BitSENSE
必感电子

2025
FLUID SENSORS
PRODUCT CATALOG

Company Profile

BitSENSE Electronics (Suzhou) Co., Ltd. was founded in Suzhou in 2021, specializing in the development, manufacturing, and sales of industrial sensing and control products. It is committed to the upgrading of China's industrial sector and the transformation towards intelligent manufacturing.

The company possesses multiple sensor invention patents with completely independent intellectual property rights. It draws on and sublimates foreign sensor design schemes, adhering to innovation and independent factory production. With a flexible design system, it aims to become a sensor solution provider tailored to the Chinese industrial market. With a comprehensive production and manufacturing system, quality management, and supply chain management, it provides high-standard products with a 3-year warranty for the market. Adhering to sustainable development and a people-oriented business philosophy, it has established a comprehensive employee incentive and welfare system.

PHILOSOPHY	MISSION	CORPORATE VISION
Innovation and focus	Provide for automation	Achievement automation
Excellence in Quality	Accurate and reliable perception	National brand of sensors

· R&D, production, and sales of industrial sensors

· A research and development team with proprietary core technologies

· A comprehensive production and manufacturing system, quality management, and supply chain management

· Excellent product quality

· Rich product line

· Flexible customization design for customers

· Quick response time and short supply cycle.

· 360-degree service concept.

6 CORE VALUE
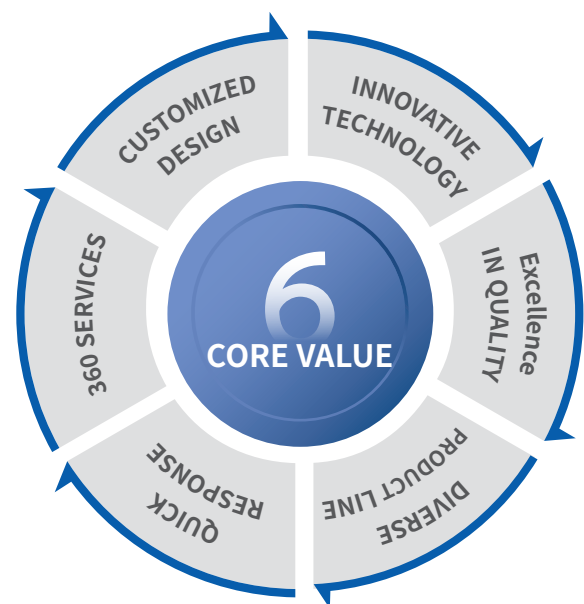
CUSTOMIZED DESIGN
INNOVATIVE TECHNOLOGY
Excellence IN QUALITY
DIVERSE PRODUCT LINE
QUICK RESPONSE
360 SERVICES

FLUID SENSORS

BitSENSE Electronics (Suzhou) Co., Ltd

Contents

Pressure sensor with display - BPD series

Product Features

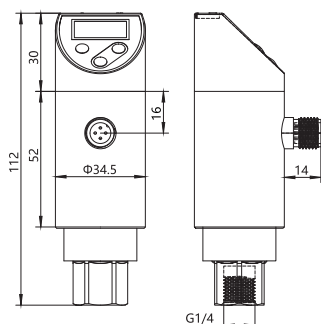· Three-button one-hand control
· LED digital display
· M12 standard Plug

Product Category
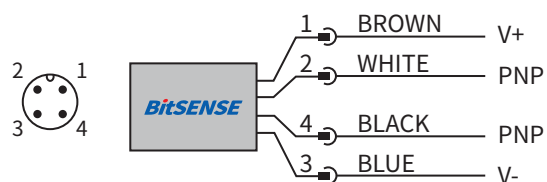
· 2*PNP Output
· G1/4 Internal thread process connection

PRODUCT SPECIFICATIONS

Order number	BPD2P00	BPD2P01	BPD2P02	BPD2P03	BPD2P04	BPD2P05	BPD2P06	BPD2P07	BPD2P08	BPD2P09
Measuring principle	metal diaphragm									
Process connection	G1/4 internal thread									
Measuring range [bar]	0~600 bar	0~400 bar	0~250 bar	0~160 bar	0~100 bar	-1~40 bar	-1~25 bar	-1~16 bar	-1~10 bar	-1~1 bar
Application Range	liquids and gases media									
Overload Pressure [bar]	900	600	400	250	200	80	50	32	20	2
Medium temperature [℃]	-25...80									
Output function	2*PNP，normally open/normally closed									
In steps of [bar]	0.01									
Switch point accuracy	<±0.5%									
Characteristics deviation*	<±0.5%FS									
Electrical design (PNP/NPN)	DC PNP									
Operating voltage [V]	10...30 DC									
Insulation resistance [MΩ]	>100 (500V DC)									
Current consumption [mA]	<50									
Electrical Protection class	III									
Reverse polarity protection	yes									
Power-on delay time [s]	<0.3									
Switch response time [ms]	<20									
Ambient temperature [℃]	-25...80									
Housing Protection class	IP65									
Materials (moist components)	1.4404 / 304									

DIMENSIONS DRAWING

WIRING DIAGRAM

Pin	Color	Function
1	BROWN	V+
2	WHITE	PNP
4	BLACK	PNP
3	BLUE	V-

Pressure sensor with display - BPD series

Product Features

· Three-button one-hand control
· LED digital display
· M12 standard Plug

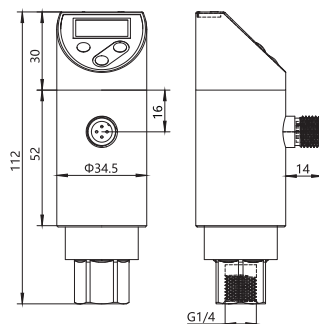## Product Category

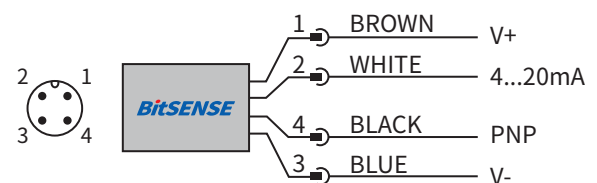· 4...20mA + 1*PNP Output
· G1/4 Internal thread process connection

PRODUCT SPECIFICATIONS

Order number	BPD2X00	BPD2X01	BPD2X02	BPD2X03	BPD2X04	BPD2X05	BPD2X06	BPD2X07	BPD2X08	BPD2X09
Measuring principle	metal diaphragm									
Process connection	G1/4 internal thread									
Measuring range [bar]	0~600 bar	0~400 bar	0~250 bar	0~160 bar	0~100 bar	-1~40 bar	-1~25 bar	-1~16 bar	-1~10 bar	-1~1 bar
Application Range	liquids and gases media									
Overload Pressure [bar]	900	600	400	250	200	80	50	32	20	2
Medium temperature [°C]	-25..80									
Output function	4...20mA +1*PNP, normally open / normally closed									
In steps of [bar]	0.01									
Switch point accuracy	<±0.5%									
Characteristics deviation*	<±0.5%FS									
Electrical design (PNP/NPN)	DC PNP									
Operating voltage [V]	10...30 DC									
Insulation resistance [MΩ]	>100 (500V DC)									
Current consumption [mA]	<50									
Electrical Protection class	III									
Reverse polarity protection	yes									
Power-on delay time [s]	<0.3									
Switch response time [ms]	<20									
Ambient temperature [°C]	-25..80									
Housing Protection class	IP65									
Materials (moist components)	1.4404/304									

DIMENSIONS DRAWING

WIRING DIAGRAM

1	BROWN	V+
2	WHITE	4...20mA
4	BLACK	PNP
3	BLUE	V-

Pressure sensor with display - BPD series

Product Features

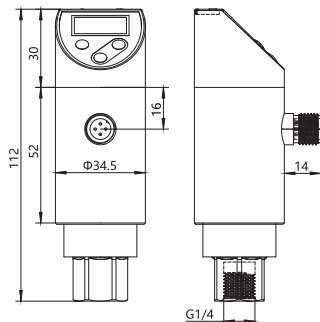· Three-button one-hand control
· LED digital display
· M12 standard Plug

Product Category

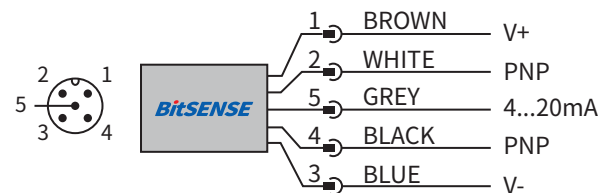· 4...20mA+2*PNP Output
· G1/4 Internal thread process connection

PRODUCT SPECIFICATIONS

Order number	BPD3X00	BPD3X01	BPD3X02	BPD3X03	BPD3X04	BPD3X05	BPD3X06	BPD3X07	BPD3X08	BPD3X09
Measuring principle	metal diaphragm									
Process connection	G1/4 internal thread									
Measuring range [bar]	0~600 bar	0~400 bar	0~250 bar	0~160 bar	0~100 bar	-1~40 bar	-1~25 bar	-1~16 bar	-1~10 bar	-1~1 bar
Application Range	liquids and gases media									
Overload Pressure [bar]	900	600	400	250	200	80	50	32	20	2
Medium temperature [℃]	-25...80									
Output function	4...20mA + 2*PNP, normally open / normally closed									
In steps of [bar]	0.01									
Switch point accuracy	<±0.5%									
Characteristics deviation*	<±0.5%FS									
Electrical design (PNP/NPN)	DC PNP									
Operating voltage [V]	10...30 DC									
Insulation resistance [MΩ]	>100 (500V DC)									
Current consumption [mA]	<50									
Electrical Protection class	III									
Reverse polarity protection	yes									
Power-on delay time [s]	<0.3									
Switch response time [ms]	<20									
Ambient temperature [℃]	-25...80									
Housing Protection class	IP65									
Materials (moist components)	1.4404 / 304									

