts	304 stainless steel
Protection Class	IP67(M12×1plug)
Wiring method	M12×1plug
Process connection	G1/4 ED seal with male thread\M20×1.5 male thread

Applications

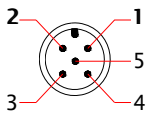
- Hydraulics and pneumatics
- Engineering machinery
- Machinery manufacturing
- Pumps and compressors
- Test equipment
- Construction automation

Technical Data

Pressure Range	bar	25	40	60	100	160	250	400	600	700	800	1000
Overload Pressure		Pressure Range×2.0（Optional pressure range×4.0）								Pressure Range×2.0		
Burst Pressure		Pressure Range×5.0（Optional pressure range×6.0）						Pressure Range×3.0				<1500bar

Wiring

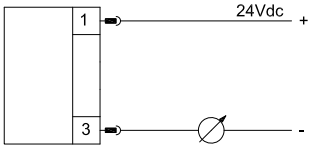
Wiring	2-wire	3-wire

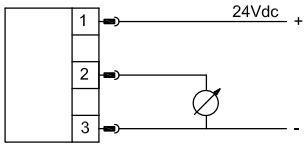


M12 plug

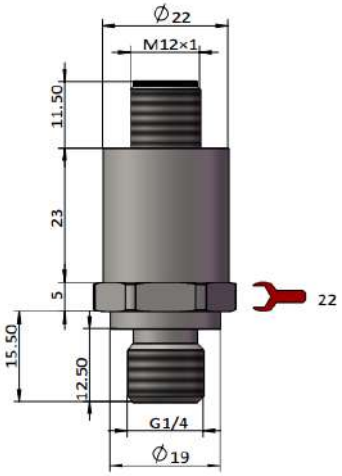
Signal	Plug	Cable
U+	1	Brown
*output	*2	*White
U-	3	Blue

* Only for 3-wire





Dimensions in inches (mm)



Model Number

OrderNO.	Type	Range Bar	Electrical Connection G/M	Output type mA/V
PC00025	PA1500/B025P0242G14MS	0...25	G1/4	Current Output 2-wire(4...20mA)
PC00040	PA1500/B040P0242G14MS	0...40		
PC00060	PA1500/B060P0242G14MS	0...60		
PC00100	PA1500/B100P0242G14MS	0...100		
PC00160	PA1500/B160P0242G14MS	0...160		
PC00250	PA1500/B250P0242G14MS	0...250		
PC00400	PA1500/B400P0242G14MS	0...400		
PC00600	PA1500/B600P0242G14MS	0...600		
PC20A00	PA1500/B1000P0242G14MS	0...1000	M20×1.5	
PC20Z00	PA1500/B2000P0242G14MS	0...2000		
PC01025	PA1500/B025P0305G14MS	0...25	G1/4	Voltage Output 3-wire(0...5V)
PC01040	PA1500/B040P0305G14MS	0...40		
PC01060	PA1500/B060P0305G14MS	0...60		
PC01100	PA1500/B100P0305G14MS	0...100		
PC01160	PA1500/B160P0305G14MS	0...160		
PC01250	PA1500/B250P0305G14MS	0...250		
PC01400	PA1500/B400P0305G14MS	0...400		
PC01600	PA1500/B600P0305G14MS	0...600		
PC21A00	PA1500/B1000P0305G14MS	0...1000	M20×1.5	
PC21Z00	PA1500/B2000P0305G14MS	0...2000		

PA2000 - General Pressure Transmitter

- **Diffused silicon pressure sensor and DN27**
- **Measuring range from 0...800bar**
- **Multiple output modes are available**
- **304 stainless steel wetted parts**
- **Optional corrosion resistant model**
- **Accuracy 0.25% of F.S**

Equipped with a diffused silicon sensing element, PA2000 converts the measured pressure to 0...20mA/4...20mA/0...5V/1...5V/0...10V as output. All-metal housing makes it suitable for various working conditions while multiple process connections makes installation easier.

Specifications

Power Supply	
Current output	10...30Vdc
Voltage output	14...30Vdc
Current Consumption	
2-wire	Same as current output(4...20mA)
3-wire	≤22mA
2-wire Current Analog Output	
Output	2-wire 4...20mA
LoadRA(Ω)	RA≤(US-10)V/0.02A
Linearity	≤±0.25% of F.S.
Voltage Analog Output	
Output	2-wire 0...5V
LoadRA(Ω)	RA≥5K
Linearity	≤±0.25% of F.S.
Accuracy	≤±0.25% of F.S.
Stability(Drift/Year)	≤±0.2% of F.S.
Temperature	
Medium	-40...85℃
Ambient	-20...85℃
Material	
Housing	304 stainless steel
Wetted Parts	304 stainless steel
Protection Class	IP67(M12×1plug
Wiring method	M12×1plug
Electrical Connection	G1/4 ED seal with male thread

Applications

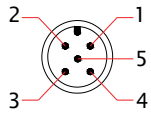
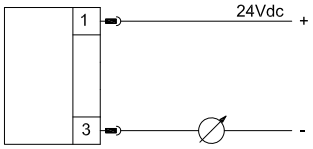
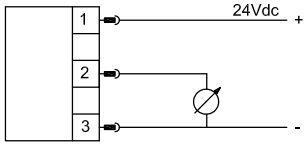
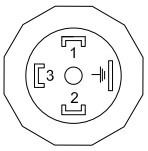
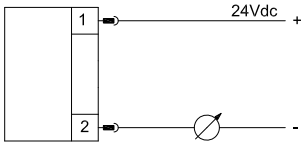
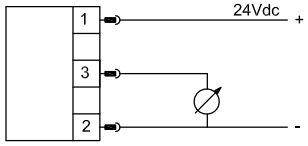
- Hydraulics and pneumatics
- Smart sensing controller
- Machinery manufacturing
- Pumps and compressors
- Test equipment
- Construction automation

Technical Data

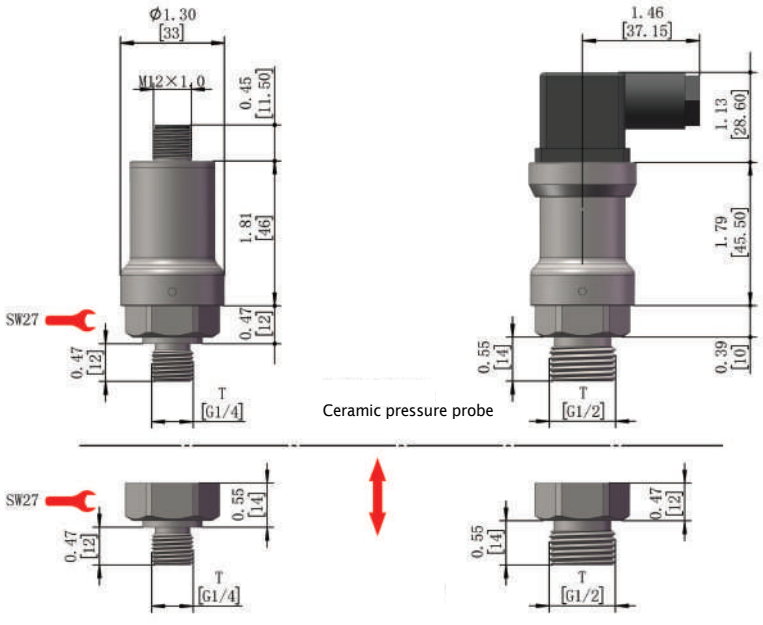
Pressure Range	bar	<0.1	1	2	5	10	16	25	60	100	160	250	400	≥600
Overload Pressure		×2	×5			×3			×2			×1.5		×1.3
Burst Pressure		×3	X6			×4			×3			×2		×1.6

* 4 times overload products (failure pressure is 6 times by default) selection mode:
add /HP at the end of the basic model selection

Wiring

Wiring	2-wire	3-wire
 M12 plug **Signal / Plug / Cable** U+ / 1 / Brown *output / *2 / *White U- / 3 / Blue * Only for 3-wire		
 Solenoid plug **Signal / Plug** U+ / 1 *output / *3 U- / 2 * Only for 3-wire		

Dimensions in inches (mm)



Diffused silicon pressure probe

PRESSURE

Model Number

OrderNO.	Type	Range Bar	Pressure type N/P/A	Output type mA/V
PB00N01	PA2000/B001N02/42-SBG14MS	-1...1	Negative Pressure	Current Output 2-wire(4...20mA)
PB00N04	PA2000/B004N02/42-SBG14MS	-1...4		
PB00N06	PA2000/B006N02/42-SBG14MS	-1...6		
PB00N10	PA2000/B010N02/42-SBG14MS	-1...10		
PB00N16	PA2000/B016N02/42-SBG14MS	-1...16		
PB00N25	PA2000/B025N02/42-SBG14MS	-1...25		
PB000,25	PA2000/B000.25P02/42-SBG14MS	0...0.25	Positive Pressure	
PB0000,5	PA2000/B000.5P02/42-SBG14MS	0...0.5		
PB00001	PA2000/B001P02/42-SBG14MS	0...1		
PB00004	PA2000/B004P02/42-SBG14MS	0...4		
PB00006	PA2000/B006P02/42-SBG14MS	0...6		
PB00010	PA2000/B010P02/42-SBG14MS	0...10		
PB00016	PA2000/B016P02/42-SBG14MS	0...16		
PB00025	PA2000/B025P02/42-SBG14MS	0...25		
PB00040	PA2000/B040P02/42-SBG14MS	0...40		
PB00060	PA2000/B060P02/42-SBG14MS	0...60		
PB00100	PA2000/B100P02/42-SBG14MS	0...100		
PB00160	PA2000/B160P02/42-SBG14MS	0...160		
PB00250	PA2000/B250P02/42-SBG14MS	0...250		
PB00400	PA2000/B400P02/42-SBG14MS	0...400		
PB00600	PA2000/B600P02/42-SBG14MS	0...600		
PB00800	PA2000/B800P02/42-SBG14MS	0...800		
PB00A01	PA2000/B001A02/42-SBG14MS	0...1	Absolute Pressure	
PB00A02	PA2000/B002A02/42-SBG14MS	0...2		
PB00A04	PA2000/B004A02/42-SBG14MS	0...4		
PB00A06	PA2000/B006A02/42-SBG14MS	0...6		
PB00A10	PA2000/B010A02/42-SBG14MS	0...10		
PB00A16	PA2000/B016A02/42-SBG14MS	0...16		
PB00A25	PA2000/A025A02/42-SBG14MS	0...25		
PB00A50	PA2000/B050A02/42-SBG14MS	0...50		

Model Number

OrderNO.	Type	Range Bar	Pressure type N/P/A	Output type mA/V
PB01N01	PA2000/B001N03/05-SBG14MS	-1...1	Negative Pressure	Voltage Output 3-wire(0...5V)
PB01N04	PA2000/B004N03/05-SBG14MS	-1...4		
PB01N06	PA2000/B006N03/05-SBG14MS	-1...6		
PB01N10	PA2000/B010N03/05-SBG14MS	-1...10		
PB01N16	PA2000/B016N03/05-SBG14MS	-1...16		
PB01N25	PA2000/B025N03/05-SBG14MS	-1...25		
PB0100,25	PA2000/B000.25P03/05-SBG14MS	0...0.25	Positive Pressure	
PB0100,5	PA2000/B000.5P03/05-SBG14MS	0...0.5		
PB01001	PA2000/B001P03/05-SBG14MS	0...1		
PB01004	PA2000/B004P03/05-SBG14MS	0...4		
PB01006	PA2000/B006P03/05-SBG14MS	0...6		
PB01010	PA2000/B010P03/05-SBG14MS	0...10		
PB01016	PA2000/B016P03/05-SBG14MS	0...16		
PB01025	PA2000/B025P03/05-SBG14MS	0...25		
PB01040	PA2000/B040P03/05-SBG14MS	0...40		
PB01060	PA2000/B060P03/05-SBG14MS	0...60		
PB01100	PA2000/B100P03/05-SBG14MS	0...100		
PB01160	PA2000/B160P03/05-SBG14MS	0...160		
PB01250	PA2000/B250P03/05-SBG14MS	0...250		
PB01400	PA2000/B400P03/05-SBG14MS	0...400		
PB01600	PA2000/B600P03/05-SBG14MS	0...600		
PB01800	PA2000/B800P03/05-SBG14MS	0...800		
PB01A01	PA2000/B001A03/05-SBG14MS	0...1	Absolute Pressure	
PB01A02	PA2000/B002A03/05-SBG14MS	0...2		
PB01A04	PA2000/B004A03/05-SBG14MS	0...4		
PB01A06	PA2000/B006A03/05-SBG14MS	0...6		
PB01A10	PA2000/B010A03/05-SBG14MS	0...10		
PB01A16	PA2000/B016A03/05-SBG14MS	0...16		
PB01A25	PA2000/B025A03/05-SBG14MS	0...25		
PB01A50	PA2000/B050A03/05-SBG14MS	0...50		

PAF100- Sanitary Pressure Transmitter

- **Compact design**
- **High pressure rating**
- **Measuring range from 0...25bar**
- **High shock resistance**
- **Accuracy 0.5% F.S.**

Equipped with a ceramic thick film pressure sensor (for pressure <10bar) or stainless steel thin film pressure sensor (for pressure >10bar), PAF100 converts the measured pressure electric signal as output. All-metal housing makes it suitable for various working conditions while multiple process connections makes installation easier, Optiona 0... 20mA and 4... 20mA current analog output avaliable.