DIMENSIONS DRAWING

WIRING DIAGRAM

Pin	Color	Function
1	BROWN	V+
2	WHITE	PNP
5	GREY	4...20mA
4	BLACK	PNP
3	BLUE	V-

Pressure sensor with display - BPD series

Product Features

· Three-button one-hand control
· LED digital display
· M12 standard Plug

Product Category

· 2*PNP Output
· G1/4 external threaded process interface

PRODUCT SPECIFICATIONS

Order number	BPD2P50	BPD2P51	BPD2P52	BPD2P53	BPD2P54	BPD2P55	BPD2P56	BPD2P57	BPD2P58	BPD2P59
Measuring principle	metal diaphragm									
Process connection	G1/4 external thread									
Measuring range [bar]	0~600 bar	0~400 bar	0~250 bar	0~160 bar	0~100 bar	-1~40 bar	-1~25 bar	-1~16 bar	-1~10 bar	-1~1 bar
Application Range	liquids and gases media									
Overload Pressure [bar]	900	600	400	250	200	80	50	32	20	2
Medium temperature [℃]	-25...80									
Output function	2*PNP, normally open/normally closed									
In steps of [bar]	0.01									
Switch point accuracy	<±0.5%									
Characteristics deviation*	<±0.5%FS									
Electrical design (PNP/NPN)	DC PNP									
Operating voltage [V]	10...30 DC									
Insulation resistance [MΩ]	>100 (500V DC)									
Current consumption [mA]	<50									
Electrical Protection class	III									
Reverse polarity protection	yes									
Power-on delay time [s]	<0.3									
Switch response time [ms]	<20									
Ambient temperature [℃]	-25...80									
Housing Protection class	IP65									
Materials (moist components)	1.4404 / 304									

DIMENSIONS DRAWING

WIRING DIAGRAM

Pressure sensor with display - BPD series

Product Features

· Three-button one-hand control
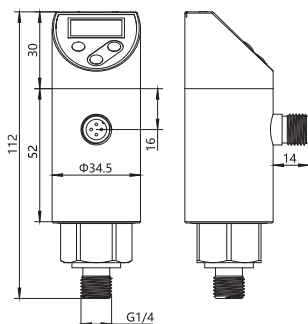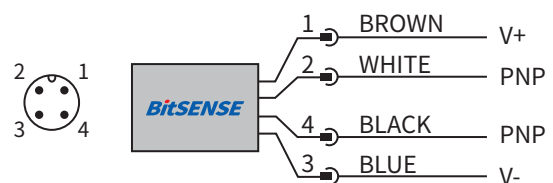· LED digital display
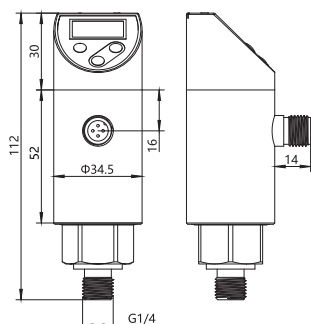· M12 standard Plug

Product Category

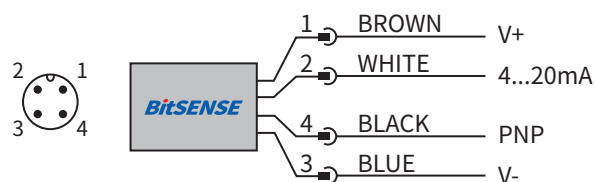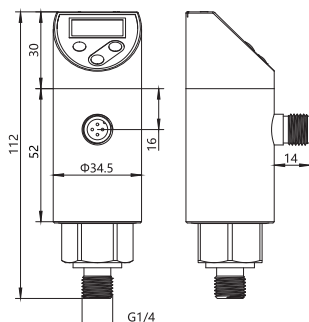· 4...20mA + 1*PNP Output
· G1/4 external threaded process interface

PRODUCT SPECIFICATIONS

Order number	BPD2X50	BPD2X51	BPD2X52	BPD2X53	BPD2X54	BPD2X55	BPD2X56	BPD2X57	BPD2X58	BPD2X59
Measuring principle	metal diaphragm									
Process connection	G1/4 external thread									
Measuring range [bar]	0~600 bar	0~400 bar	0~250 bar	0~160 bar	0~100 bar	-1~40 bar	-1~25 bar	-1~16 bar	-1~10 bar	-1~1 bar
Application Range	liquids and gases media									
Overload Pressure [bar]	900	600	400	250	200	80	50	32	20	2
Medium temperature [℃]	-25...80									
Output function	4...20mA + 1*PNP, normally open / normally closed									
In steps of [bar]	0.01									
Switch point accuracy	<±0.5%									
Characteristics deviation*	<±0.5%FS									
Electrical design (PNP/NPN)	DC PNP									
Operating voltage [V]	10...30 DC									
Insulation resistance [MΩ]	>100 (500V DC)									
Current consumption [mA]	<50									
Electrical Protection class	III									
Reverse polarity protection	yes									
Power-on delay time [s]	<0.3									
Switch response time [ms]	<20									
Ambient temperature [℃]	-25...80									
Housing Protection class	IP65									
Materials (moist components)	1.4404 / 304									

DIMENSIONS DRAWING

30
112
52
16
14
Φ34.5
G1/4

WIRING DIAGRAM

2 1
3 4

BitSENSE

1 BROWN — V+
2 WHITE — 4...20mA
4 BLACK — PNP
3 BLUE — V-

Pressure sensor with display - BPD series

Product Features

· Three-button one-hand control
· LED digital display
· M12 standard Plug

Product Category

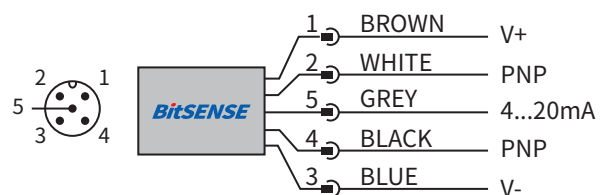· 4...20mA + 2*PNP Output
· G1/4 external threaded process interface

PRODUCT SPECIFICATIONS

Order number	BPD3X50	BPD3X51	BPD3X52	BPD3X53	BPD3X54	BPD3X55	BPD3X56	BPD3X57	BPD3X58	BPD3X59
Measuring principle	metal diaphragm									
Process connection	G1/4 external thread									
Measuring range [bar]	0~600 bar	0~400 bar	0~250 bar	0~160 bar	0~100 bar	-1~40 bar	-1~25 bar	-1~16 bar	-1~10 bar	-1~1 bar
Application Range	liquids and gases media									
Overload Pressure [bar]	900	600	400	250	200	80	50	32	20	2
Medium temperature [°C]	-25...80									
Output function	4...20mA + 2*PNP, normally open / normally closed									
In steps of [bar]	0.01									
Switch point accuracy	<±0.5%									
Characteristics deviation*	<±0.5%FS									
Electrical design (PNP/NPN)	DC PNP									
Operating voltage [V]	10...30 DC									
Insulation resistance [MΩ]	>100 (500V DC)									
Current consumption [mA]	<50									
Electrical Protection class	III									
Reverse polarity protection	yes									
Power-on delay time [s]	<0.3									
Switch response time [ms]	<20									
Ambient temperature [°C]	-25...80									
Housing Protection class	IP65									
Materials (moist components)	1.4404 / 304									

DIMENSIONS DRAWING

WIRING DIAGRAM

1	BROWN	V+
2	WHITE	PNP
5	GREY	4...20mA
4	BLACK	PNP
3	BLUE	V-

Compact pressure transmitter - BPS series

Product Features

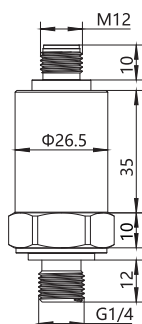· Stainless steel sturdy Housing

· M12 standard Plug

Product Category

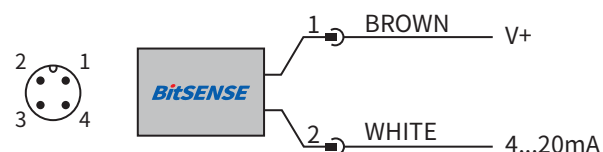· Analog outputs 4...20mA

· G1/4 external threaded process interface

PRODUCT SPECIFICATIONS

Order number	BPS1A50	BPS1A51	BPS1A52	BPS1A53	BPS1A54	BPS1A55	BPS1A56	BPS1A57	BPS1A58	BPS1A59
Measuring principle	metal diaphragm									
Process connection	G1/4 external thread									
Measuring range[bar]	0~600 bar	0~400 bar	0~250 bar	0~160 bar	0~100 bar	-1~40 bar	-1~25 bar	-1~16 bar	-1~10 bar	-1~1 bar
Application Range	liquids and gases media									
Overload Pressure [bar]	900	600	400	250	200	80	50	32	20	2
Medium temperature [°C]	-25...80									
Output function	4...20mA									
Characteristics deviation*	<±0.5%FS									
Operating voltage [V]	10...30 DC									
Insulation resistance [MΩ]	>100 (500V DC)									
Current consumption [mA]	<50									
Electrical Protection class	III									
Reverse polarity protection	yes									
Power-on delay time [s]	<0.3									
Ambient temperature [°C]	-40...90									
Housing Protection class	IP65									
Materials (moist components)	1.4404/304									

DIMENSIONS DRAWING

M12

Φ26.5

10
35
10
12

G1/4

WIRING DIAGRAM

2   1
3   4

BitSENSE

1   BROWN   V+

2   WHITE   4...20mA

Compact pressure transmitter - BPS series

Product Features

· Stainless steel sturdy Housing

· M12 standard Plug
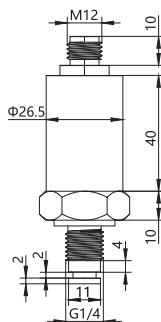
Product Category

· Analog outputs 4...20mA
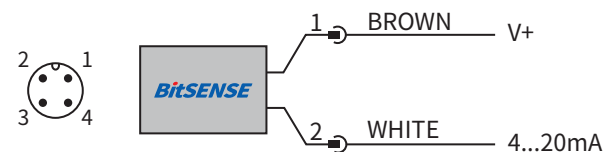
· G1/4 external threaded process interface, flush

PRODUCT SPECIFICATIONS

Order number	BPS1A60	BPS1A61	BPS1A62	BPS1A63	BPS1A64	BPS1A65	BPS1A66	BPS1A67	BPS1A68	BPS1A69
Measuring principle	metal diaphragm									
Process connection	G1/4 external thread, flush									
Measuring range [bar]	0~600 bar	0~400 bar	0~250 bar	0~160 bar	0~100 bar	-1~40 bar	-1~25 bar	-1~16 bar	-1~10 bar	-1~1 bar
Application Range	liquids and gases media									
Overload Pressure [bar]	900	600	400	250	200	80	50	32	20	2
Medium temperature [°C]	-25...80									
Output function	4...20mA									
Characteristics deviation*	<±0.5%FS									
Operating voltage [V]	10...30 DC									
Insulation resistance [MΩ]	>100 (500V DC)									
Current consumption [mA]	<50									
Electrical Protection class	III									
Reverse polarity protection	yes									
Power-on delay time [s]	<0.3									
Ambient temperature [°C]	-40...90									
Housing Protection class	IP65									
Materials (moist components)	1.4404/304									

DIMENSIONS DRAWING

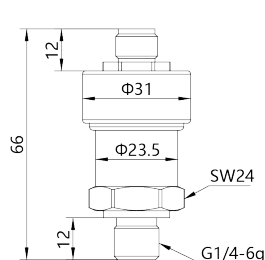## WIRING DIAGRAM

Compact pressure transmitter - BPT series

Product Features

· Stainless steel sturdy Housing

· M12 standard Plug

· Miniature size, adaptable to extreme installation environments

PRODUCT SPECIFICATIONS

Order number	BPT1A50	BPT1A51	BPT1A52	BPT1A53	BPT1A54	BPT1A55	BPT1A56	BPT1A57	BPT1A58	BPT1A59
Measuring principle	metal diaphragm									
Process connection	G1/4 external thread									
Measuring range [bar]	0~600 bar	0~400 bar	0~250 bar	0~160 bar	0~100 bar	-1~40 bar	-1~25 bar	-1~16 bar	-1~10 bar	-1~1 bar
Application Range	liquids and gases media									
Overload Pressure [bar]	900	600	400	250	200	80	50	32	20	2
Medium temperature [°C]	-25...80									
Output function	4...20mA									
Characteristics deviation*	<±0.5%FS									
Operating voltage [V]	10...30 DC									
Insulation resistance [MΩ]	>100 (500V DC)									
Current consumption [mA]	<50									
Electrical Protection class	III									
Reverse polarity protection	yes									
Power-on delay time [s]	<0.3									
Ambient temperature [°C]	-40...90									
Housing Protection class	IP65									
Materials (moist components)	1.4404/304									

DIMENSIONS DRAWING

BPT1A50-51-52-53-54
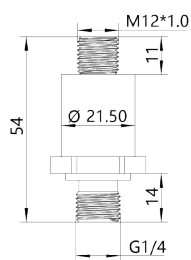
BPT1A55-56-57-58-59

WIRING DIAGRAM
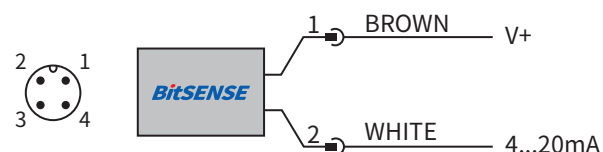
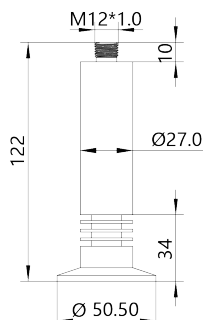| 1 | BROWN | V+ |
| 2 | WHITE | 4...20mA |

Food hygiene pressure transmitter - BPH series

Product Features

· Suitable for food hygiene areas, heat-resistant

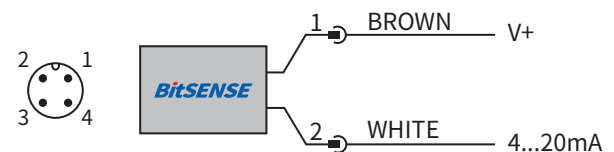· High precision, high stability

· Clamp connection

PRODUCT SPECIFICATIONS

Order number	BPH1A00	BPH1A01	BPH1A02	BPH1A03	BPH1A04	BPH1A05	BPH1A06	BPH1A07	BPH1A08	BPH1A09
Measuring principle	metal diaphragm									
Process connection	1.5-inch clamp									
Measuring range [bar]	-0.1~0.1 bar	-0.25~0.25 bar	-0.4~0.4 bar	-1~1 bar	-1~4 bar	-1~6 bar	-1~10 bar	-1~16 bar	-1~25 bar	-1~40 bar
Application Range	Food hygiene area									
Overload Pressure [bar]	10 bar	10 bar	10 bar	20 bar	20 bar	20 bar	30 bar	30 bar	100 bar	100 bar
Medium temperature [°C]	-40...150									
Output function	4...20mA + Hart protocol									
Characteristics deviation*	<±0.2%FS	<±0.2%FS	<±0.2%FS	<±0.1%FS	<±0.1%FS	<±0.1%FS	<±0.1%FS	<±0.1%FS	<±0.1%FS	<±0.1%FS
Operating voltage [V]	10...30 DC									
Insulation resistance [MΩ]	>100 (500V DC)									
Current consumption [mA]	<50									
Electrical Protection class	III									
Reverse polarity protection	yes									
Power-on delay time [s]	<0.3									
Ambient temperature [°C]	-40...150									
Shell material	304 stainless steel									
Process connection material	316L stainless steel									
Diaphragm material	316L stainless steel									
Housing Protection class	IP67									

DIMENSIONS DRAWING

M12*1.0
10
122
Ø 27.0
34
Ø 50.50

WIRING DIAGRAM

2 1
3 4

BitSENSE

1 BROWN V+
2 WHITE 4...20mA

Food hygiene pressure transmitter - BPH series

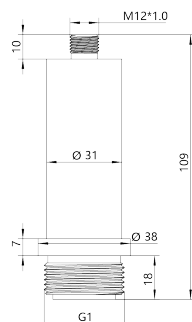## Product Features

· Suitable for food hygiene areas, heat-resistant
· High precision, high stability
· Ceramic diaphragm

PRODUCT SPECIFICATIONS

Order number	BPH2A00	BPH2A01	BPH2A02	BPH2A03	BPH2A04	BPH2A05	BPH2A06	BPH2A07	BPH2A08	BPH2A09
Measuring principle	ceramic diaphragm									
Process connection	G1 external thread									
Measuring range [bar]	-0.1~0.1 bar	-0.25~0.25 bar	-0.4~0.4 bar	-1~1 bar	-1~4 bar	-1~6 bar	-1~10 bar	-1~16 bar	-1~25 bar	-1~40 bar
Application Range	Food hygiene area									
Overload Pressure [bar]	10 bar	10 bar	10 bar	20 bar	20 bar	20 bar	30 bar	30 bar	100 bar	100 bar
Medium temperature [℃]	-40...125									
Output function	4...20mA + Hart protocol									
Characteristics deviation*	<±0.2%FS	<±0.2%FS	<±0.2%FS	<±0.1%FS	<±0.1%FS	<±0.1%FS	<±0.1%FS	<±0.1%FS	<±0.1%FS	<±0.1%FS
Operating voltage [V]	10...30 DC									
Insulation resistance [MΩ]	>100 (500V DC)									
Current consumption [mA]	<50									
Electrical Protection class	III									
Reverse polarity protection	yes									
Power-on delay time [s]	<0.3s									
response time	5ms									
Ambient temperature [℃]	-40...125									
Shell material	304 stainless steel									
Process connection material	316L stainless steel									
Diaphragm material	ceramics（Al3O2）									
Housing Protection class	IP67									

DIMENSIONS DRAWING

M12*1.0
10
Ø 31
109
7
Ø 38
18
G1

WIRING DIAGRAM

2 1
3 4

BitSENSE

1 BROWN V+
2 WHITE 4...20mA
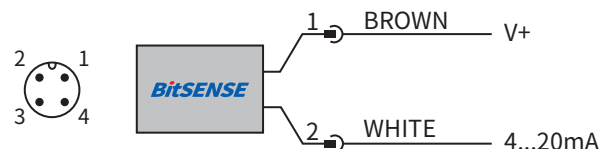
# liquid level transmitter - BPQ series

Product Features

· 316L stainless steel Housing, corrosion-resistant

· Analog outputs 4...20mA

· Measuring range/cable length can be customized

PRODUCT SPECIFICATIONS

Order number	BPQ1A11	BPQ1A12	BPQ1A22	BPQ1A23	BPQ1A24	BPQ1A25	BPQ1A26	BPQ1A33	BPQ1A36
Measuring principle	metal diaphragm								
cable material	PUR								
Measuring range [m]	2.5	2.5	6	6	6	6	6	10	10
Cable length [m]	5	10	10	15	20	25	30	15	30
Pressure rating [bar]	2	2	4	4	4	4	4	5	5
Medium temperature [°C]	-40...70								
Output function	4...20mA								
Characteristics deviation*	<±0.5%FS								
Operating voltage [V]	10...30 DC								
Response time	5ms								
Electrical Protection class	III								
Ambient temperature [°C]	-40...90								
Housing Protection class	IP67								
Materials (moist components)	316L								