Specifications

Power Supply	
Current output	10...30Vdc
Current Consumption	Same as current output(4...20mA)
Current Analog Output	
Output	4...20mA
LoadRA(Ω)	RA ≤(Us-10)V/0.02A
Linearity	≤±0.25% of F.S.
Accuracy	≤±0.5% of F.S.
Stability(Drift/Year)	≤±0.2% of F.S.
Temperature	
Medium	-30...85℃
Ambient	-30...85℃
Material	
Housing	304 stainless steel
Wetted Parts	316L stainless steel
Protection Class	IP65
Wiring method	Solenoid plug
Process connection	Sanitary chuck 50.5mm

Applications

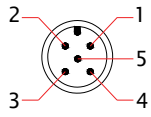
- Food industry
- Brewing industry
- Pharmaceutical industry

Technical Data

Pressure Range	bar	<0.1	0.1	0.25	0.4	0.6	1	4	6	10	16	25
	psi	1.5	1.45	3.62	5.8	8.7	14.5	58	87	145	230	370
Overload Pressure		×2	×5				×4			×3		
Burst Pressure		×3	X6				X5			×4		

Wiring

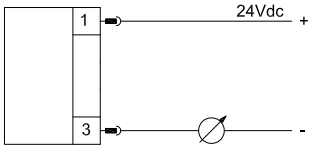
Wiring	2-wire	3-wire

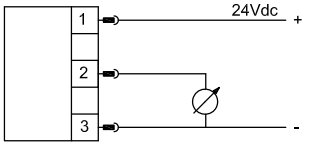


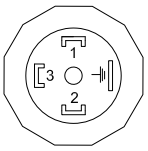
M12 plug

Signal	Plug	Cable
U+	1	Brown
*output	*2	*White
U-	3	Blue

* Only for 3-wire



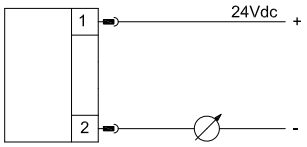


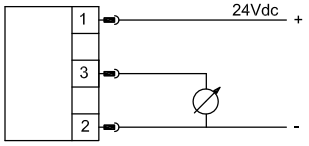


Solenoid plug

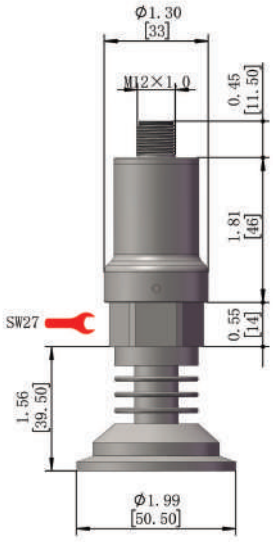
Signal	Plug
U+	1
*output	*3
U-	2

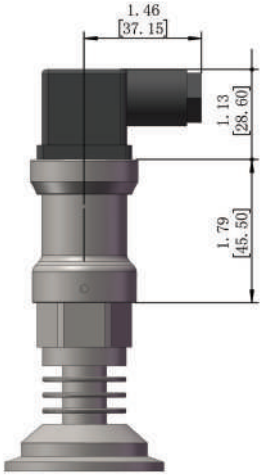
* Only for 3-wire





Dimensions in inches (mm)





Model Number

OrderNO.	Type	Range Bar	Output type mA
PF000,1	PAF100/B00.1P0242-BT1H/	0...0.1	Current Output 4...20mA
PF000,3	PAF100/B00.3P0242-BT1H/	0...0.3	
PF000,5	PAF100/B00.5P0242-BT1H/	0...0.5	
PF0001	PAF100/B001P0242-BT1H/	0...1	
PF0003	PAF100/B003P0242-BT1H/	0...3	
PF0005	PAF100/B005P0242-BT1H/	0...5	
PF0006	PAF100/B006P0242-BT1H/	0...6	
PF0010	PAF100/B010P0242-BT1H/	0...10	
PF0016	PAF100/B016P0242-BT1H/	0...16	
PF0025	PAF100/B025P0242-BT1H/	0...25	

PN3000-Electrical Pressure Transmitter With LED Display

- High pressure rating
- Measuring range from 0...1barG to 0...800barG
- All-metal housing, 4-digit LEDs with digital display
- PNP/NPN programmable
- 4...20mA/0...20mA/1...5V/0...5V output programmable
- Rotatable indicator

PN3000 equips with a ceramic thick film sensing element while a standard electrical signal is output and display. All-metal housing, 330° rotatable highlight LED display, dual keys and friendly menu design, multiple process connections.

Specifications

Power Supply	12...30Vdc
Current Consumption	≤30mA (power supply 24Vdc, no-load)
Switching Output	
Output	Push-pull (compatible with PNP/NPN),NC/NO configurable
S1, S2 Output Current	<500mA
Response Time	<10ms
Voltage Drop	<1V
Accuracy	≤±0.25% of F.S.
Current Analog Output	
Output	3-wire 0...20mA/4...20mA programmable
Load RA	RA≤0.5KΩ
Voltage Analog Output	
Output	3-wire 0...5V/1 ...5V programmable
Load RA	RA>10KΩ
Wiring Protection	Reverse polarity, overvoltage and short-circuit
Display	
Design	8mm height, red 4-digit LED
Display Range	-1999...9999
Accuracy	≤±0.25% of F.S.
Stability(Drift/Year)	≤±0.3% of F.S.
Temperature	
Medium	-40...+85℃
Ambient	-20...+85℃
Material	
Dislpay Head	304 stainless steel
Housing	304 stainless steel
Wetted Parts	316 stainless steel
Protection Class	IP67
Wiring method	M12×1plug
Process connection	G1/4 ED seal with male thread

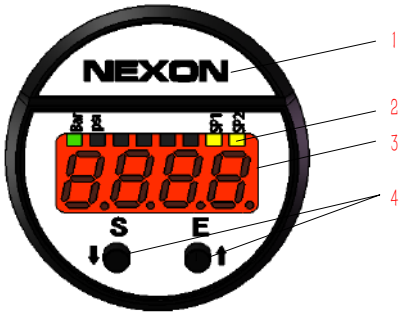
Applications

- Hydraulics and pneumatics
- Machine tools
- Pumps and compressors
- Machinery manufacturing
- Vacuum technology applications

Technical Data

Pressure Range	bar	1	2	5	10	16	25	40	60	100	160	250	400	600
	psi	15	30	75	145	230	370	580	900	1500	2300	3600	6000	9000
Overload Pressure		×5			×3			×2				×1.5		×1.3
Burst Pressure		×6			×4			×3				×2		×1.6

Set Panel



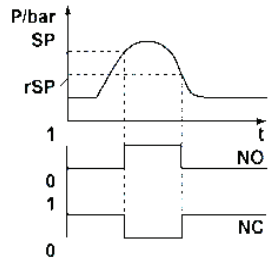
1 - LOGO
2 - 8 state lights
3 - 4-digit LED display window
4 - Keys

S + E	Press and hold for 2 seconds toenter setting mode/verification
S	Shift down the menu / Change avalue
E	Shift up the menu / Change a value

Functional Specifications

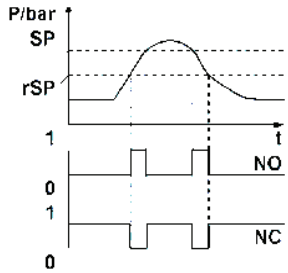
Hysteresis Mode

The hysteresis keeps the switching output stable if the pressure fluctuates around the setpoint. Output switches when rising pressure reaches set point (SP1); As pressure falls, the output switches back only if the reset point (rP1) is reached.



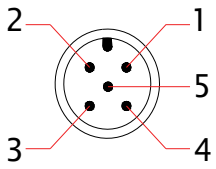
Window Mode

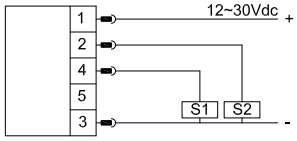
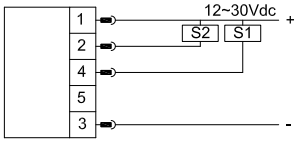
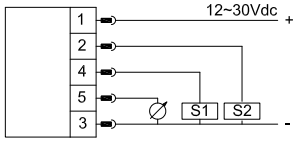
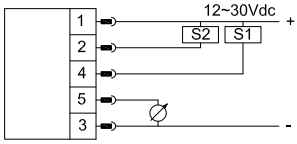
The window function allows the monitoring of a defined range. If the pressure is between set point (SP1) and reset point (rP1), the output is activated (NO), otherwise it is deactivated(NC).



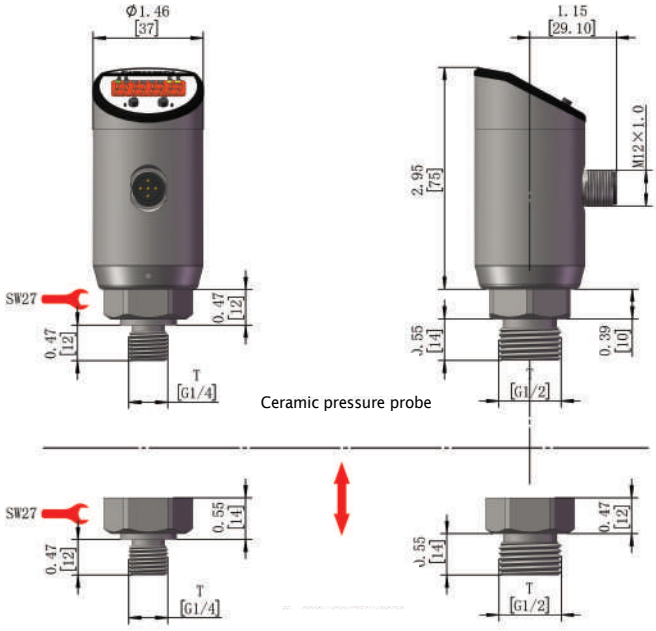
Wiring

Signal	Plug	Cable
U+	1	Brown
U-	3	Blue
Switching output 1	4	Black
Switching output 2	2	White
Analog output (Currentor Voltage)	5	Gray



PNP output	NPN output
2x PNP 	2x NPN 
2x PNP + analog output 	2x NPN + analog output 

Dimensions in inches (mm)



Ceramic pressure probe

Diffused silicon pressure probe

PRESSURE

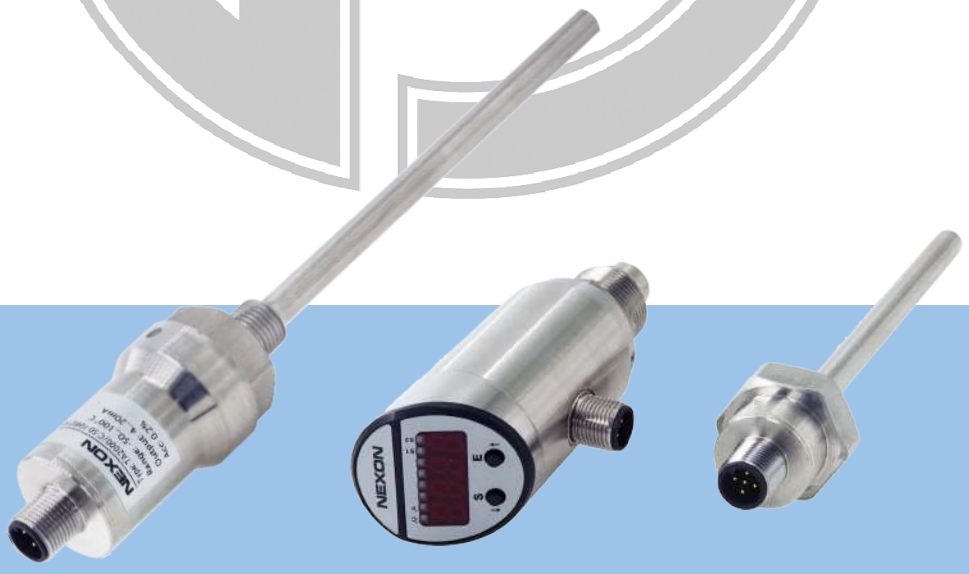
Model Number

OrderNO.	Type	Range Bar	Pressure type N/P/A	Output type MA/V
PN00N01	PN3000/B001N21G14MS	-1...1	Negative Pressure	2 switch Current Output (0...20/4...20mA)
PN00N04	PN3000/B004N21G14MS	-1...4		
PN00N06	PN3000/B006N21G14MS	-1...6		
PN00N10	PN3000/B010N21G14MS	-1...10		
PN00N16	PN3000/B016N21G14MS	-1...16		
PN00N25	PN3000/B025N21G14MS	-1...25		
PN000,25	PN3000/B0.25P21G14MS	0...0.25	Positive Pressure	
PN0000,5	PN3000/B00.5P21G14MS	0...0.5		
PN00001	PN3000/B001P21G14MS	0...1		
PN00004	PN3000/B004P21G14MS	0...4		
PN00006	PN3000/B006P21G14MS	0...6		
PN00010	PN3000/B010P21G14MS	0...10		
PN00016	PN3000/B016P21G14MS	0...16		
PN00025	PN3000/B025P21G14MS	0...25		
PN00040	PN3000/B040P21G14MS	0...40		
PN00060	PN3000/B060P21G14MS	0...60		
PN00100	PN3000/B100P21G14MS	0...100		
PN00160	PN3000/B160P21G14MS	0...160		
PN00250	PN3000/B250P21G14MS	0...250		
PN00400	PN3000/B400P21G14MS	0...400		
PN00600	PN3000/B600P21G14MS	0...600		
PN00800	PN3000/B800P21G14MS	0...800		
PN00A01	PN3000/B001A21G14MS	0...1	Absolute Pressure	
PN00A02	PN3000/B002A21G14MS	0...2		
PN00A04	PN3000/B004A21G14MS	0...4		
PN00A06	PN3000/B006A21G14MS	0...6		
PN00A10	PN3000/B010A21G14MS	0...10		
PN00A16	PN3000/B016A21G14MS	0...16		
PN00A25	PN3000/B025A21G14MS	0...25		
PN00A50	PN3000/B050A21G14MS	0...50		

Model Number

OrderNO.	Type	Range Bar	Pressure type N/P/A	Output type MA/V
PN01N01	PN3000/B001N22G14MS	-1...1	Negative Pressure	2 switch Voltage Output (0...5/1...5V)
PN01N04	PN3000/B004N22G14MS	-1...4		
PN01N06	PN3000/B006N22G14MS	-1...6		
PN01N10	PN3000/B010N22G14MS	-1...10		
PN01N16	PN3000/B016N22G14MS	-1...16		
PN01N25	PN3000/B025N22G14MS	-1...25		
PN010,25	PN3000/B000.25P22G14MS	0...0.25	Positive Pressure	
PN0100,5	PN3000/B000.5P22G14MS	0...0.5		
PN01001	PN3000/B001P22G14MS	0...1		
PN01004	PN3000/B004P22G14MS	0...4		
PN01006	PN3000/B006P22G14MS	0...6		
PN01010	PN3000/B010P22G14MS	0...10		
PN01016	PN3000/B016P22G14MS	0...16		
PN01025	PN3000/B025P22G14MS	0...25		
PN01040	PN3000/B040P22G14MS	0...40		
PN01060	PN3000/B060P22G14MS	0...60		
PN01100	PN3000/B100P22G14MS	0...100		
PN01160	PN3000/B160P22G14MS	0...160		
PN01250	PN3000/B250P22G14MS	0...250		
PN01400	PN3000/B400P22G14MS	0...400		
PN01600	PN3000/B600P22G14MS	0...600		
PN01800	PN3000/B800P22G14MS	0...800		
PN01A01	PN3000/B001A22G14MS	0...1	Absolute Pressure	
PN01A02	PN3000/B002A22G14MS	0...2		
PN01A04	PN3000/B004A22G14MS	0...4		
PN01A06	PN3000/B006A22G14MS	0...6		
PN01A10	PN3000/B010A22G14MS	0...10		
PN01A16	PN3000/B016A22G14MS	0...16		
PN01A25	PN3000/B025A22G14MS	0...25		
PN01A50	PN3000/B050A22G14MS	0...50		

Temperature Series



Temperature Sensors for Fluid Measuring Technology

TA1000 - Compact Temperature Transmitter

- **Economical product**
- **Measuring range: -50℃...200℃**
- **Compact design**
- **Stainless steel housing**

TA1000 series is a compact, economical and durable temperature transmitter that uses thermal resistance for temperature measurement. The signal is processed by a rear processing circuit and converted into a standard industrial electrical signal output.