DIMENSIONS DRAWING
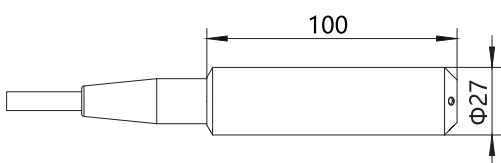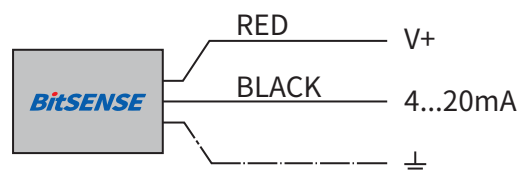
100

Φ27

WIRING DIAGRAM

BitSENSE

RED — V+

BLACK — 4...20mA
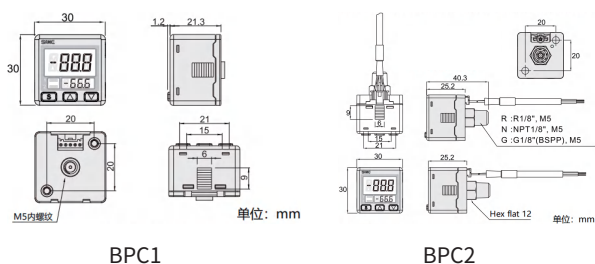
⏚

Miniature Air Pressure Switch - BPC Series

Product Features

· Dual-screen three-color digital display, with switchable air pressure units

· Standard size, panel-mountable

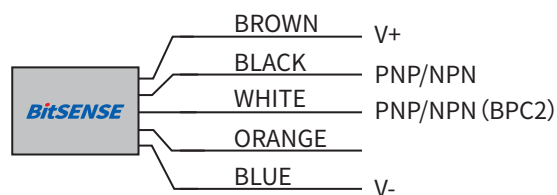· Supports switch value, Number of analog outputs, and RS485 output

PRODUCT SPECIFICATIONS

Order number	BPC1N09	BPC1P09	BPC1N08	BPC1P08	BPC2N09	BPC2P09	BPC2N08	BPC2P08
Rated pressure range	-1~1 bar	-1~1 bar	-1~10 bar	-1~10 bar	-1~1 bar	-1~1 bar	-1~10 bar	-1~10 bar
display precision	±2%FS							
Repeatability	±2%FS							
Adapt to gas	Non-corrosive gas, non-flammable gas, compliant with ISO 8573-1:2010[7:4:4]							
Operating Temperature	0°C~+50°C（Be careful not to condense or freeze）							
Storage temperature	-10°C~+50°C							
ambient humidity	35%RH~85%RH							
Operating voltage	10-30V DC							
signal output	NPN	PNP	NPN	PNP	NPN*2	PNP*2	NPN*2	PNP*2
current consumption	<45mA							
load current	<100mA							
pressure drop	<1.5V							
Short-circuit protection	Surge protection, reverse polarity protection							
response time	minimum 2ms							
electrical interface	5-pin, comes with a 2m cable with terminals (cables of other lengths need to be purchased separately)							
interface dimensions	R1/8 male connector or M5 Internal thread							
IP rating	IP40							
material	plastic							
LED display	Dual-screen three-color digital display							

DIMENSIONS DRAWING

单位：mm

BPC1___

R :R1/8", M5
N :NPT1/8", M5
G :G1/8"(BSPP), M5

Hex flat 12

单位：mm

BPC2___

WIRING DIAGRAM

BROWN — V+
BLACK — PNP/NPN
WHITE — PNP/NPN (BPC2)
ORANGE
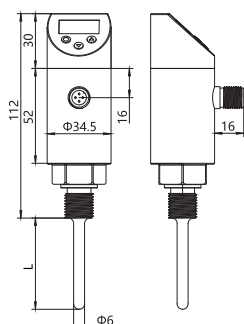BLUE — V-

Temperature sensor with display - BTD series

Product Features

· Three-button one-hand control

· LED digital display

· M12 standard Plug

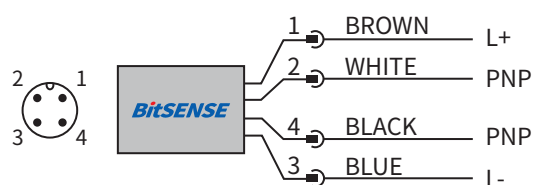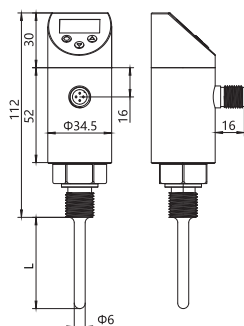## PRODUCT SPECIFICATIONS

Order number	BTD2P51	BTD2P52	BTD2P53	BTD2P54	BTD2P31	BTD2P32	BTD2P33	BTD2P34
Measuring principle	PT100							
Measuring range [℃]	-50...150							
Process connection	G1/4 external thread				G1/2 external thread			
Scope of application	liquids and gases media							
Probe rod diameter [mm]	6							
Probe length [mm]	30	50	100	150	30	50	100	150
Pressure rating [bar]	200							
Ambient temperature [℃]	-25...80							
Output function	2*PNP Output							
Analog output accuracy	±0.3+(±0.1%FS)							
Operating voltage [V]	10...30 DC							
Current consumption [mA]	<25							
Electrical Protection class	III							
Power-on delay time [s]	<0.3							
Response time T05/T09 [s]	5 / 9							
Housing Protection class	IP65 / IP67							
Materials (moist components)	1.4404 / 304							
Note	If you need to customize the length of the probe, please consult your local sales representative							

DIMENSIONS DRAWING

WIRING DIAGRAM

1	BROWN	L+
2	WHITE	PNP
4	BLACK	PNP
3	BLUE	L-

Temperature sensor with display - BTD series

Product Features

· Three-button one-hand control

· LED digital display

· M12 standard Plug

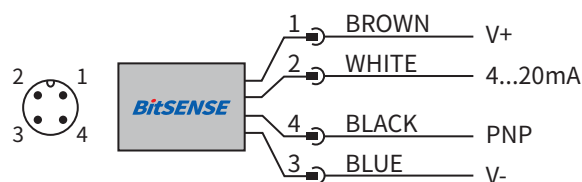## PRODUCT SPECIFICATIONS

Order number	BTD2X51	BTD2X52	BTD2X53	BTD2X54	BTD2X31	BTD2X32	BTD2X33	BTD2X34
Measuring principle	PT100							
Measuring range [℃]	-50...150							
Process connection	G1/4 external thread				G1/2 external thread			
Application Range	liquids and gases media							
Probe rod diameter [mm]	6							
Probe length [mm]	30	50	100	150	30	50	100	150
Pressure rating [bar]	200							
Ambient temperature [℃]	-25...80							
Output function	4...20mA + 1*PNP Output							
Analog output accuracy	±0.3+(±0.1%FS)							
Operating voltage [V]	10...30 DC							
Current consumption [mA]	<25							
Electrical Protection class	III							
Power-on delay time [s]	<0.3							
Response time T05/T09 [s]	5 / 9							
Housing Protection class	IP65 / IP67							
Material (moist component)	1.4404 / 304							
Note	If you need to customize the length of the probe, please consult your local sales representative							

DIMENSIONS DRAWING

WIRING DIAGRAM

1	BROWN	V+
2	WHITE	4...20mA
4	BLACK	PNP
3	BLUE	V-

Compact Temperature Sensor - BTS Series

Product Features

· Stainless steel sturdy Housing

· M12 standard Plug

## Product Category

· Analog outputs 4...20mA

PRODUCT SPECIFICATIONS

Order number	BTS1A51	BTS1A52	BTS1A53	BTS1A54	BTS1A31	BTS1A32	BTS1A33	BTS1A34
Measuring principle	PT100							
Measuring range [°C]	-50...150							
Process connection	G1/4 external thread				G1/2 external thread			
Application Range	liquids and gases media							
Minimum insertion depth [mm]	12							
Probe rod diameter [mm]	6							
Probe length [mm]	30	50	100	150	30	50	100	150
Pressure rating [bar]	200							
Ambient temperature [°C]	-25...80							
Output function	4...20mA							
Analog output accuracy	±0.3+(±0.1%FS)							
Operating voltage [V]	10...30 DC							
Current consumption [mA]	<25							
Electrical Protection class	III							
Power-on delay time [s]	<0.3							
Response time T05/T09 [s]	5 / 9							
Housing Protection class	IP65/IP67 /IP68							
Material (moisture-sensitive component)	1.4404/304							
Note	If you need to customize the length of the probe, please consult your local salesperson							

DIMENSIONS DRAWING
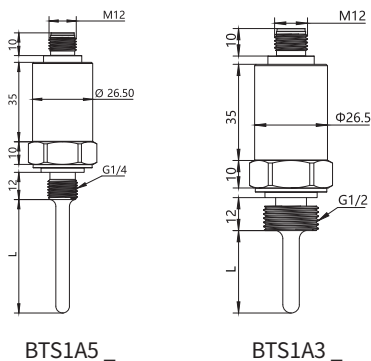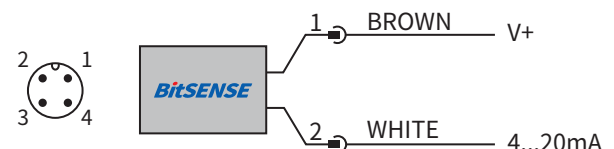
BTS1A5 _   BTS1A3 _

WIRING DIAGRAM

Turbine flowmeter - BFW series

Product Introduction

- Rangeability 1:50
- Use a non-magnetic carrier detector
- Repeatability ±0.1%RS
- Strong anti-interference performance
- Low pressure loss
- Dynamic response time ≤ 5ms
- Temperature resistance range: -40~+150°C
- Optional explosion-proof

Technical Parameter
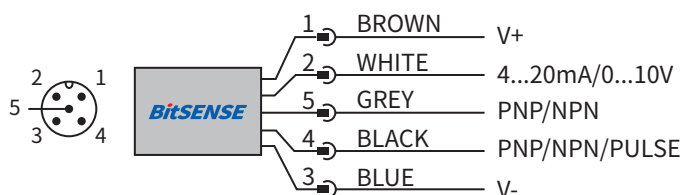
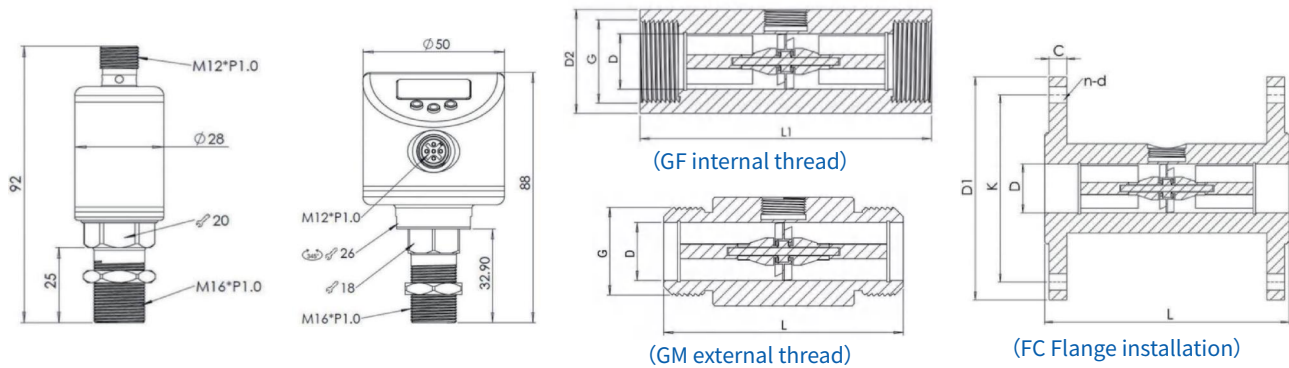|			
pipeline interface	DN4…DN12 Adopt threaded connection DN15…DN50 Optional flange installation	response time	≤5ms
measuring media	Optimal for medium and low viscosity	electrical interface	M12
power supply voltage	16-36VDC	Protection class	IP67
repetitiveness	±0.1%	material	
accuracy class	±0.5%RS	Sensor housing	stainless steel
turndown ratio	1:10、1:20、1:30、1:40、1:50	ontology	stainless steel 304SS
pressure resistance	Max. 400bar	rotor	17-4PH
Resistance to ambient temperature	-40 ~ +85°C，（display -20°C）	axis	tungsten steel
Resistance to Medium temperature	-20~+85°C、 -40~+125°C、 -40~+150°C	bearing	cemented carbide steel
line protection	Reverse protection, Short-circuit protection, Overload protection	support	stainless steel 304SS
signal output	Pulse signal, 4...20mA output, switch output	filtration accuracy	80-300μm

Dimensions Specifications

Diameter(mm)	Standard flow range(l/min)	Internal thread installation (thread)	pressure resistance(bar)	External thread installation (thread)	pressure resistance(bar)	Flange installation pressure resistance(bar)	Filter diameter(μm)
DN4	0.6...4.5	G1/2	400	G1/2	100	N/A	80
DN6	1.6...10	G1/2	400	G1/2	100	N/A	80
DN10	3…20	G1/2	400	G1/2	100	N/A	100
DN12	6…60	G1/2	400	G1/2	63	N/A	150
DN15	10…100	G1/2	400	G1	63	25	150
DN20	13…130	G3/4	300	G1	63	25	150
DN25	17…170	G1	300	G1-1/4	63	25	200
DN32	25…250	G1-1/4	250	G1 - 1/ 2	63	25	200
DN40	33...330	G1-1/2	160	G2	63	25	300
DN50	66..660	G2	100	N/A	N/A	16	300

Wiring Diagram

1	BROWN	V+
2	WHITE	4...20mA/0...10V
5	GREY	PNP/NPN
4	BLACK	PNP/NPN/PULSE
3	BLUE	V-

Product Dimensions Chart

(GF internal thread)

(GM external thread)

(FC Flange installation)

Nominal Diameter (mm)	GF internal thread specification			GM external thread specification			FC Flange Specification				
	L1 (mm)	D2 (mm)	GF (thread)	L (mm)	D (mm)	GM (thread)	outer diameter (D1)	center distance (K)	aperture (d)	number of holes (n)	thickness (C)
4	80	38	G1/4	65	4	G1/2					
6	80	38	G1/4	65	6	G1/2			N/A		
10	80	38	G1/2	65	10	G1/2					
12	80	38	G1/2	65	12	G1/2					
15	100	40	G1/2	75	15	G1	95	65	14	4	14
20	115	48	G3/4	85	20	G1	105	75	14	4	16
25	140	53	G1	100	25	G1-1/4	115	85	14	4	16
32	168	62	G1-1/4	120	32	G1-1/2	140	100	18	4	18
40	180	70	G1-1/2	140	40	G2	150	110	18	4	18
50	200	78	G2	N/A	N/A	N/A	165	125	18	4	20

Model Selection

Nominal Diameter(mm):
- 04
- 06
- 10
- 12
- 15
- 20
- 25
- 32
- 40
- 50

M: external thread
F: internal thread
C: flange

1: without display
2: with digital display
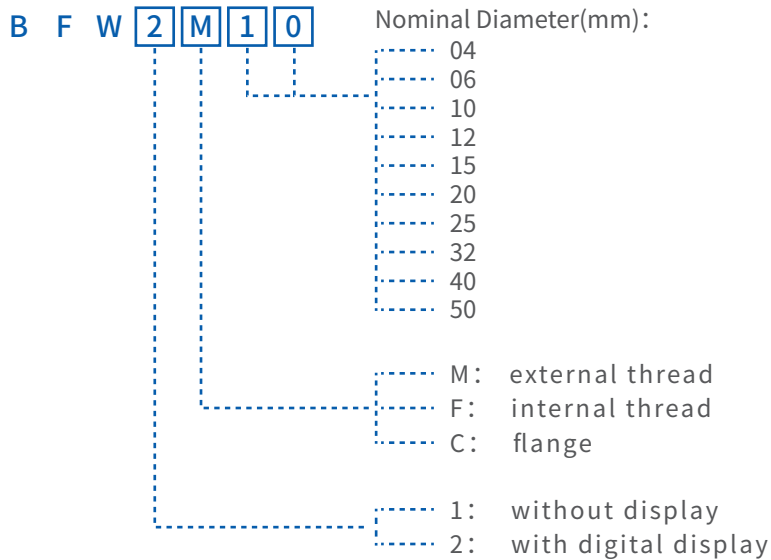
* For flange installation, the maximum diameter is 100mm. Please contact your local sales representative.

*The selection rules do not represent all combinations. Please confirm the specific model with your local sales representative.

* The standard model features a 4...20mA output. If a 0...10V output is required, add "-V" to the standard model.

PRESSURE SENSOR
BPD series
BPS series
BPT series
BPH series
BPQ series
BPC series

TEMPERATURE SENSOR
BTD series
BTS series

FLOW SENSOR
BFW series
BFG series
BFT series
BFV series

LEVEL SENSOR
BLC series
BLT series
BLM series
BLF series

Fluid sensor

PRESSURE SENSOR

BPD series
BPS series
BPT series
BPH series
BPQ series
BPC series

TEMPERATURE SENSOR

BTD series
BTS series

FLOW SENSOR

BFW series
BFG series
BFT series
BFV series

LEVEL SENSOR

BLC series
BLT series
BLM series
BLF series

Gear flowmeter - BFG series

Product Introduction

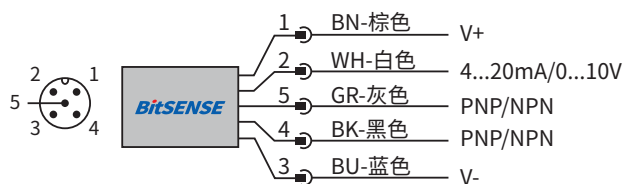- Rangeability 1:100
- High accuracy ±0.5%RS, high repeatability ±0.1%RS
- Suitable for flow detection of various viscous media
- Dynamic response time ≤ 5ms
- Temperature resistance range: -40~+150°C
- PNP/NPN output can be set
- Analog switch with dual outputs

Technical Parameter

measuring media	Various viscous media		response time	≤5ms
power supply voltage	16-36VDC		electrical interface	M12
repetitiveness	±0.1%		Protection class	IP67
accuracy class	±0.5%RS		Sensor housing	stainless steel
turndown ratio	1:100			
pressure resistance	Max. 400bar			
Resistance to ambient temperature	-40 ~ +85°C , (display with-20°C)			
Resistance to Medium temperature	-20~+85°C、 -40~+125°C、 -40~+150°C			
line protection	Reverse protection, Short-circuit protection, Overload protection			
signal output	Pulse signal, 4...20mA output, switch output			

Dimensions Specifications

Order Number	Measuring range (l/min)	Internal thread installation(thread)	pressure resistance(bar)
BFGxx01	0.05~2	G1/4	400
BFGxx02	0.005~2	G1/4	400
BFGxx11	0.1~3	G3/8	400
BFGxx21	0.5~20	G1/2	400
BFGxx22	0.15~8	G1/2	400
BFGxx31	2~50	G3/4	400
BFGxx41	5~100	G1	400

Wiring Diagram

1	BROWN	V+	
2	WHITE	4...20mA/0...10V	
5	GREY	PNP/NPN	
4	BLACK	PNP/NPN/PULSE	
3	BLUE	V-	
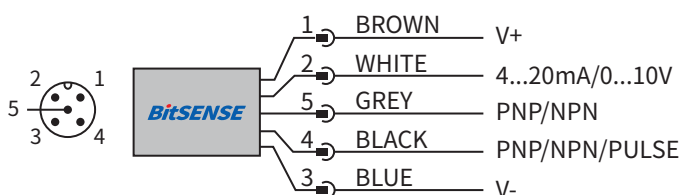
Product Dimensions Chart