The all-metal shell design enables the series of products to be used in various industrial situations. The analog output type is: 4... 20mA, a variety of connections can fully meet a variety of specific installation requirements.

Specifications

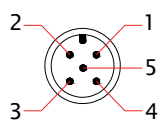
Power Supply	10...30Vdc
Current Consumption	
2-wire	Same as current output(4...20mA)
2-wire Current Output	
Output	2-wire 4...20mA
LoadRA(Ω)	RA≤(Us-10)V/0.02A
Linearity	≤±0.5% of F.S.
Sensor	PT1000 Class A
Accuracy	≤±0.5% of F.S.
Stablity(Drlft/Year)	≤±0.25% of F.S.
Temperature	
Medium	-50...100℃/-50...150℃/-50...200℃
(Measuring Range)	0...100℃/0...150℃/0...200℃
Ambient	-20...+85℃
Pressure Rating	200bar
Material	
Housing	304 stainless steel
Wetted Parts	316 stainless steel
Protection Class	IP67(M12×1plug)
Electrical Connection	M12×1plug
Process Connection	G1/4 external thread

Applications

- Hydraulics and pneumatics
- Heating and cooling circuits
- Machinery manufacturing
- Oil/Gas industry
- Water treatment
- Building automation

Wiring

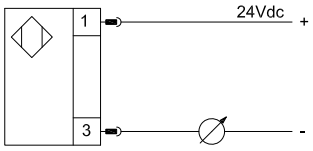
Wiring



M12 plug

Signal	Plug	Cable
U+	1	Brown
U-	3	Blue

2-wire



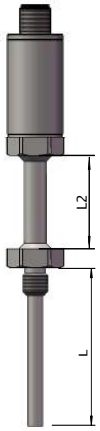
TEMPERATURE

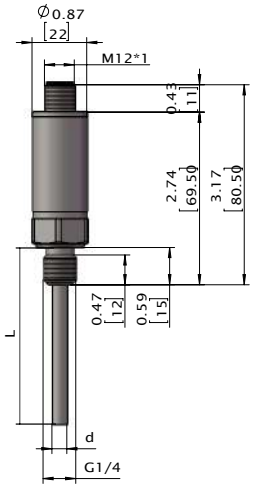
Dimensions in inches (mm)

Neck type with heat dissipation

Standard type

Probe with gooseneck tube for high temperature, apply to:C0-200℃

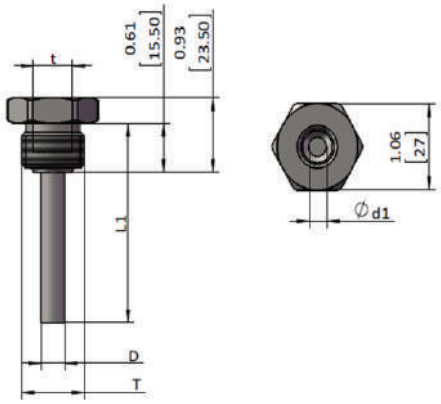




Upper Limit	L2	
	inch	mm
125℃	0	0
400℃	1.97	50
600℃	3.94	100

Note: Same size except cooling neck

Probe matching tube size



T	t	d	d1	D	L1
G1/2	G1/4	6	8	10	L-15

TEMPERATURE

Model Number

OrderNO.	Type	Rod Length mm	Temperature ℃
TA002,5	TA1000/-C-5-100/02/42G14MSM010D6	25	-50...100℃
TA005,0	TA1000/-C-50-100/02/42G14MSM035D6	50	
TA0010	TA1000/-C-50-100/02/42G14MSM085D6	100	
TA0015	TA1000/-C-50-100/02/42G14MSM135D6	150	
TA0025	TA1000/-C-50-100/02/42G14MSM235D6	250	
TA0035	TA1000/-C-50-100/02/42G14MSM335D6	350	
TA012,5	TA1000/-C-50-150/02/42G14MSM010D6	25	-50...150℃
TA015,0	TA1000/-C-50-150/02/42G14MSM035D6	50	
TA0110	TA1000/-C-50-150/02/42G14MSM085D6	100	
TA0115	TA1000/-C-50-150/02/42G14MSM135D6	150	
TA0125	TA1000/-C-50-150/02/42G14MSM235D6	250	
TA0135	TA1000/-C-50-150/02/42G14MSM335D6	350	
TA022,5	TA1000/-C-50-200/02/42G14MSM010D6	25	-50...200℃
TA025,0	TA1000/-C-50-200/02/42G14MSM035D6	50	
TA0210	TA1000/-C-50-200/02/42G14MSM085D6	100	
TA0215	TA1000/-C-50-200/02/42G14MSM135D6	150	
TA0225	TA1000/-C-50-200/02/42G14MSM235D6	250	
TA0235	TA1000/-C-50-200/02/42G14MSM335D6	350	
TA032,5	TA1000/-C0-100/02/42G14MSM010D6	25	0...100℃
TA035,0	TA1000/-C0-100/02/42G14MSM035D6	50	
TA0310	TA1000/-C0-100/02/42G14MSM085D6	100	
TA0315	TA1000/-C0-100/02/42G14MSM135D6	150	
TA0325	TA1000/-C0-100/02/42G14MSM235D6	250	
TA0335	TA1000/-C0-100/02/42G14MSM335D6	350	
TA042,5	TA1000/-C0-150/02/42G14MSM010D6	25	0...150℃
TA045,0	TA1000/-C0-150/02/42G14MSM035D6	50	
TA0410	TA1000/-C0-150/02/42G14MSM085D6	100	
TA0415	TA1000/-C0-150/02/42G14MSM135D6	150	
TA0425	TA1000/-C0-150/02/42G14MSM235D6	250	
TA0435	TA1000/-C0-150/02/42G14MSM335D6	350	
TA052,5	TA1000/-C0-200/02/42G14MSM010D6	25	0...200℃
TA055,0	TA1000/-C0-200/02/42G14MSM035D6	50	
TA0510	TA1000/-C0-200/02/42G14MSM085D6	100	
TA0515	TA1000/-C0-200/02/42G14MSM135D6	150	
TA0525	TA1000/-C0-200/02/42G14MSM235D6	250	
TA0535	TA1000/-C0-200/02/42G14MSM335D6	350	

Note: Other range, process connection, electrical connection can be customized

TA2000-General Temperature Transmitter

- Standard model
- Measuring range from -200℃ to 600℃,customized available
- 2-wire type 4... 20mA output
- 304 stainless steel wetted parts
- Metal housing

TA2000 series is a temperature transmitter with a wide measuring range. It uses PT1000 thermal resistance for temperature
The signal is processed by the rear processing circuit and converted into a standard industrial electrical signal output. All metal casing design allows The series of products can be used in a variety of industrial applications.

Specifications

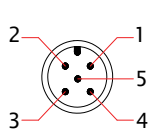
Power Supply	10...30Vdc
Current Consumption	
2-wire	Same as current output(4...20mA)
2-wire Current Output	
Output	2-wire 4...20mA
LoadRA(Ω)	RA(US-10)V/0.02A
Linearity	≤±0.5% of F.S.
Sensor	PT1000 classA
Accuracy	≤±0.2% of F.S.
Temperature	
Medium	-50...100℃/-50...150℃/-50...200℃
(Measuring Range)	0...100℃/0...150℃/0...200℃/-200...600℃
Ambient/Storage	-40...+85℃
Material	
Housing	304 stainless steel
Wetted Parts	304 stainless steel
Protection Class	IP67(M12×1plug)
Electrical Connection	M12×1plug
Process Connection	G1/4 external thread ED seal

Applications

- Iron and steel industry
- Circulating water/coolant
- Machinery manufacturing
- Oil/Gas industry
- Water treatment
- Glass industry

Wiring

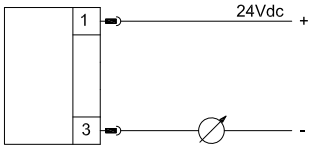
Wiring



M12 plug

Signal	Plug	Cable
U+	1	Brown
U-	3	Blue

2-wire



TEMPERATURE

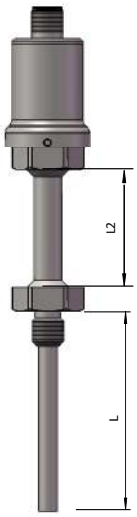
Dimensions in inches (mm)

Probe with gooseneck tube for high temperature, apply to: C-50-150℃
C-50-200℃
C 0-150℃
C 0-200℃
C-200-600℃

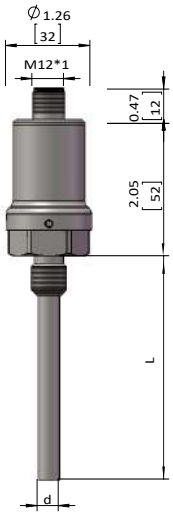
Upper Limit	L2	
	inch	mm
150℃	0	0
200℃	1.97	50
600℃	3.94	100

Note: Same size except cooling neck

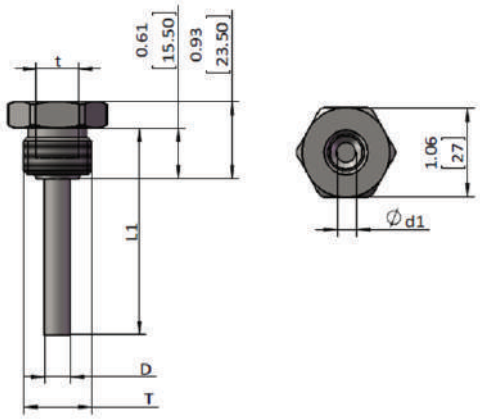
Neck type with heat dissipation



Standard type



Probe matching tube size



T	t	d	d1	D	L1
G1/2	G1/4	6	8	10	L-15

TEMPERATURE

Model Number

OrderNO.	Type	Rod Length mm	Temperature ℃
TB0002,5	TA2000/-C-50-100/02/42G14MSM010D6	25	-50...100℃
TB0005,0	TA2000/-C-50-100/02/42G14MSM035D6	50	
TB00010	TA2000/-C-50-100/02/42G14MSM085D6	100	
TB00015	TA2000/-C-50-100/02/42G14MSM135D6	150	
TB00025	TA2000/-C-50-100/02/42G14MSM235D6	250	
TB00035	TA2000/-C-50-100/02/42G14MSM335D6	350	
TB0012,5	TA2000/-C-50-150/02/42G14MSM010D6	25	-50...150℃
TB0015,0	TA2000/-C-50-150/02/42G14MSM035D6	50	
TB00110	TA2000/-C-50-150/02/42G14MSM085D6	100	
TB00115	TA2000/-C-50-150/02/42G14MSM135D6	150	
TB00125	TA2000/-C-50-150/02/42G14MSM235D6	250	
TB00135	TA2000/-C-50-150/02/42G14MSM335D6	350	
TB0022,5	TA2000/-C-50-200/02/42G14MSM010D6	25	-50...200℃
TB0025,0	TA2000/-C-50-200/02/42G14MSM035D6	50	
TB00210	TA2000/-C-50-200/02/42G14MSM085D6	100	
TB00215	TA2000/-C-50-200/02/42G14MSM135D6	150	
TB00225	TA2000/-C-50-200/02/42G14MSM235D6	250	
TB00235	TA2000/-C-50-200/02/42G14MSM335D6	350	
TB032,5	TA2000/-C0-100/02/42G14MSM010D6	25	0...100℃
TB035,0	TA2000/-C0-100/02/42G14MSM035D6	50	
TB0310	TA2000/-C0-100/02/42G14MSM085D6	100	
TB0315	TA2000/-C0-100/02/42G14MSM135D6	150	
TB00325	TA2000/-C0-100/02/42G14MSM235D6	250	
TB00335	TA2000/-C0-100/02/42G14MSM335D6	350	
TB0042,5	TA2000/-C0-150/02/42G14MSM010D6	25	0...150℃
TB0045,0	TA2000/-C0-150/02/42G14MSM035D6	50	
TB00410	TA2000/-C0-150/02/42G14MSM085D6	100	
TB00415	TA2000/-C0-150/02/42G14MSM135D6	150	
TB00425	TA2000/-C0-150/02/42G14MSM235D6	250	
TB00435	TA2000/-C0-150/02/42G14MSM335D6	350	
TB0052,5	TA2000/-C0-200/02/42G14MSM010D6	25	0...200℃
TB0055,0	TA2000/-C0-200/02/42G14MSM035D6	50	
TB00510	TA2000/-C0-200/02/42G14MSM085D6	100	
TB00515	TA2000/-C0-200/02/42G14MSM135D6	150	
TB00525	TA2000/-C0-200/02/42G14MSM235D6	250	
TB00535	TA2000/-C0-200/02/42G14MSM335D6	350	
TB0062,5	TA2000/-C-200-600/02/42G14MSM010D6	25	-200...600℃
TB0065,0	TA2000/-C-200-600/02/42G14MSM035D6	50	
TB00610	TA2000/-C-200-600/02/42G14MSM085D6	100	
TB00615	TA2000/-C-200-600/02/42G14MSM135D6	150	
TB00625	TA2000/-C-200-600/02/42G14MSM235D6	250	
TB00635	TA2000/-C-200-600/02/42G14MSM335D6	350	

Note: Other range, process connection, electrical connection can be customized

TAF - Sanitary Temperature Transmitter

RoHS

- **Economical product**
- **Measuring range -50C...200C**
- **Compact structure**
- **All stainless steel case**
- **Sanitary chuck connection**
- **Intrinsic safety is optional**

Describe

TAF Sanitary Type Temperature Transmitter for measuring -50... +200 ˚C [-58... +392 ˚F] (without cervical tube) and -50... +200 ˚C [-58.. +392 ˚F] (with neck tube) in liquid and gaseous media. They can be used at pressures up to 25 bar [363 psi] with protective tube diameter of 6 mm [0.24 in].
The device is designed and manufactured for use with chuck connections in the sanitary beverage and food industries. The TAF sanitary temperature transmitter consists of a protective tube with a chuck connection. It is designed to withstand impact and vibration, and all electrical components are protected against moisture (IP67). Vibration resistance conforms to IEC 60751 (20 g). The impact resistance of all versions complies with IEC 60751. Ensure that the mechanical load on the connector is kept to a minimum, especially if the ambient temperature rises or the vibration load is strong. Electrical connection M12x1 circular connector, mini solenoid valve optional.