The product size diagram varies according to the size specifications of different types of pipeline interfaces, but the main body size of the sensor remains unchanged. The following figure takes the product with G1 internal thread pipeline interface as an example:
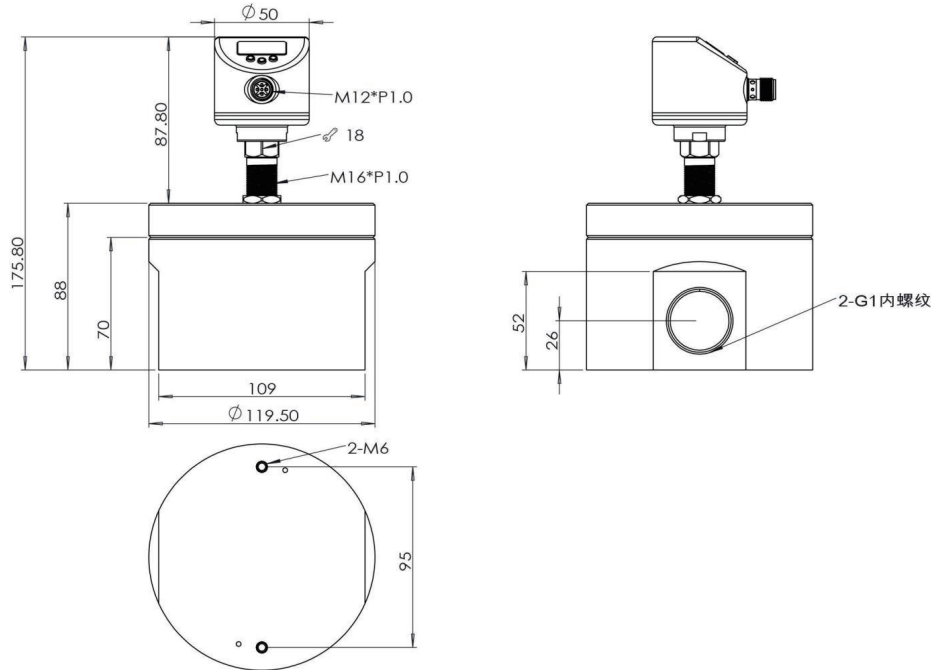
Model Selection
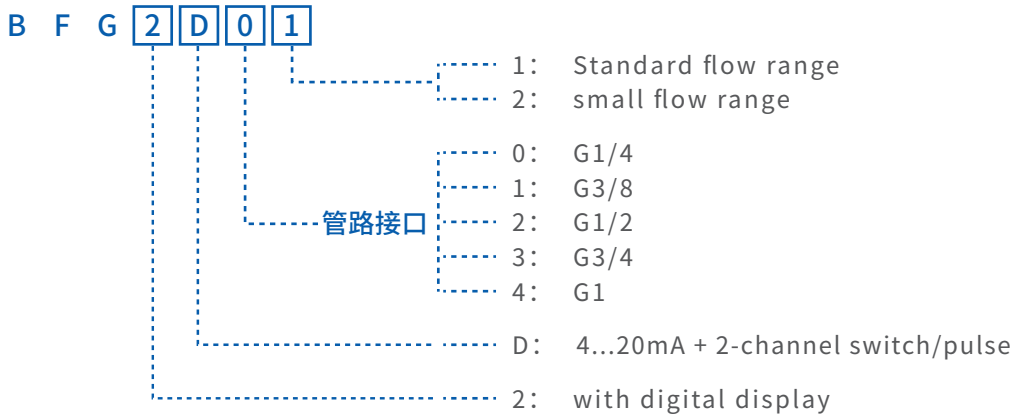
B F G 2 D 0 1

1: Standard flow range
2: small flow range

0: G1/4
1: G3/8
2: G1/2
3: G3/4
4: G1

管路接口

D: 4...20mA + 2-channel switch/pulse

2: with digital display

*The selection rules do not represent all combinations. Please confirm the specific model with your local sales representative.

*The standard model features a 4...20mA output. If a 0...10V output is required, the standard model should be designated with "-V".

Thermal flow sensor - BFT series

Product Introduction

The BFT series flow and temperature integrated sensor adopts a thermal principle, features a full metal housing design, and a 4-segment LCD display. It is suitable for flow rate detection of various pipe diameters and different media. With no moving parts, it is maintenance-free.

● Applicable to various media such as water, oil, and gas
● Integrated flow and temperature monitoring
● Plug-in installation, suitable for various pipe diameters
● 4-segment LCD display
● Switching value + Number of analog outputs are optional
● PNP/NPN, NO/NC can be set
● The Housing can rotate 345° left and right

Technical Parameter

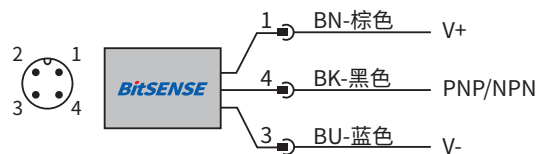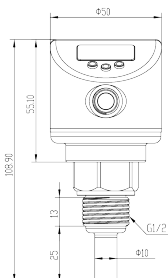|			
Flow Measuring range	liquid: 3...300cm/s	Maximum linearity range	liquid: 3...100cm/s
	gas: 200...3000cm/s		gas: 200...800cm/s
Temperature Measuring range	-50~100°C	precision	traffic: 7% temperature: 0.5°C
Applicable Media	Water, ethylene glycol solution, oil, air	signal output	PNP/NPN, NO/NC can be set Number of analog outputs 4...20mA, 0...10V (optional)
power supply voltage	24V±20%DC, 18~30V DC	Protection class	IP67
Initialization time	about8s	Sensor housing	stainless steel 304
response time	2s	sensor probe	stainless steel 304
pressure resistance	Max, 100bar	Resistance to ambient temperature	-20~+80°C
load	400mA（PNP/NPN）	Medium temperature	-20~+80°C
line protection	Reverse protection, Short-circuit protection, Overload protection	No-load consumption current	≤100mA
temperature gradient	≤4°C C/S	electrical interface	M12*1 Connector

Wiring Diagram

1 BN-棕色 V+
2 WH-白色 4...20mA/0...10V
5 GR-灰色 PNP/NPN
4 BK-黑色 PNP/NPN
3 BU-蓝色 V-

BFT2D__

1 BN-棕色 V+
2 WH-白色 4...20mA/0...10V
5 GR-灰色 4...20mA/0...10V
4 BK-黑色 PNP/NPN
3 BU-蓝色 V-

BFT2X__

1 BN-棕色 V+
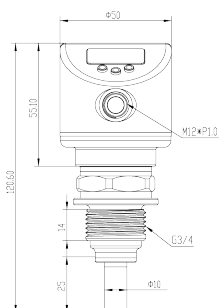2 WH-白色 PNP/NPN（Temp）
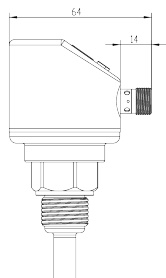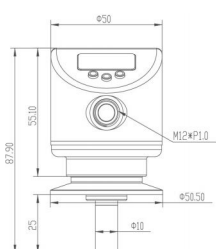4 BK-黑色 PNP/NPN（Flow）
3 BU-蓝色 V-

BFT2P80

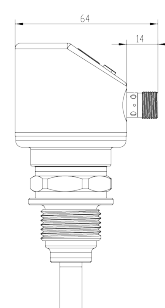1 BN-棕色 V+
4 BK-黑色 PNP/NPN
3 BU-蓝色 V-

BFT1P37/BFT1N37

Product Dimensions Chart

BFT2X37/BFT2D37

BFT2X77/BFT2D77
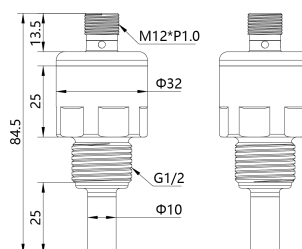
BFT2X27/BFT2D27

BFT1P37/BFT1N37

BFT2D8D/BFT2P80

PRESSURE SENSOR
BPD series
BPS series
BPT series
BPH series
BPQ series
BPC series

TEMPERATURE SENSOR
BTD series
BTS series

FLOW SENSOR
BFW series
BFG series
BFT series
BFV series

LEVEL SENSOR
BLC series
BLT series
BLM series
BLF series
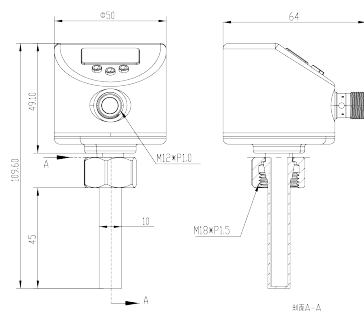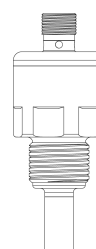
Product Order Number

Order Number	BFT2X37	BFT2D37	BFT2X77	BFT2D77	BFT2X27	BFT2D27	BFT2D8D	BFT2P80	BFT1P37	BFT1N37
process connection	G1/2 external thread		G3/4 external thread		1.5-inch chuck		M18*1.5 internal thread		G1/2 external thread	
probe length	25mm				25mm		45mm		25mm	
output method	1-channel switch value + 2-channel analog value	2-channel switch signal + 1-channel analog signal	1-channel switch value + 2-channel analog value	2-channel switch signal + 1-channel analog signal	1-channel switch value + 2-channel analog value	2-channel switch signal + 1-channel analog signal	2-channel switch signal + 1-channel analog signal	2-channel switch signal	1-way switch, PNP	1-way switch, NPN
display mode	Digital liquid crystal display								No display	

*The standard model features a 4...20mA output. If a 0...10V output is required, the standard model should be designated with "-V".
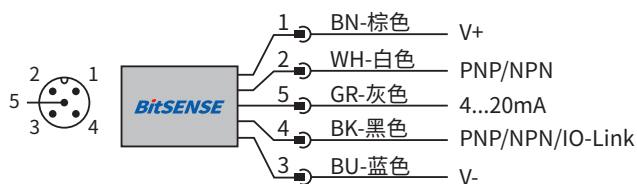
Vortex Flowmeter - BFV Series

Product Features

· Flow Measuring range: 1-120 l/min
· Integrated flow and temperature monitoring
· Integrated IO-Link, switch quantity, analog output
· TFT digital display
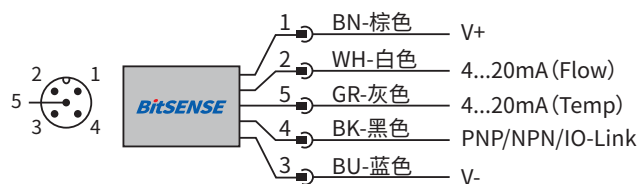· button-operated

PRODUCT SPECIFICATIONS

Order Number	BFV2S08	BFV2S10	BFV2S15	BFV2S20	BFV2S25	BFV2A08	BFV2A10	BFV2A15	BFV2A20	BFV2A25
Application Range	Water, coolant, ethylene glycol solution, etc									
Flow Measuring range	1~15 l/min	3~30 l/min	5~50 l/min	8~80 l/min	12~120 l/min	1~15 l/min	3~30 l/min	5~50 l/min	8~80 l/min	12~120 l/min
Temperature Measuring range	0~100°C									
pipeline connection	G1/2 internal thread	G1/2 internal thread	G1/2 internal thread	G3/4 internal thread	G1 internal thread	G1/2 internal thread	G1/2 internal thread	G1/2 internal thread	G3/4 internal thread	G1 internal thread
pipe diameter	DN8	DN10	DN15	DN20	DN25	DN8	DN10	DN15	DN20	DN25
Operating voltage	24V±10% DC									
output method	Switching value/Number of analog outputs/IO-Link, configurable									
OUT1	PNP/NPN, IO-Link, configurable					PNP/NPN, IO-Link, configurable				
OUT2	4~20mA					4~20mA				
OUT3	PNP/NPN,Configurable					4-20mA				
output interface	M12,Acode，5 stitches									
Flow measurement accuracy	≤3%F.S.									
Temperature measurement accuracy	≤1°C									
Response time	≤3s									
digital display	Digital Display									
circuit protection	Reverse polarity protection									
display mode	TFT,128*128									
ambient temperature	-20-85°C									
Material of Housing and body	304stainless steel+PP									
Pressure rating	16 bar									
Filtration accuracy requirements	≤100μm									
Protection class	IP65/IP67									

*For other customization needs, please contact your local sales representative.

Wiring Diagram
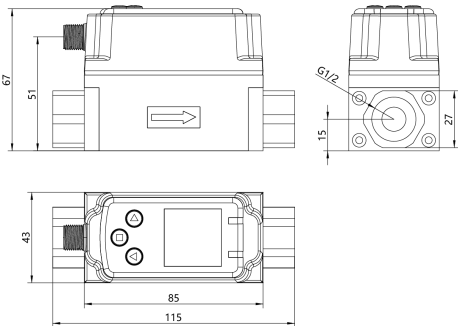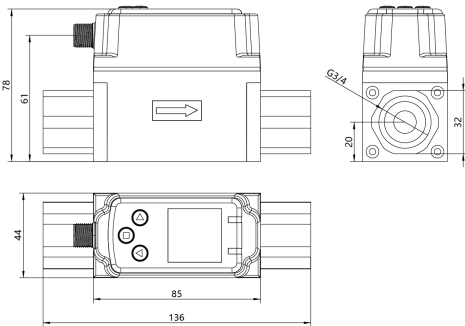
Pin	Wire	Signal
1	BN-棕色	V+
2	WH-白色	PNP/NPN
5	GR-灰色	4...20mA
4	BK-黑色	PNP/NPN/IO-Link
3	BU-蓝色	V-

BFV2S_

Pin	Wire	Signal
1	BN-棕色	V+
2	WH-白色	4...20mA (Flow)
5	GR-灰色	4...20mA (Temp)
4	BK-黑色	PNP/NPN/IO-Link
3	BU-蓝色	V-

BFV2A_

Fluid sensor
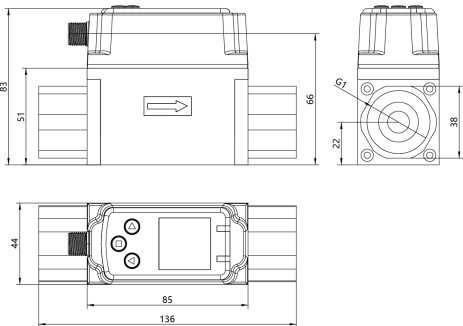
PRESSURE
SENSOR

BPD series
BPS series
BPT series
BPH series
BPQ series
BPC series

TEMPERATURE
SENSOR

BTD series
BTS series

FLOW
SENSOR

BFW series
BFG series
BFT series
BFV series

LEVEL
SENSOR

BLC series
BLT series
BLM series
BLF series

Capacitive level gauge - BLC series

Product Introduction

Capacitive intelligent liquid level gauge is a liquid level transmitter that can be applied to liquids, oils, and solid particles. With no moving parts, it is minimally affected by water vapor, dust, or condensation, greatly enhancing its reliability. It features long-term stability and reliability, high sensitivity, good linearity, high temperature resistance, high pressure resistance, and other characteristics. It can be widely used in industries such as petroleum, chemical, metallurgy, power, paper making, and pharmaceuticals.

● simple structure

● Multiple signal output modes

● It is suitable for liquid level measurement of high-temperature and high-pressure vessels, and the measured value is not affected by the shape and pressure of the vessel

● Made of 316L stainless steel and PTFE material, it is particularly suitable for measuring strong corrosive liquids such as acids and alkalis

● Comprehensive electrical protection against overcurrent, overvoltage, and power polarity reversal

● Optional explosion-proof

Technical Parameter

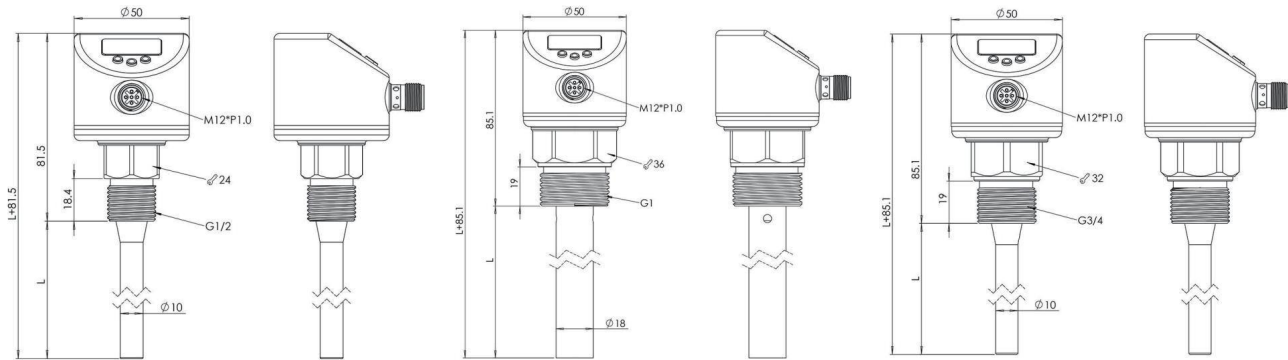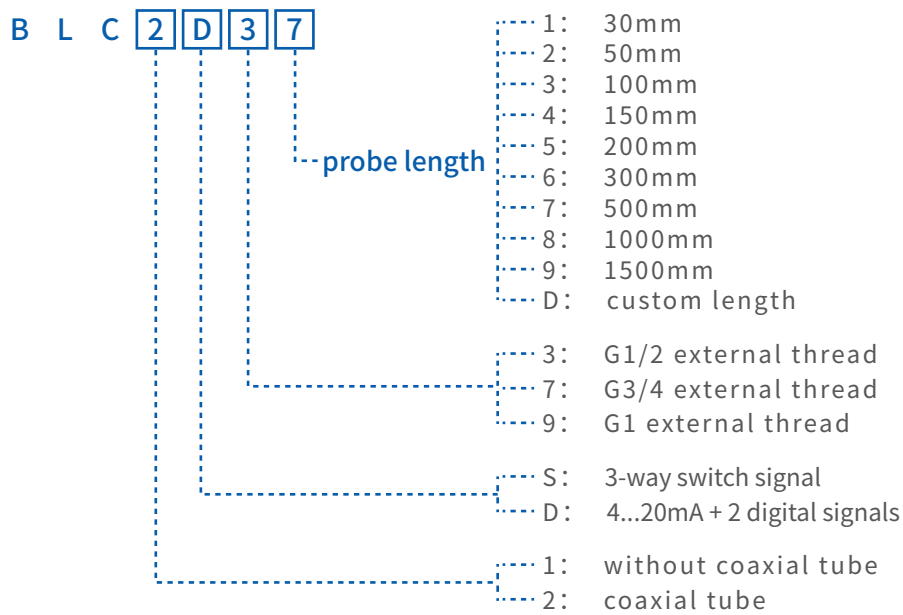|			
probe length	1~1500mm（customizable）	Protection class	IP67
power supply voltage	18...30V DC	Contact media material	PTFE、316L stainless steel
Switch Repeatability	±0.25%FS (Typ.)	Sensor housing	304 stainless steel
Number of analog outputs accuracy	±0.5%FS (Typ.)	current consumption	≤35mA
temperature drift	±0.02%FS (Typ.)	response time	≤50ms
pressure resistance	-0.1~4MPa	Resistant to vibration	10g/0~500Hz
Resistance to ambient temperature	-40~80°C	impact resistance	50g/1ms
Resistance to Medium temperature	-50~150°C	electrical connection	M12 A-code joint
line protection	Inversion includes，Overload protection，Short-circuit protection	Process interface	G1/2，G3/4，G1 external thread
signal output	4...20mA / 0...10V（optional）+2*PNP/NPN，3*PNP/NPN		

Wiring Diagram
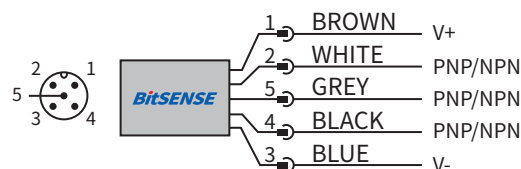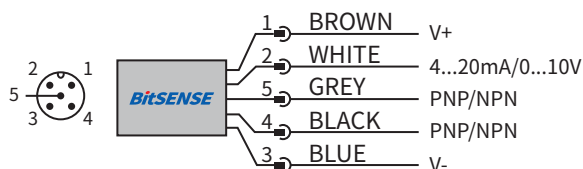
Installation Precautions

● During installation, the connection method of the product should be checked before connecting it.