Applications

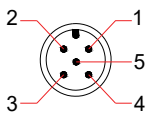
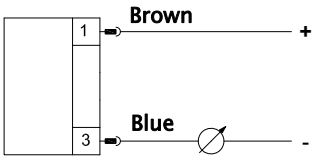
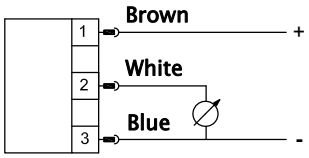
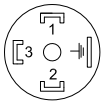
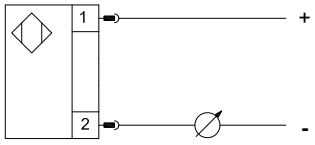
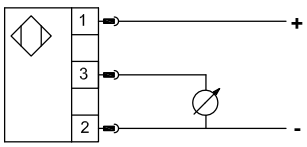
- Food industry
- Brewing industry
- Pharmaceutical industry

Specifications

Power Supply	12…30Vdc
No load current consumption	≤4mA@24Vdc
Current Analog Output	
Output	2-wire 4...20mA
Load RA (Ω)	*RA ≤ (U+ - 10 V) / 0.02 A
Current Analog Output	
Output	3-wire 0...20mA, 4...20mA
Load RA (Ω)	*RA ≤ (U+ - 3V) / 0.02 A
Voltage Analog Output	
Output	3-wire 0.5...4.5V, 0...5V, 1...5V, 0...10V
Load RA (Ω)	RA＞10KΩ
Wiring Protection	Reverse polarity,overvoltage and short-circuit
Accuracy	≤±0.5% of F.S. ±0.25% of F.S.optional
Stability (Drift/Year)	≤±0.1% of F.S.
Temperature	
Medium	-50...+200℃
Ambient	-20...+85℃
Material	
Housing	304 stainless steel
Wetted Parts	316 stainless steel
Protection Class	IP67
Process Connection	50.5mm chuck
Electrical Connection	M12×1plug, Solenoid valves

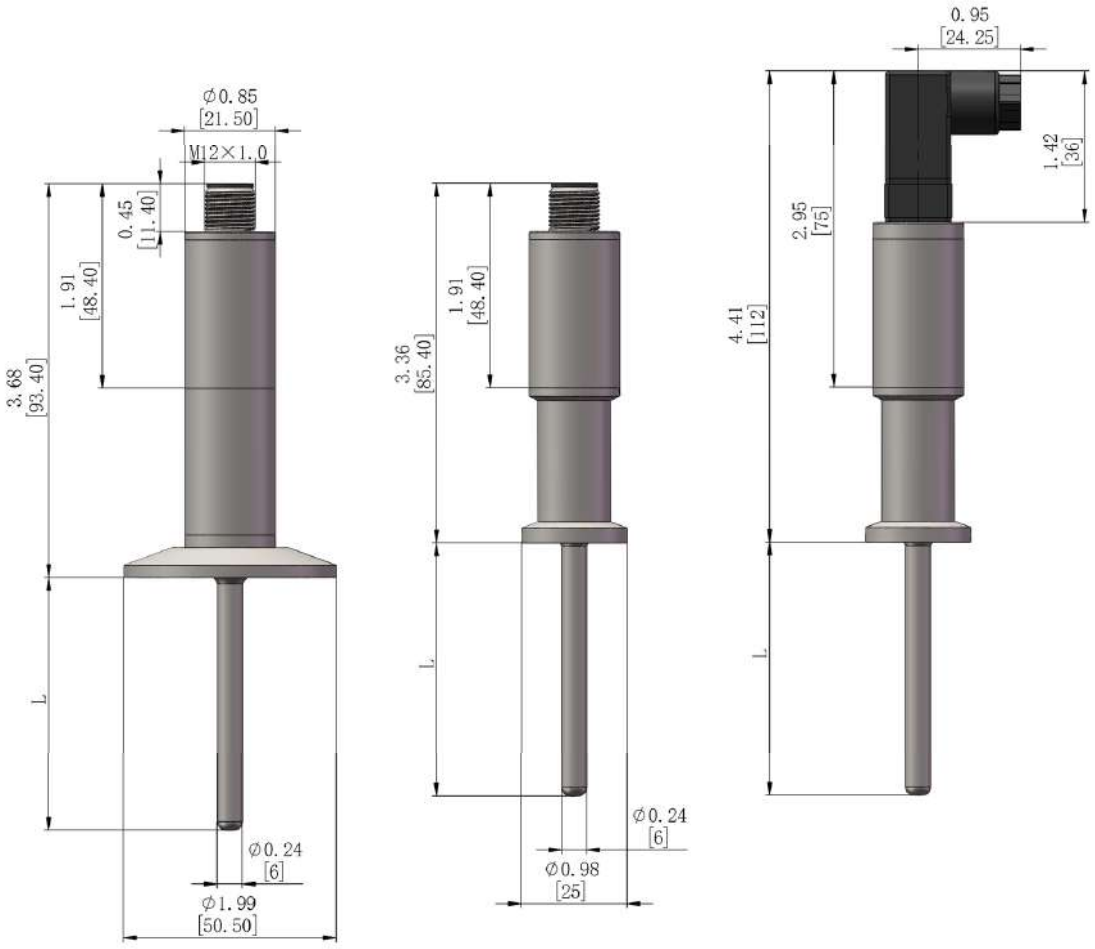
*U+ : Power supply +

Wring

Wring	2-wire 4...20mA Output	3-wire 0...20mA, 4...20mA, 0.5...4.5V, 0...5V, 1...5V, 0...10V Output
 M 12x1 Plug		
 Solenoid plug		

TEMPERATURE

Inches (mm)



Model Number

OrderNO.	Output type	Process connection	Temperature ℃	Rod Length (cm)
TAF	X	X	X	XX
	0 : M12 2-wire 4-20mA	0 : 25.4 chuck	0 : -50-100	Rod Length
	1 : M12 3-wire 4-20mA	1 : 50.5 chuck	1 : -50-150	
	2 : M12 0-5V	2 : Sanitary thread	2 : -50- 200	
	3 : M12 1-5V		3 : 0- 100	
	4 : M12 0-10V		4 : 0- 150	
	5 : Solenoid valves 2-wire 4-20mA		5 : 0- 200	
	6 : Solenoid valves 3-wire 4-20mA		6 : -10- 150	
	7 : Solenoid valves 0-5V			
	8 : Solenoid valves 1-5V			
	9 : Solenoid valves 0-10V			

TN3000-Temperature Sensor With LED Digital Dislpay

- **Smart product**
- **4-digit LED display**
- **All-metal housing**
- **PNP/NPN programmable**
- **Rotatable indicator**

TN3000 measures the temperature with a high-accuracy sensor and output signal is processed to standard electricai signal for outputing and dispiaying.

All-metal housing; rotatable highlight LED display; dual keys design and friendly menu; multiple process connections selectable: 3 30˚ rotatable indicator.

Specifications

Measuring Range	
TN3000	-50...125℃
Power Supply	12...30Vdc
Current Consumption	≤30mA (power supply 24Vdc, no-load)
Switching Output	
Output	Push-pull (compatible with PNP/NPN);NC/NO configurable
S1, S2 Output Current	<500mA
Response Time	<10ms
Voltage Drop	<1V
Accuracy	≤±0.5% of F.S.
Current Analog Output	
Output	3-wire 4...20mA
Load RA	RA≤0.5KΩ
Linearity	≤±0.5% of F.S.
Voltage Analog Output	
Output	3-wire 0...5V
Load RA	RA>10KΩ
Linearity	≤±0.5% of F.S.
Wiring Protection	Reverse polarity,overvoltage and short-circuit
Display	
Design	8mm height, red 4-digit LED
Display Range	-1999...9999
Accuracy	≤±0.5% of F.S.
Stability (Drift/Year)	≤±0.3% of F.S.
Temperature	
Medium	-50...125℃
Ambient	-40...85℃
Storage	-40...100℃
Probe Pressure Rating	200bar
Material	
Dislpay Head	Zinc Alloy
Housing	304 stainless steel
Wetted Parts	316 stainless steel
Protection Class	IP67
Electrical Connection	M12×1plug
Process Connection	G1/4 external thread ED seal

Applications

- Hydraulics and pneumatics
- Circulating water/cooling liquids
- Machinery manufacturing
- Oil/Gas industry
- Water treatment

Set Panel

1 - LOGO
2 - 8 state lights
3 - 4-digit LED display window
4 - Keys

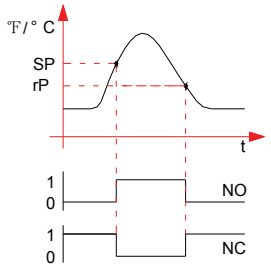
S + E	Press and hold 2 seconds to enter setting mode/verification
S	Shift down the menu/change values
E	Shift up the menu/change the setting bit

Functional Specifications

Hysteresis Mode

The hysteresis keeps the switching output stable if temperature fluctuates around the setpoint. Output switches when rising temperature reaches set point (SP1); As temperature falls, the output switches back only if the reset point (rP1) is reached.

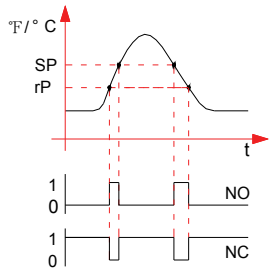
Hysteresis Mode



Window Mode

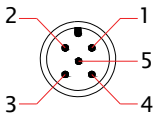
The window function allows the monitoring of a defined range. If the temperature is between set point (SP1) and reset point (rP1),the output is activated (NO), otherwise it is deactivated(NC).

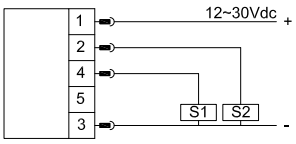
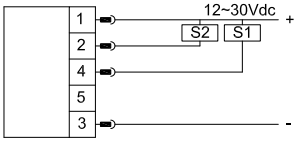
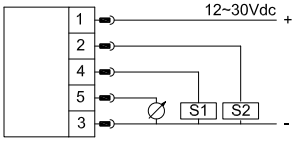
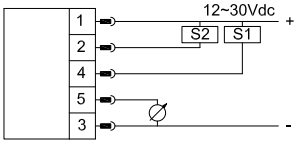
Window Mode



Wiring

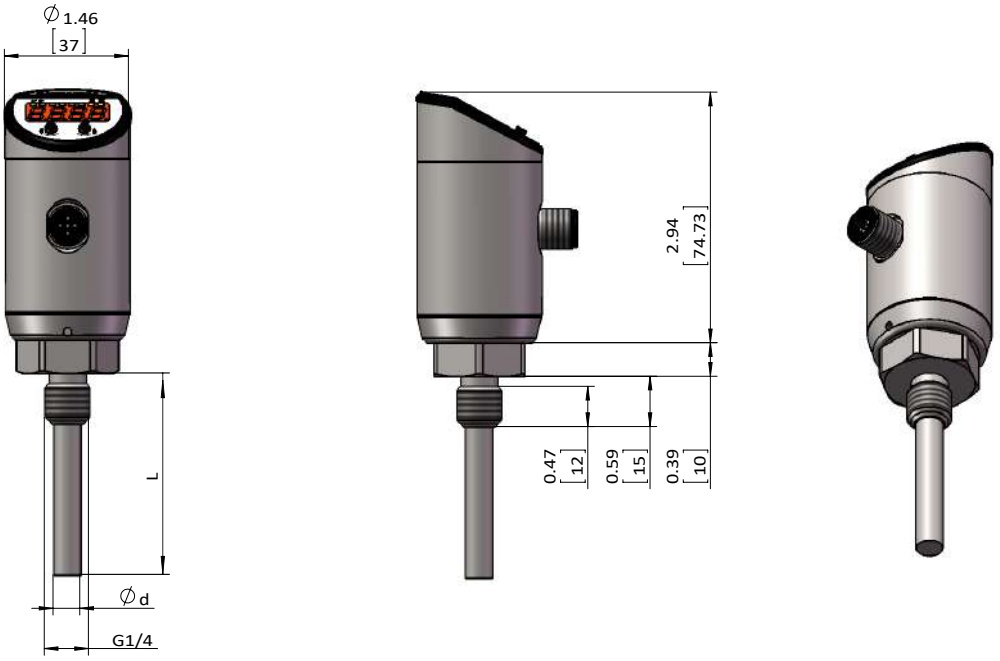
Signal	Plug	Cable
U+	1	Brown
U-	3	Blue
Switching output 1	4	Black
Switching output 2	2	White
Analog output (Currentor Voltage)	5	Gray



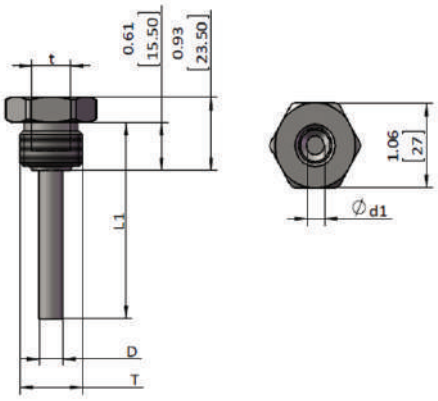
PNP output	NPN output
2x PNP 	2x NPN 
2x PNP + analog output 	2x NPN + analog output 

TEMPERATURE

Dimensions in Inches (mm)



Probe matching tube size



T	t	d	d1	D	L1
G1/2	G1/4	8	9	12	L-15

Model Number

OrderNO.	Type	Rod Length mm	Temperature ℃	Output type mA/V
TN002,5	TN3000/21G14MSM010D8	25	Standard form -50...125℃	2 switch output Current Output 3-wire（4...20mA)
TN005,0	TN3000/21G14MSM035D8	50		
TN0010	TN3000/21G14MSM085D8	100		
TN0015	TN3000/21G14MSM135D8	150		
TN0025	TN3000/21G14MSM235D8	250		
TN0035	TN3000/21G14MSM335D8	350		
TN012,5	TN3000/22G14MSM010D8	25		2 switch output Voltage Output 3-wire（0...5V)
TN015,0	TN3000/22G14MSM035D8	50		
TN0110	TN3000/22G14MSM085D8	100		
TN0115	TN3000/22G14MSM135D8	150		
TN0125	TN3000/22G14MSM235D8	250		
TN0135	TN3000/22G14MSM335D8	350		

Note: Other range, process connection, electrical connection can be customized

TNS3000 - Separate Temperature Sensor with LED Digital Dislpay

- **Probe and display unit designed separately**
- **Smart product**
- **4-digit LED display**
- **All-metal housing**
- **PNP/NPN programmable**
- **4..20mA programmable**
- **Rotatable indicator**

TNS3000, designed with separate probe and display unit, measures the temperature with a high-accuracy sensor and output signal is processed to standard electrical signal for outputing and displaying.

All-metal housing; rotatable highlight LED display; dual keys design and friendly menu; multiple process connections; 330° rotatable indicator.

Specifications

Measuring Range	
TNS3000	-50...125℃
Power Supply	12...30Vdc
Current Consumption	≤30mA (power supply 24Vdc, no-load)
Switching Output	
Output	Push-pull (compatible with PNP/NPN);NC/NO configurable
S1, S2 Output Current	<500mA
Response Time	<10ms
Voltage Drop	<1V
Accuracy	≤±0.5% of F.S.
Current Analog Output	
Output	3-wire 4...20mA
Load RA	RA≤0.5KΩ
Linearity	≤±0.5% of F.S.
Voltage Analog Output	
Output	3-wire 0...5V
Load RA	RA>10KΩ
Linearity	≤±0.5% of F.S.
Wiring Protection	Reverse polarity,overvoltage and short-circuit
Display	
Design	8mm height, red 4-digit LED
Display Range	-1999...9999
Accuracy	≤±0.5% of F.S.
Stability (Drift/Year)	≤±0.3% of F.S.
Temperature	
Medium	-50...125℃
Ambient	-40...85℃
Probe Pressure Rating	200bar
Material	
Dislpay Head	Zinc Alloy
Housing	304 stainless steel
Wetted Parts	316 stainless steel
Protection Class	IP67
Electrical Connection	M12×1plug
Process Connection	G1/4 external thread ED seal

Applications

- Equipment manufacturing
- Hydraulics and pneumatics
- Pumps and compressors
- Machinery manufacturing

Set Panel

1 - LOGO
2 - 8 state lights
3 - 4-digit LED display window
4 - Keys

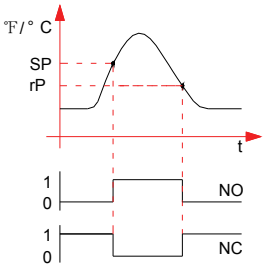
S + E	Press and hold for 2 seconds to enter setting mode/verification
S	Shift down the menu/change values
E	Shift up the menu/change the setting bit

Functional Specifications

Hysteresis Mode

The hysteresis keeps the switching output stable if temperature fluctuates around the setpoint. Output switches when rising temperature reaches set point (SP1); As temperature falls, the output switches back only if the reset point (rP1) is reached.

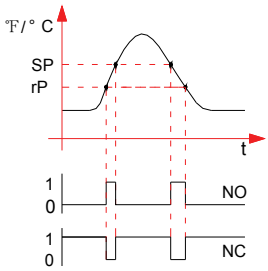
Hysteresis Mode



Window Mode

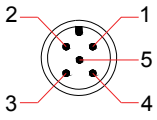
The window function allows the monitoring of a defined range. If the temperature is between set point (SP1) and reset point (rP1),the output is activated (NO), otherwise it is deactivated(NC).

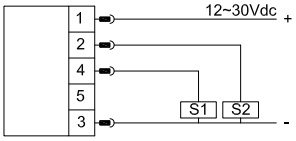
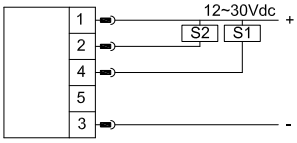
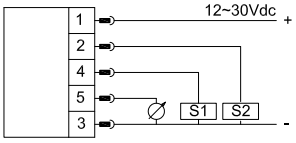
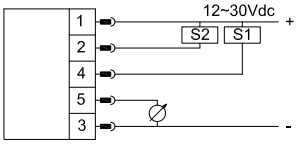
Window Mode



Display Unit Wiring

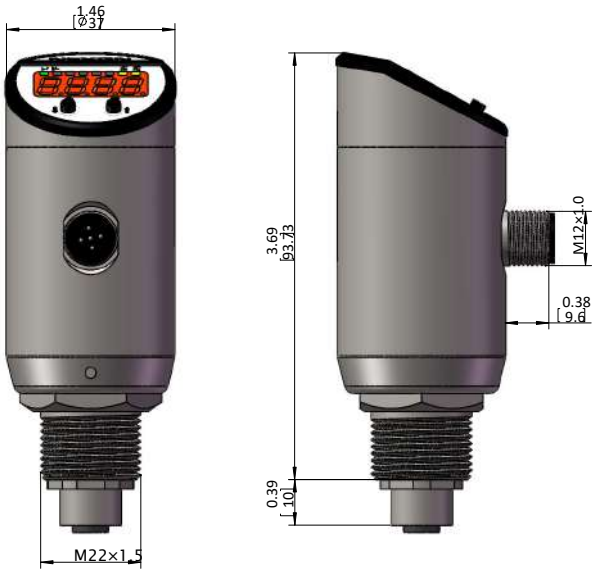
Signal	Plug	Cable
U+	1	Brown
U-	3	Blue
Switching output 1	4	Black
Switching output 2	2	White
Analog output (Currentor Voltage)	5	Gray



PNP output	NPN output
2x PNP 	2x NPN 
2x PNP + analog output 	2x NPN + analog output 

TEMPERATURE

Dimensions in Inches (mm)

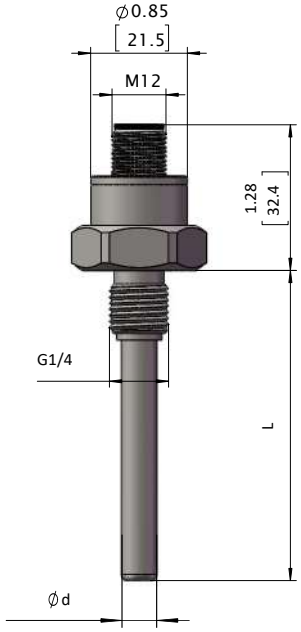


Model Number for Display Unit

OrderNO.	Type	Temperature ℃	Probe series	Output type mA/V
TNS1000	TNS3000/DH21S	-50...125℃	TT1000	2 switch output Current Output 3-wire (4...20mA)
TNS1100	TNS3000/DH22S			2 switch output Voltage Output 3-wire (0...5V)

Probe assembly

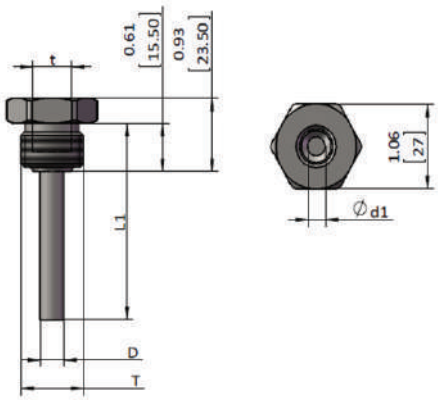
TT1000 type



TEMPERATURE

Dimensions in Inches (mm)

Probe matching tube size



T	t	d	d1	D	L1
G1/2	G1/4	8	9	12	L-15

Model Number for Temperature Probe

OrderNO.	Type	Rod Length mm
TT002,5	TNS3000/SNG14M010	25
TT005,0	TNS3000/SNG14M035	50
TT0010	TNS3000/SNG14M085	100
TT0015	TNS3000/SNG14M135	150
TT0025	TNS3000/SNG14M235	250
TT0035	TNS3000/SNG14M335	350

Note: Other range, process connection, electrical connection can be customized

Model Number for Connecting Cable

OrderNO.	Type	Cable length L m
CD05FGRPV02S	2 m 5 pin 5 core hole double straight shielded cable	2
CD05FGRPV05S	2 m 5 pin 5 core hole double straight shielded cable	50
CD05FGRPV10S	2 m 5 pin 5 core hole double straight shielded cable	100

Liquid level series

Level Sensors for Fluid Measuring Technology

LA2000 - Float Level Transmitter

- **Economical liquid level transmitter**
- **No impact on measuring from container inner pressure**
- **Multiple outputs selectable**
- **Easy to use, applicable to various medium**
- **Stainless steel wetted parts**
- **Measuring range up to 2m**

The principle of LA2000 is that under the action of liquid buoyancy, the floating ball with magnetic steel moves up and down along the guide rod, and the magnetic switch in the guide rod is continuously triggered. The magnetic switch controls the number of resistance on or off, and the liquid level change is converted into resistance change. The resistance value is converted into standard electrical signal output and displayed after processing by the back circuit.

The all-metal housing design enables the series to be used in a variety of industrial applications. A variety of connection methods can fully meet a variety of specific installation requirements.

Specifications

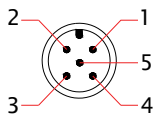
Measuring Range	250mm/ 500mm/ 750mm
(Rod length)	1000mm/1500mm/2000mm
Applicable Medium	Corrosive liquids compatible with 304(316/PTFE) stainless steel
Resolution	For details please see 'technical data
Pressure Rating	20bar
Medium Density	≥0.7g/cm^3
Power Supply	10...36Vdc
Current Consumption	
2-wire	Same as current output (4...20mA)
3-wire	≤22mA
2-wire Current Analog Output	
Output	2-wire 4...20mA
Load RA (Ω)	RA (Us-10)V/0.02A
Linearity	≤±1.5% of F.S.
3-wire Voltage Analog Output	
Output	3-wire 0...5V
Load RA (Ω)	RA≥5
Linearity	≤±1.5% of F.S.
Wiring Protection	Reverse polarity
Temperature	
Medium	-40...85℃
Ambient	-40...85℃
Storage	-40...85℃
Material	
Housing	304 stainless steel
Process Connection	304 stainless steel
Float and Rod	304 stainless steel
Protection Class	IP67
Electrical Connection	M12×1plug
Process Connection	G2 external thread

Applications

- Food/pharmaceutical industry
- Power plant
- Petrochemical
- Water treatment
- Boiler
- Papermaking

Wiring

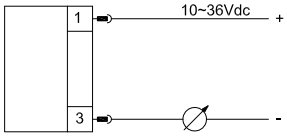
Wiring



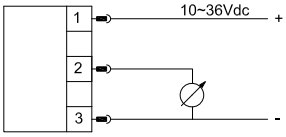
M12 plug

Signal	Plug	Cable
U+	1	Brown
(Signal)	2	White
U-	3	Blue

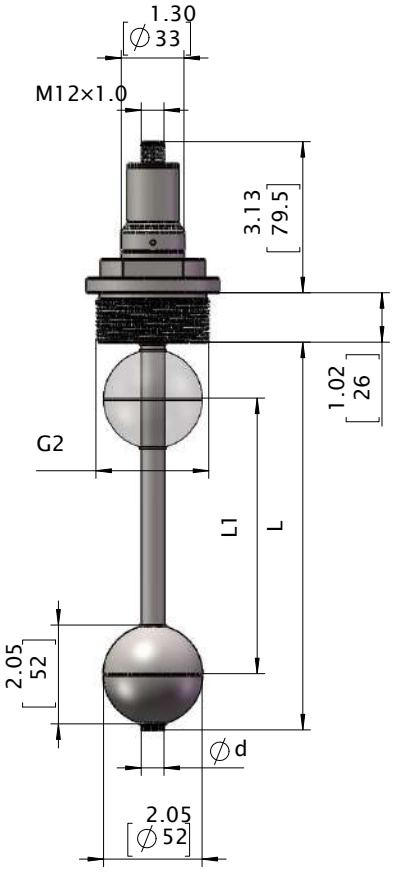
2-wire



3-wire



Dimensions in inches (mm)



Model Number

OrderNO.	Type	Rod Length mm	Effective Length mm	Resolution mm	Output type mA/V
LA0025	LA2000/24GSM250C	250mm	190	8	Current analog output 2-wire 4...20mA
LA0050	LA2000/24GSM500C	500mm	440	8	
LA0075	LA2000/24GSM750C	750mm	690	8	
LA0100	LA2000/24GSM1000C	1000mm	940	15	
LA0150	LA2000/24GSM1500C	1500mm	1440	15	
LA0200	LA2000/24GSM2000C	2000mm	1940	15	
LA1025	LA2000/30GSM250C	250mm	190	8	Voltage analog output 3-wire0...5V
LA1050	LA2000/30GSM500C	500mm	440	8	
LA1075	LA2000/30GSM750C	750mm	690	8	
LA1100	LA2000/30GSM1000C	1000mm	940	15	
LA1150	LA2000/30GSM1500C	1500mm	1440	15	
LA1200	LA2000/30GSM2000C	2000mm	1940	15	

LC2000-Capacitive Level Meter

- **Optional intrinsically safe model**
- **Sanitary clamp connection**
- **High pressure resistant**
- **High/low temperature resistant**
- **Applicable to various media**
- **Field calibration available，No moving parts**

LC2000 consists of electronic module and measuring electrode which is determined by type of medium and applications. It can be used to measure the limit level of the fluids, powder or bulk solid materials in tanks, vessels, etc.

Specifications

Measuring Range (Rod length L)	5...300cm
Applicable Medium	Conductive liquid, non-conductive liquid, bulk solid, powder
Current Consumption	
Current Output	Signal current
Voltage Output	About 8mA
Power Supply	
Current Output	9...36Vdc
Voltage Output	16...36Vdc
Current Analog Output	
Output	2-wire 4...20mA
Load RA (Ω)	R_{max}=750Ω
Voltage Analog Output	
Output	3-wire 0...10V
Load RA (Ω)	R>1KΩ
Sensitivity Ranges(PF)	20;30;50;100;150;300;500;1000
Initial Capacity Regulation Ratio	Min 1:2
Linearity	Max 1%
Temperature Error	Max 0.05%/K
Voltage Error	
Current Output	Max 0.3uA/V
Voltage Output	Max 0.1mV/V
Material	
Housing	304 stainless steel
Guide rod	304 stainless steel
Guide rod coated	FEP
Insulating Bushing	FEP
Protection Class	IP65（M12 plug）/IP67(housing)
Electrical Connection	M12 plug
Explosion Proof Parameters	
Grade	Ex la IIB T5
MAX Internal value	Ui=30V DC;Ii=132mA;Pi=0.99W;Ci=370nF;Li=0.9mH
Power Supply	9...30Vdc
Temperature Range	-20...60℃
Pressure Range	0.08...0.11MPa
Process Connection	G3/4 external thread, 50.5 sanitary chuck

Applications

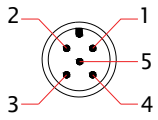
- Level measuring
- Material level measuring
- Petrochemicals, energy
- Water treatment
- Hydraulic/lubrication system

Temperature and Pressure Durability

Medium Temperature ℃	Ambient Temperature ℃	Temperature at Process Connection Spot	Max. Operating Pressure for Process Connection Spot	
			30℃	85℃
-40...300	-40...85(Xi:70℃)	-40...85(Xi:75℃)	7MPa	5MPa
-40...200			4MPa	2MPa
-40...130			1MPa	0.5MPa

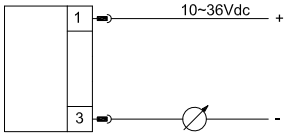
Wiring

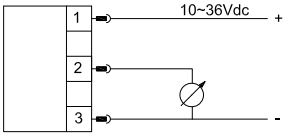
Wiring	2-wire Output type	3-wire Output type



M12 plug

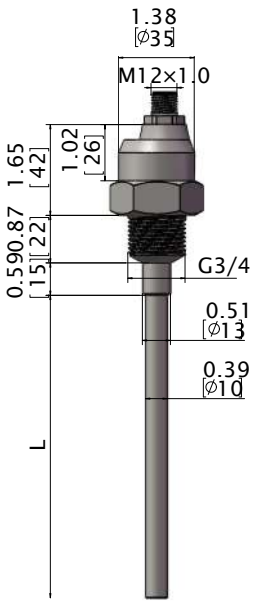
Signal	Plug	Cable
U+	1	Brown
U-	2	White
Signal port	3	Blue



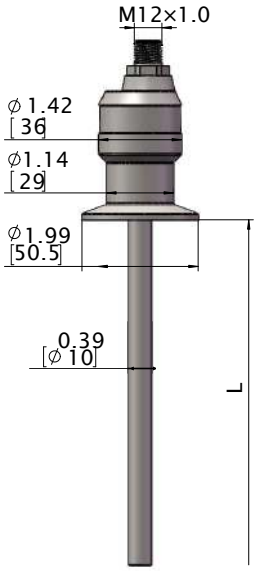


Dimensions in inches (mm)

Standard type



50.5 Sanitary chuck type



Model Number

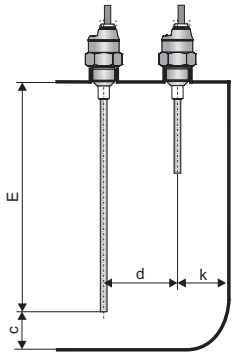
OrderNO.	Type	Rod Length cm	Process Connection	Output type mA /V
LC00XXX	LC2000/2GISM(XXX)304N	XXX (5…300)	G3/4	2-wire 4…20mA/Current Output
LC10XXX	LC2000/2GUSM(XXX)304N			3-wire 0…10V、Voltage Output
LC20XXX	LC2000/2GISM(XXX)304Xi			2-wire 4…20mA/Current Output(Explosion Proof)
LC01XXX	LC2000/2GISM(XXX)304N	XXX (5…300)	50.5 Sanitary chuck	2-wire 4…20mA/Current Output
LC11XXX	LC2000/2GUSM(XXX)304N			3-wire 0…10V、Voltage Output
LC21XXX	LC2000/2GISM(XXX)304Xi			2-wire 4…20mA/Current Output(Explosion Proof)
LC00XXXT	LC2000/2GISM(XXX)304NT	XXX (5…300)	G3/4	2-wire 4…20mA/Current Output
LC10XXXT	LC2000/2GUSM(XXX)304NT			3-wire 0…10V、Voltage Output
LC20XXXT	LC2000/2GISM(XXX)304XiT			2-wire 4…20mA/Current Output(Explosion Proof)
LC01XXXT	LC2000/2GISM(XXX)304NT	XXX (5…300)	50.5 Sanitary chuck	2-wire 4…20mA/Current Output
LC11XXXT	LC2000/2GUSM(XXX)304NT			3-wire 0…10V、Voltage Output
LC21XXXT	LC2000/2GISM(XXX)304XiT			2-wire 4…20mA/Current Output(Explosion Proof)

Note: When selecting, XXX is replaced by rod length (unit: cm); T is for high temperature type

Dimensions in inches (mm)

- The level sensor may be attached to the wall of a container, tank or fixture in a vertical, horizontal or inclined position. Install the console inside the oil pan by screwing in a welded flange and attaching using a retaining nut or TriClamp® process.

- In the case of vertical mounting, the sensor can be installed in open, closed and pressurized tanks. The distance is related to the electrode length (longer electrode).



Vertical package

All vertically mounted sensors

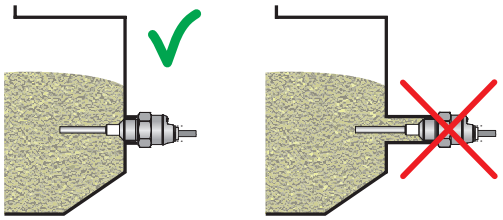
$$c \geq 10 + \frac{E}{50}$$

$$d \geq 40 + \frac{E}{40}$$

$$k \geq 20 + \frac{E}{20}$$

E–Rod length

- In the case of sidewall installation, it is necessary to avoid long fittings where induction media may accumulate (Figure right). We recommend installing the sensor with the entire sensor electrode and insulation inside the tank (figure left).



Correct and incorrect long tube installation

LEVEL

CS1000 - Capacitive Level Switch

- **Structural diversity**
- **Pressure resistance up to 60bar**
- **Applicable to the conductive/non-conductive/corrosive fluids**
- **Optional ex-proof**
- **Optional high temperature model**

CS1000 is designed to measure the limit level of the non-conductive fluids, non-corrosive conductive liquids and moderately corrosive conductive liquids in tanks, vessels, pipes, etc.

Specifications

Electrode Length	Standard type 3cm、Extended type 5—100cm
Power Supply	6...30Vdc,8...9Vdc(ex-proof model)
Pulse Output	
Supply Current	Max. 0.6/7mA(off/on state)
Conversion Current	100mA
Remanent Voltage(On State)	1.8V
Switching Output	
Supply Current	Max. 0.6/7mA(off/on state)
Conversion Current	3.3mA/40mA(Min./Max.)
Remanent Voltage(On State)	6.0V
Output Time Delay	0.1s
Cable	PVC2x0.34mm^2, PVC 3x0.34mm^2(for pulse output)
Temperature	For details, see'Temperature and Pressure Durability
Material	
Housing	PP(Polypropylene)
Process Connection	303 stainless steel
Rod	303 stainless steel
Coated	FEP
Protection Class	IP65
Ex-proof Parameters	
Current Supply	≤1mA/≥2.2mA(state off/on)
Coupling Capacity	44nF
Electric Strength	250Vac
Cable LC Parameters	Typical C＜150pF/m; L＜0.8μH/m
Electrical Connection	M12×1 plug
Process Connection	G external thread

Applications

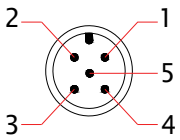
- Petrochemical industry
- Energy industry
- Equipment manufacture
- Water treatment
- Hydraulic/lubrication system

Temperature and Pressure Durability

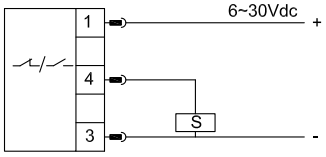
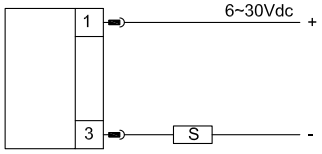
Medium Temperature	Ambient Temperature	Tem perature of Process Connection Spot	Max. Operating Pressure for Process Connectioin Spot		
			30℃	85℃	105℃
-25℃ ... 105℃	-20℃ ... 80℃	-25℃ ... 105℃	8MPa	6MPa	5MPa
-10℃ ... 105℃	-10℃ ... 80℃	-10℃ ... 105℃	7MPa	5MPa	4MPa
-25℃ ... 105℃	-20℃ ... 80℃	-25℃ ... 105℃	8MPa	6MPa	5MPa

Wiring

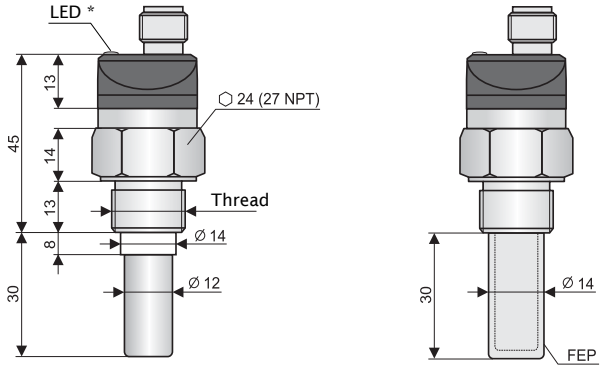
Signal	Plug	Cable
U+	1	Brown
U-	3	Blue
Switching output S1	4	Black
Switching output S2	2	White



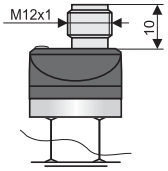
M12x1

PNP output	2-wire output
PNP 	NAMUR 

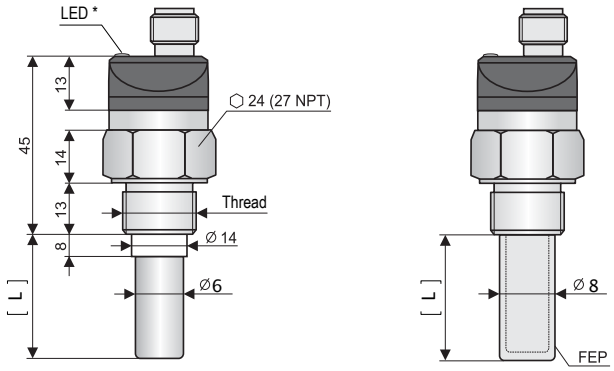
Dimensions in inches (mm)



Standard type



M12×1 Plug



Extended type

LEVEL

Model Number

OrderNO.	Type	Probe rod type 12/21/T	Active length cm	Process connection	Output type mA /V
CS0003	CS1000-3G12PSFN12/03	12 Standard type Ø14mm	3	G1/2	2-wire PNP/NPN Output
CS0103	CS1000-3G12RSFXi12/03				2-wire NAMUR Output (Intrinsically safe Ex-proof)
CS0003T	CS1000-3G12RSFN12T/03	12T Standard high temperature type Ø14mm	3		2-wire PNP/NPN Output
CS0103T	CS1000-3G12RSFXi12T/03				2-wire NAMUR Output (Intrinsically safe Ex-proof)
CS00XX	CS1000-3G12RSFN21/XX	21Extended type Ø8mm	XX (XX=5…100)		2-wire PNP/NPN Output
CS01XX	CS1000-3G12RSFXi21/XX				2-wire NAMUR Output (Intrinsically safe Ex-proof)
CS00XXT	CS1000-3G12RSFN21T/XX	21T Extended high-temperature type Ø8mm	XX (XX=5…100)		2-wire PNP/NPN Output
CS01XXT	CS1000-3G12RSFXi21T/XX				2-wire NAMUR Output (Intrinsically safe Ex-proof)

Note: When choosing elongated type, XX is replaced by rod length (unit: cm); 12 standard type, 21 elongated type, T high temperature type (XX=100cm XX=A0)

LN3000- Float Level Sensor With Digital Display

- 4 digit LED digital display
- All-metal housing
- PNP/NPN programmable
- 3-wire 4..20mA；3-wire 0...5V programmable
- Rotatable indicator
- Stainless steel wetted parts

With liquid level fluctuation, a magnetic float triggers the switch inside tube , which changes the number of connected resistors. This changing of resistance is converted to standard electrical signal output. Ali-metal housing with highlight LED display, dual-keydesign, user friendly menu, multiple process connections, 330° rotatable indicator.

Specifications

Measuring Range (Rod length L)	250mm/ 500mm/ 750mm/ 1000mm/1250mm/1500mm/2000mm
Applicable Medium	Corrosive liquids compatible with 304 stainless steel
Pressure Rating	20bar
Medium Density	≥0.7g/cm^3
Power Supply	12...30Vdc
Current Consumption	≤30mA (power supply 24Vdc, no-load)
Switching Output	
Output	Push-pull(compatible with PNP/NPN);NC/NO configurable
S1,S2 Output Current	<500mA
Voltage Drop	<1V
Current Analog Output	
Output	3-wire 4...20mA
Load RA (Ω)	RA≤500Ω
Voltage Analog Output	
Output	3-wire 0...5V
Load RA (Ω)	RA>10KΩ
Linearity	≤±1.5% of F.S.
Wiring Protection	Reverse polarity, overvoltage and short-circuit
Display	
Design	Red 4-bit 8mm high brightness 7-segment digital LED
Display Range	-1999...9999
Temperature	
Operating/Medium	-20...85℃
Storage	-20...+100℃
Material	
Dislpay Head	Zinc alloy
Housing	304 stainless steel
Process Connection Tube/Float	304 stainless steel
Protection Class	IP67
Electrical Connection	M12×1plug
Process Connection	G2 external thread

Applications

- Petrochemical
- Food/pharmaceutical industry
- Power plant
- Water treatment
- Boiler
- Papermaking

Set Panel

1 - LOGO
2 - 8 state lights
3 - 4-digit LED display window
4 - Keys

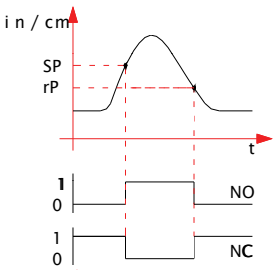
S + E	Press and hold 2 seconds to entersetting mode/verification
S	Shift down the menu/change values
E	Shift up the menu/change the setting bit

Functional specifications

Hysteresis Mode

The hysteresis keeps the switching output stable if the measuredvalue fluctuates around the setpoint. Output switches when rising measured value reaches set point (SP1); As measured value falls,the output switches back only if the reset point (rP1) is reached.

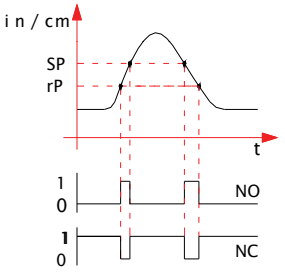
Hysteresis Mode



Window Mode

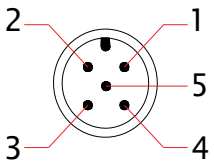
The window function allows the monitoring of a defined range. If the measured value is between set point (SP1) and reset point (rP1),the output is activated (NO), otherwise it is deactivated (NC)

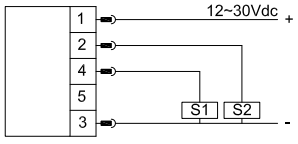
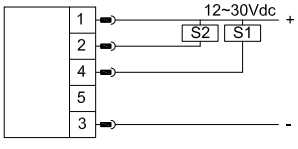
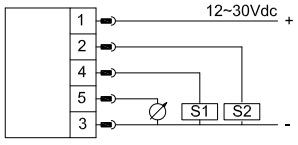
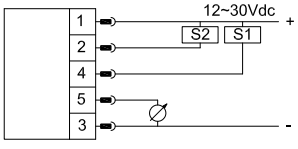
Window Mode



Wiring

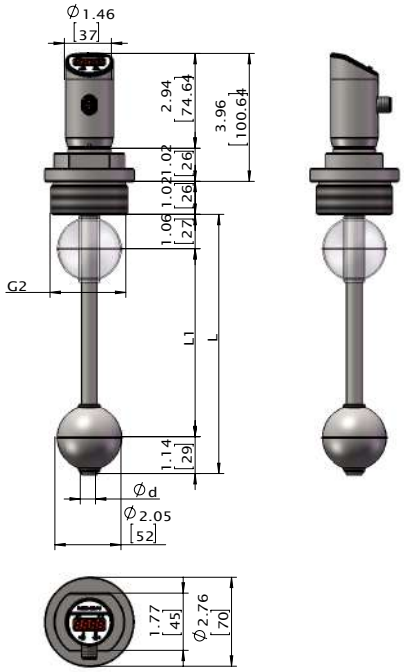
Signal	Plug	Cable
U+	1	Brown
U-	3	Blue
Switching output S1	4	Black
Switching output S2	2	White
Analog output(Current or Voltage)	5	Gray



PNP output	NPN output
2x PNP 	2x NPN 
2x PNP + analog output 	2x NPN + analog output 

LEVEL

Dimensions in inches (mm)



Model Number

OrderNO.	Type	Rod Length mm	Effective Length mm	Resolution mm	Output type mA/V
LN0025	LN3000/21GSM250C	250	190	8	2 switch output Current Output 3-wire（4...20mA)
LN0050	LN3000/21GSM500C	500	440	8	
LN0075	LN3000/21GSM750C	750	690	8	
LN0100	LN3000/21GSM1000C	1000	940	15	
LN0125	LN3000/21GSM1250C	1250	1190	15	
LN0150	LN3000/21GSM1500C	1500	1440	15	
LN0200	LN3000/21GSM2000C	2000	1940	15	
LN1025	LN3000/22GSM250C	250	190	8	2 switch output Voltage Output 3-wire（0...5V)
LN1050	LN3000/22GSM500C	500	440	8	
LN1075	LN3000/22GSM750C	750	690	8	
LN1100	LN3000/22GSM1000C	1000	940	15	
LN1125	LN3000/22GSM1250C	1250	1190	15	
LN1150	LN3000/22GSM1500C	1500	1440	15	
LN1200	LN3000/22GSM2000C	2000	1940	15	

LF1000 -Vibrating Fork Level Switch

- No moving parts
- Measuring unaffected by medium density or electrical parameters
- Stainless steel wetted parts
- Relay output
- NC / NO programmable
- Applicable to the liquid or solid

The LF1000 is based on the principle of a tuning fork. A piezo-electric crystal oscillates the forks at their natural frequency. The frequency of the vibrating fork sensor changes depending on the medium in which it is immersed, this change is monitored and converted to standard electrical signals. Operating is unaffected by medium conductivity, turbulence, stirring, bubbles and vibrating. No moving parts enables it to be used in most tough applications.

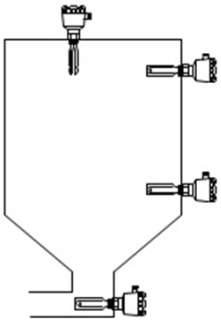
Specifications

Applicable Medium	Liquid or bulk-solid
Medium Density	≥0.6g/cm^3
Pressure Rating	20bar
Adjustable Delay	1…20s(only for rugged model)
Response Time	1s
Power Supply	
DC powered type	24±10%Vdc
Power Consumption	≤1W
Switching Output	
Output	Relay (NC/NOprogrammable)
Load	AC220V（110V）/3A, DC 30V/3A
Wiring Protection	Reverse polarity
Temperature	
Operating	-20…85℃
Medium	-20…85℃
Material	
Compact Housing	304 stainless steel
Fork	316 stainless steel
Protection Class	IP65
Electrical Connection	
Compact Housing	Solenoid plug
Process Connection	G external thread

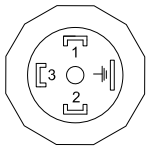
Applications

- Hydraulic/Lubrication system
- Pump protection
- Cooling system
- Paper making
- Water treatment
- Food/beverage industry

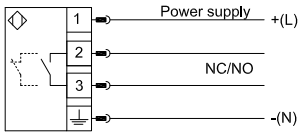
Installation



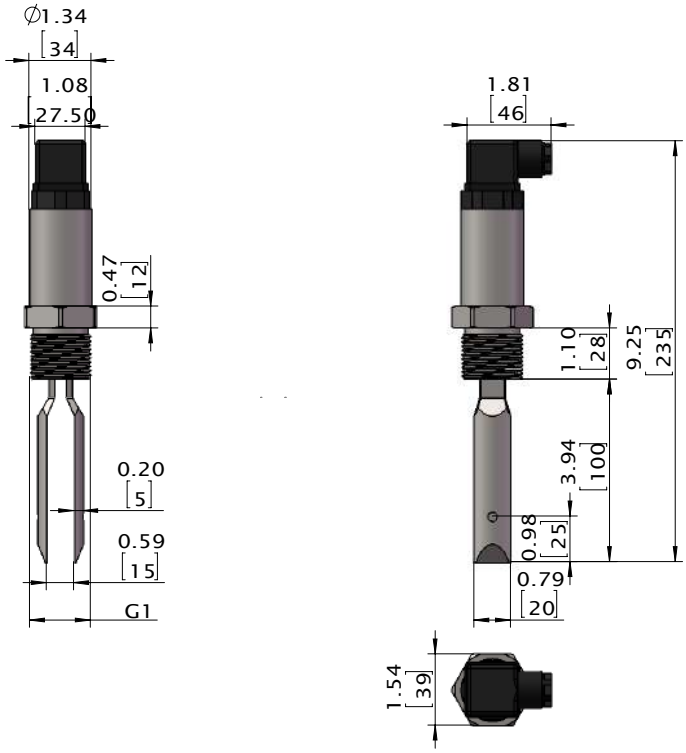
Wiring



Solenoid plug



Dimensions in inches (mm)



Model Number

OrderNO.	Type	Fork type S/E	Rod Length mm	Process Connection
LF1100	LF1000/024G1CSM100	S standard	100	G1

LEVEL

UM2000 - Ultrasonic Level Meter

- **2-wire 4..20mA/3-wire 0...10V output**
- **Liquid level / distance measuring mode programmable**
- **Applicable to liquid and solids**
- **Narrow-beam**
- **Optional intrinsically safe model**

UM2000 contains an ultrasonic transmitter and an electronic module, the transmitter transmits ultrasonic pulses towards the level surface. The period during individual pulses spread towards the level and back was obtained and subsequently converted by the electronic module to an output current 4-20 mA or voltage 0-1 0V. Measuring range can be set through two keys.

Specifications

Measuring Range	0.1...1m/0.25...2m/ 0.25...6m/0. 5...10m/0.5...20m
Applicable Medium	Liquid
Acoustic wave	For details please see 'Technical Data'
Accuracy	
UM2000-06/10/20	≤0.2% F.S.
UM2000-01/02	≤0.3% F.S.
Resolution	＜1mm
Power Supply	18...36Vdc,18...30Vdc(ex-proof model)
Current Analog Output	
Output	2-wire 4...20mA
Load RA	RA≤270Ω
Voltage Analog Output	
Output	3-wire0...10V
Load RA	RA>1KΩ
Temperature	
UM2000-02/06	-30...+70℃
UM2000-10/20	-30...+60℃
Material	
Housing	Plastic
Sensor	PVDF
Protection Class	IP67
Electrical Connection	Solenoid plug
Process Connection	G External thread, Flange

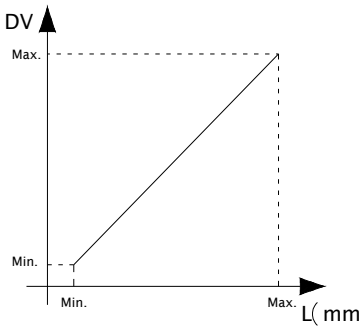
Applications

- Food/pharmaceutical industry
- Power plant
- Plastics processing
- Papermaking
- Water treatment

Flow Range Technical Data

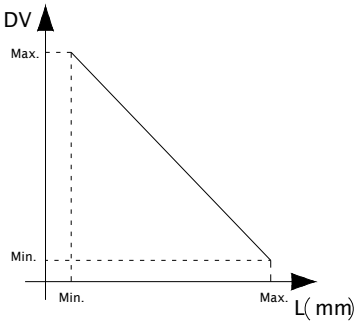
Measuring Range(m)	0.25-2（UM2000-02）	0.25-6（UM2000-06）	0.5-10（UM2000-10）	0.5-20（UM2000-20）
Acoustic wave	10°	14°	10°	12°
Measuring Period(s)	0.6s	1.0s	1.8s	5.0s

Working Mode



L: distance from sensor to objective surface
DV: display value

Distance measuring mode : The further distance between sensor and objective surface, the larger value displayed, and vice versa.

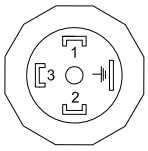


L: distance from sensor to objective surface
DV: display value

Level measuring mode : The further distance between sensor and objective surface, the larger value displayed, and vice versa.

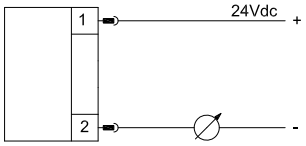
Wiring

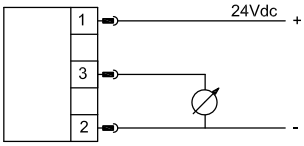
Wiring	2-wire 4...20mA Output	3-wire 0...10V Output



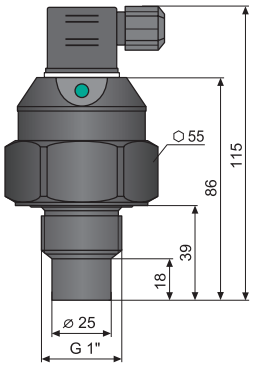
Solenoid plug

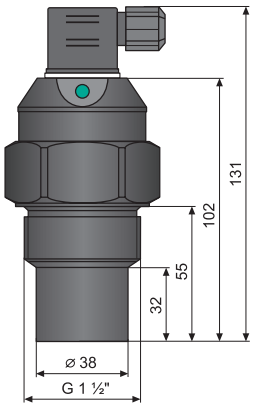
Signal	Plug
U+	1
U-	2
(Signal)	3

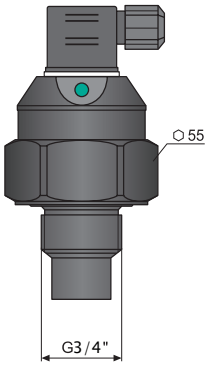


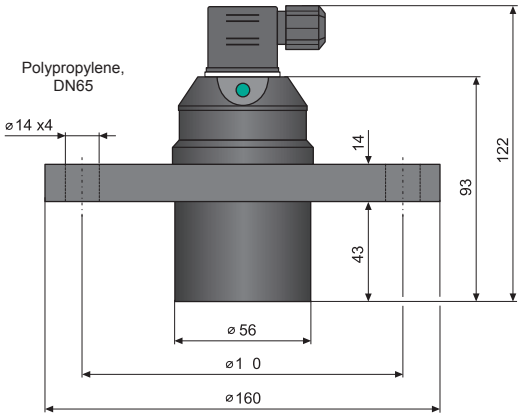


Dimensions in inches (mm)









LEVEL

Model Number

OrderNO.	Type	Range m	Process Connection	Output type mA/V
UM2001	UM2000-01/42G34HN	0.1...1	G3/4	Current Analog Output 2-wire 4...20mA
UM2002	UM2000-02/42G1HN	0.25...2	G1	
UM2006	UM2000-06/42G2HN	0.25...6	G1-1/2	
UM2010	UM2000-10/42G2HN	0.5...10	G1-1/2	
UM2020	UM2000-20/42FHN	0.5...20	Flange	
UM2101	UM2000-01/01G34HN	0.1...1	G3/4	Voltage Analog Output 3-wire 0...10V
UM2102	UM2000-02/01G1HN	0.25...2	G1	
UM2106	UM2000-06/01G2HN	0.25...6	G1-1/2	
UM2110	UM2000-10/01G2HN	0.5...10	G1-1/2	
UM2120	UM2000-20/01FHN	0.5...20	Flange	
UM2201	UM2000-01/__G34HN	0.1...1	G3/4	RS485 Mod bus
UM2202	UM2000-02/__G1HN	0.25...2	G1	
UM2206	UM2000-06/__G2HN	0.25...6	G1-1/2	
UM2210	UM2000-10/__G2HN	0.5...10	G1-1/2	
UM2220	UM2000-20/__FHN	0.5...20	Flange	

Instrument series

Control meters for Fluid Measuring Technology

MST100 - Wall Mounted Digital Display Flow Controller

- 6-digit LED display
- Flow meter/totalizer/batcher
- Flow rate/total flow display
- 1 pulse counting input + 3 control inputs
- 1 relay(REL)Output
- Optional isolated current output
- Power supply output 24V DC
- RS-485 / Modbus RTU
- Dose-based batch processing and cumulative metering

MST100 is the flow meter in tight, wall mounted case (IP 65), designed to work in tandem withthe pulse flow transducers with coefficients ranging from 0.01 to 9999.99 pulses per litre,equipped with electronic (open collector) or contact input. A flow meter allows to measure the actual instantaneous value and to record the total flow of fluids, gases or bulk materials. Wide range of total flow enables flow volume control for a long time. Build in a batcher function makes possible application of MST100 in a wide range of industry branches (food production, pharmacy, paint and varnish). The counters may have 2 relay (or OC) outputs, depending on the actual instantaneous, batcher or total value of the flow (R1).

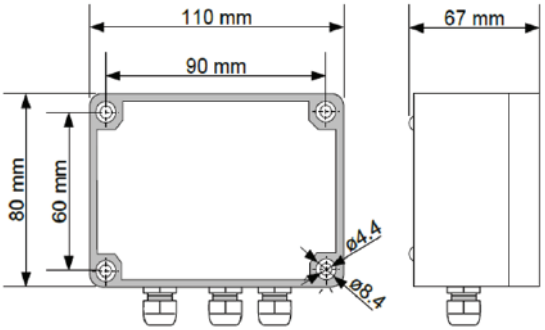
Specifications

Power Supply	19...50Vdc,16...35Vac or 85...260Vac/Vdc
Power Consumption	Max. 5 VA
Accuracy	Frequency: + 0.02% (full temperature range); Flow: equivalent to used flow sensor precision
Display	LED, 6 x 13mm high, red, brightness adjustable in 8 steps
Display Range	0...999999 + decimal point
Readout Precision	
Flow Rate	Selected in the 0...0.00000 of unit
Total Flow and Batcher	Selected in the 0...0.000 of unit
Inputs(pulse, fully isolated)	Counting input with debouncing filter and
	pulse width control: max. input frequency 1 0.0 kHz
	Zeroing of batcher counter: active edge or level
	Zeroing of total counter: active edge or level
	Counting blockade: active edge or level; Common (COM)
Input Levels	Low level: 0 V... V; High level: 10 V...30 V
Counter Capacity	
Total flow	over $4x10^9$ m^3 (max. 16 significant digits)
Batcher	up to 65536 m^3
Units	
Flow Rate	L or m^3 / per second/minute/hour.
Total Flow and Batcher	L or m^3
Pulse Waiting Time	Settable from 0.1 to 39.9 seconds
Output	
Switching Output	1 x REL, I_{max} =1A, U_{max} =30Vdc/250Vac
Isolated Current Output	Working range Max. 2.8...24 mA, Resolution 13 bit
Sensor power output	24Vdc +5%/-10%, Max. 100 mA (stabilized)
Communication interface	RS-485, 8N1和8N2, 1200...115200 bit/s;
	Modbus RTU
Operating Temperature	0...+50°C
Protection Class	IP65
Dimensions(WxHxD)	Without glands:110 x 80 x 67 mm;With glands:110 x 105 x 67 mm

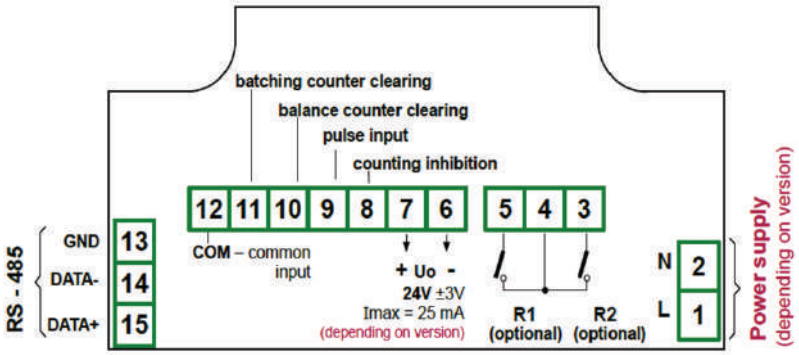
Applications

- Working with FTB/FGR series

Dimensions in mm



Wiring



Relay output type (suitable for no current output type)

Model Number

OrderNo.	Output Type	Input Type	Power Supply
MST100 P	2 REL + 1 current output + RS485 output	Frequency input	19...50Vdc,16...35Vac
MST101 I	2 REL + 1 current output + RS485 output	Current input	85...260Vac/Vdc

MST200 - Standard Panel Mounted Flow Controller

- **6-digit LED display**
- **Flow meter/totalizer/batcher**
- **Flow rate/total flow display**
- **1 pulse counting input + 3 control inputs**
- **2 relay (REL) output+1 AO(0/1... 5V,0/2... 10V, no isolation type)**
- **Analogue output, 24V DC power supply output**
- **RS-485 / Modbus RTU**
- **Free configuration software S-Config**

The purpose of flow controller working with flow sensor is to measure the flow rate and to record the total flow of media like liquids, gases or loose materials. A wide range of total flow indication (up to 16 digits) allows controlling the flow rate for a long operation time. Thanks to the built-in batcher function the MST200 can be used in many industries like: food pharmaceutical or paint and varnish industry. The REL/0C control outputs can be programmed depending on the flow rate, total flow or batcher. Additionally the controller may be equipped with analogue outputs, according to the customer selection: active current output (0/4 ...20mA) , passive isolated current output (4 ... 20mA) or active voltage output (0/1 ..5V,0/2...10V) . The controller can be configured with the local keyboard or free S-Config software via the RS-485 communication port.

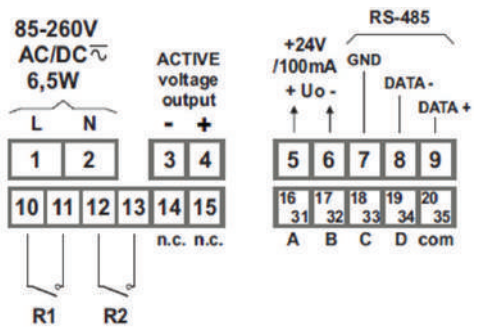
Specifications

Power Supply	19...50Vdc,16...35Vac or 85...260Vac/Vdc
Power Consumption	Max. 6.5 VA
Accuracy	Frequency:±0.02%(full temperature range)
	Flow:equivalent to used flow sensor precision
Display	Red LED, 6 x 13 mm height
Display Range	0...999999 + decimal point
Readout Precision	
Flow Rate	Selected in the 0...0.00000 of unit
Total Flow and Batcher	Selected in the 0...0.000 of unit
Inputs(pulse, fully isolated)	Counting input with debouncing filter and
	pulse width control: max. input frequency 1 0.0 kHz
	Zeroing of batcher counter: active edge or level
	Zeroing of total counter: active edge or level
Input Levels(12mA@24V)	Low level: 0 V...1 V; High level:（about 12mA @ 24V）
Counter Capacity	
Total flow	over 4x109 m^3 (max. 16 significant digits)
Batcher	up to 65536 m^3
Units	Flow Rate:L or m^3 / per second/minute/hour.
	Total Flow and Batcher:L or m^3
Pulse Waiting Time	Settable from 0.1 to 39.9 seconds
Output	
Switching Output	2x REL， I_{max} =1A, U_{max} =30Vdc/250Vac
Active Voltage	0/1...5V, 0/2...10V (max. 0...11V)；RA≥2KΩ
	resolution13 bit
Communication interface	RS-485，8N1and 8N2，1200...115200 bit/s；
	Modbus RTU
Operating Temperature	0...+50°C
Protection Class	IP 65 (front side when an optional seal is installed);
	IP 40 (front side); IP 20 (case and connection clips)
Dimensions(WxHxD)	96 x 48 x 100 mm

Applications

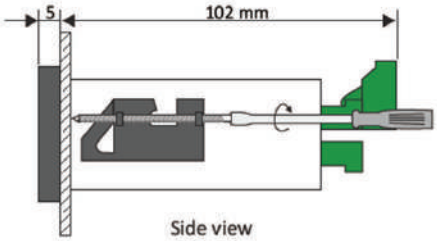
- Working with FTB/FGR series

Wiring

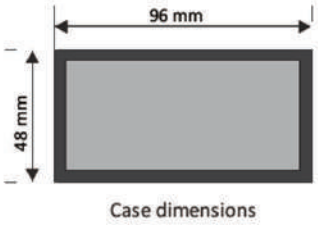


2xREL+1xAO (0/1...5V，0/2...10V，Unisolated type

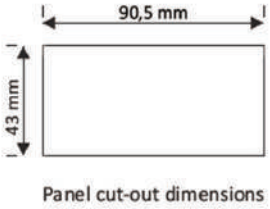
Dimensions



Side dimensioning

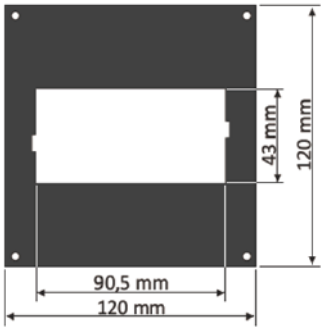


Front dimensioning

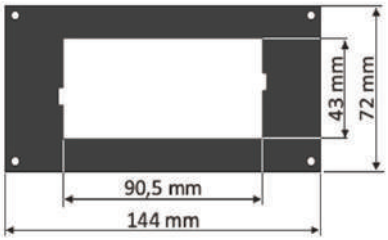


Opening size drawing

Mounting Plates



120x120mm Square mounting panel



144 x 72 mm Rectangular mounting panel

Board Thickness Brackets

Bracket plate thickness 1... 7mm
(2 pieces stand, standard)

Bracket plate thickness 1... 45mm
(2 pieces of support)

Bracket plate thickness 1... 5mm
(2 pieces of support)

Model Number

OrderNo.	Output Type	Input Type	Power Supply
MST200 P	2 REL + 1 current output + RS485 output	Frequency input	19...50Vdc,16...35Vac
MST201 I	2 REL + 1 current output + RS485 output	Current input	85...260Vac/Vdc

MST300 - Compact Panel Mounted Flow Controller

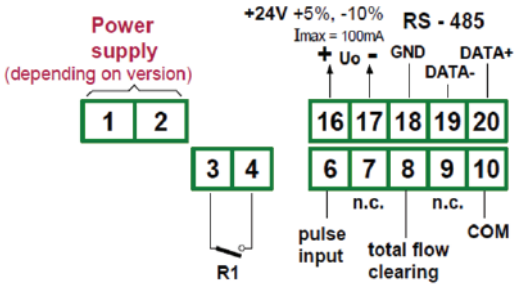
- 6-digit LED display
- Flow rate/total flow display
- 1 pulse counting input
- 1 relay (REL) output
- 24V DC power supply output
- RS-485 / Modbus RTU

The MST300 flow controller is available in conjunction with the flow sensor for a wider range of flowmeter coefficients, from 0.01 to 9999.99 pulses per liter. The cumulant value can be up to 15 digits, ensuring the control operation of the convective quantity value for a long time.

Specifications

Power Supply	19...50Vdc,16...35Vac or 85...260Vac/Vdc
Power Consumption	Max. 4.5 VA
Display	Red LED, 6 x 9 mm height
Display Range	0...999999 + decimal point
Flow Rate Readout Precision	Selected in the 0...0.00000 of unit
Flow accuracy	± 1 to ± 0.0001 optional
Inputs	Pulse potential is isolated by the corresponding
	vibration damping, and the input frequency is Max. 10.0 kHz;
	Counting blockade: active edge or level,potential isolation
Cumulative capacity	over $4x10^9$ m^3 (max. 15 significant digits)
Units	
Flow Rate	L or m^3 per second/minute/hour.
Total Flow	L or m^3
Pulse Waiting Time	Settable from 0.1 to 39.9 seconds
Output	
Relay output	I_{max} =1A, U_{max} =250Vac (cosΦ=1)
Power Supply Output	24Vdc +5%/-10%, Max. 100 mA
Communication interface	RS-485, 8N1和8N2, 1200...115200 bit/s;
	Modbus RTU
Operating Temperature	0...+50°C
Protection Class	IP 65 (front side when an optional seal is installed).
	IP 40 (front side); IP 20 (case and connection clips)
Dimensions(WxHxD)	72 x 36 x 97 mm
Installation depth	Min. 102 mm
Plate thickness	Max. 5 mm

Wiring



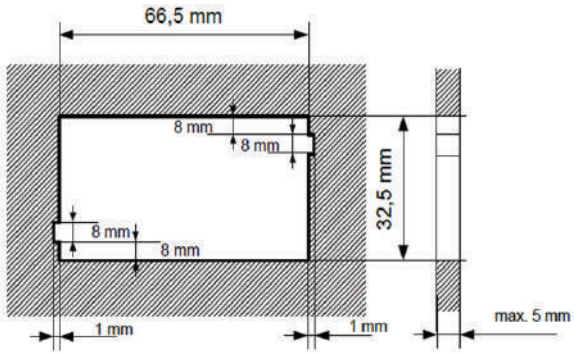
Relay output type

Applications

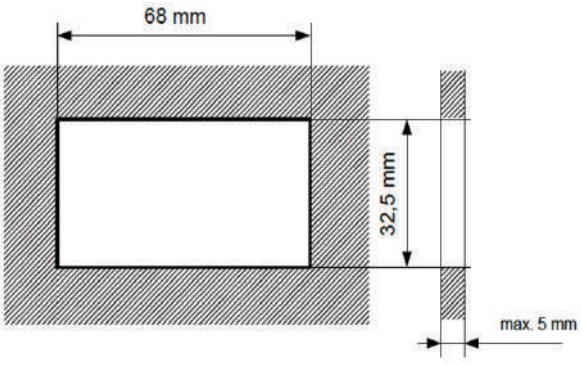
- Working with FTB/FGR series

CONTROLLER

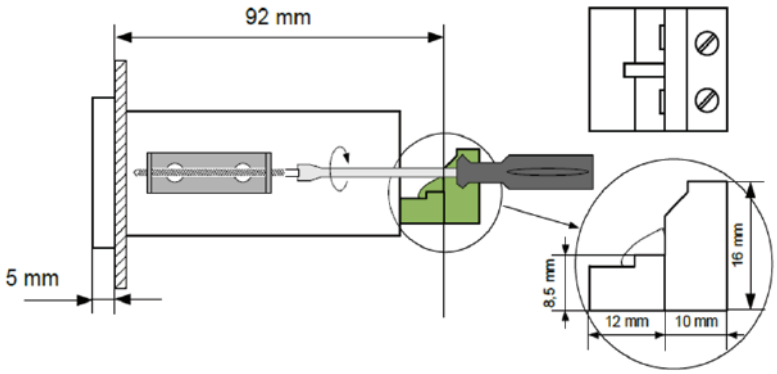
Mounting Dimensions



Mounting hole size (recommended size)



Mounting hole size (feasible size)



Mounting of the bracket and dimensions of its connectors

CONTROLLER

Model Number

OrderNo.	Output Type	Power Supply
MST300	1 X REL	24V AC/DC
MST301	1 X REL	85V...260V AC/DC