● This product is a precision transmitter, and it is strictly prohibited to disassemble, collide with, drop, or violently shake it.

● If the capacitance value is found to exceed the maximum range of 2800pF during use, it indicates a problem with the mechanical structure of the product, and there is a risk of leakage from the detection electrode. Please stop using it.

● Made of 316L stainless steel and PTFE material, it is particularly suitable for measuring strong corrosive liquids such as acids and alkalis.

● The Housing of this series of products must be reliably grounded, with a grounding resistance of <4Ω. For applications involving plastic tanks, please use a grounding pipe sleeve for installation.
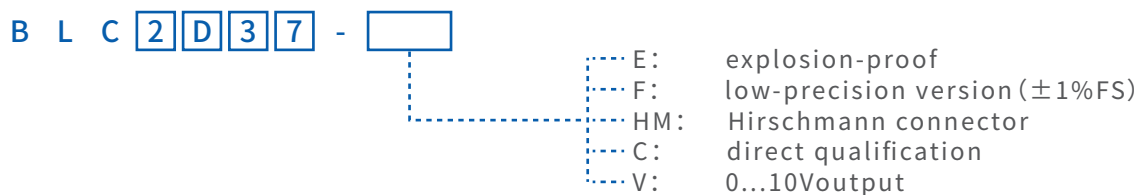
Product Dimensions Chart

Model Selection

Capacitance level meter:

B L C 2 D 3 7

probe length

- 1: 30mm
- 2: 50mm
- 3: 100mm
- 4: 150mm
- 5: 200mm
- 6: 300mm
- 7: 500mm
- 8: 1000mm
- 9: 1500mm
- D: custom length

- 3: G1/2 external thread
- 7: G3/4 external thread
- 9: G1 external thread

- S: 3-way switch signal
- D: 4...20mA + 2 digital signals

- 1: without coaxial tube
- 2: coaxial tube

*Note: When the container is made of non-metallic material, please choose a product with a coaxial tube.

*The selection rules do not cover all combinations. Please confirm the specific model with your local sales representative.

Other customization requirements can be added after the order number:

B L C 2 D 3 7 - ☐

- E: explosion-proof
- F: low-precision version (±1%FS)
- HM: Hirschmann connector
- C: direct qualification
- V: 0...10Voutput

Capacitive level sensor with temperature integrated - BLT series

Fluid sensor

PRESSURE
SENSOR

BPD series
BPS series
BPT series
BPH series
BPQ series
BPC series

TEMPERATURE
SENSOR

BTD series
BTS series

FLOW
SENSOR

BFW series
BFG series
BFT series
BFV series

LEVEL
SENSOR

BLC series
BLT series
BLM series
BLF series

Product Introduction

The capacitive liquid level and temperature integrated meter is a sensor that can be applied to liquids, oils, and solid micro-particles, providing an integrated measurement of liquid level and temperature.

With no moving parts, it is minimally affected by water vapor, dust, or condensation, greatly enhancing its reliability. It features long-term stability and reliability, high sensitivity, good linearity, high temperature resistance, and high pressure resistance. It can be widely applied in various industries such as petroleum, chemical, metallurgy, power, paper-making, and pharmaceuticals.

- simple structure
- Multiple signal output modes
- It is suitable for liquid level measurement of high-temperature and high-pressure vessels, and the measured value is not affected by the shape and pressure of the vessel
- Made of 316L stainless steel and PTFE material, it is particularly suitable for measuring strong corrosive liquids such as acids and alkalis
- Comprehensive electrical protection against overcurrent, overvoltage, and power polarity reversal
- Optional explosion-proof

Technical Parameter

probe length	1~1500mm （customizable)		Protection class	IP67
power supply voltage	18...30V DC		Contact media material	PTFE、316L stainless steel
Liquid level measurement accuracy	±0.5%FS (Typ.)		Sensor housing	304 stainless steel
Temperature measurement accuracy	±0.1°C		current consumption	≤35mA
temperature drift	±0.02%FS (Typ.)		response time	≤50ms
pressure resistance	-0.1~30 MPa		Resistant to vibration	10g/0~500Hz
Resistance to ambient temperature	-40~80°C		impact resistance	50g/1ms
Resistance to Medium temperature	-50~150°C		electrical connection	M12 A-code joint
line protection	Inversion includes，Overload protection，Short-circuit protection		Process interface	G1/2 ， G3/4 ， G1 external thread
signal output	4...20mA / 0...10V （optional）+2*PNP/NPN			
	2*4...20mA / 0...10V （optional）+PNP/NPN			

Wiring Diagram
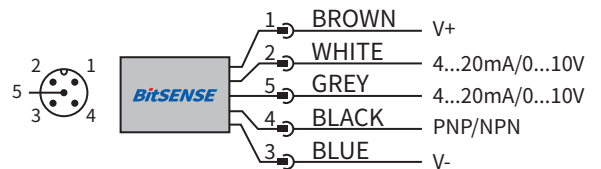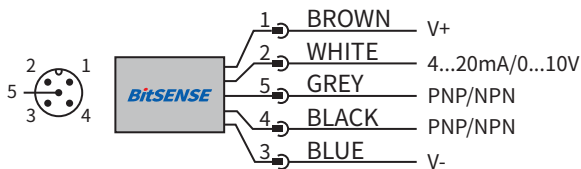
1	BROWN	V+
2	WHITE	4...20mA/0...10V
5	GREY	PNP/NPN
4	BLACK	PNP/NPN
3	BLUE	V-

|		
1	BROWN	V+
2	WHITE	4...20mA/0...10V
5	GREY	4...20mA/0...10V
4	BLACK	PNP/NPN
3	BLUE	V-

Installation Precautions

- During installation, the connection method of the product should be checked before connecting it.

- This product is a precision transmitter, and it is strictly prohibited to disassemble, collide with, drop, or forcefully throw it.

- If the capacitance value is found to exceed the maximum range of 2800pF during use, it is likely that there is a problem with the mechanical structure of the product, indicating a risk of leakage from the detection electrode,Please stop using it.

- The Housing of this series of products must be reliably grounded, with a grounding resistance of <4Ω. For applications involving plastic tanks, please use a grounding pipe sleeve for installation.

Product Dimensions Chart
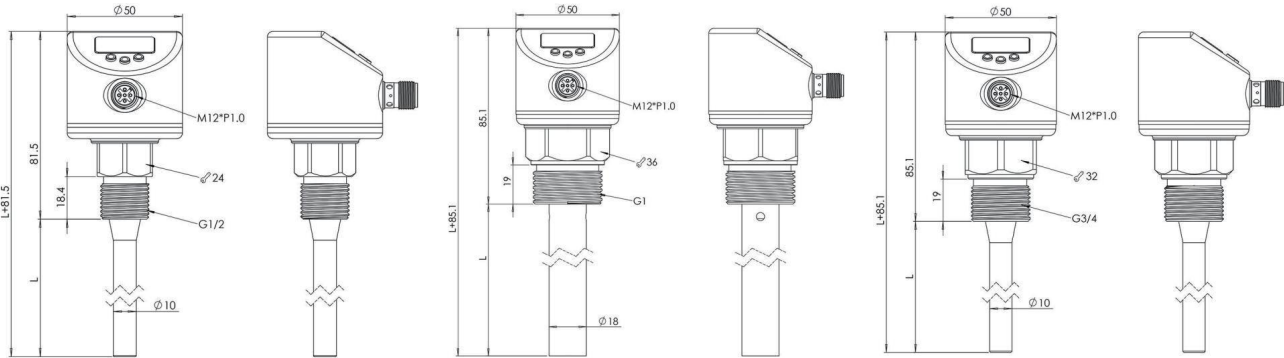
Model Selection

Capacitive liquid level gauge:

B L T 2 D 3 7

probe length

- 1: 30mm
- 2: 50mm
- 3: 100mm
- 4: 150mm
- 5: 200mm
- 6: 300mm
- 7: 500mm
- 8: 1000mm
- 9: 1500mm
- D: custom length

- 3: G1/2 external thread
- 7: G3/4 external thread
- 9: G1 external thread

- X: 2*4...20mA++1 digital input
- D: 4...20mA + 2 digital signals

- 1: without coaxial tube
- 2: coaxial tube

*Note: When the container is made of non-metallic material, please choose a product with a coaxial tube.
*The selection rules do not represent all combinations. Please confirm the specific model with your local salesperson.

Other customization requirements can be added after the order number:

B L T 2 D 3 7 - ☐

- E: explosion-proof
- F: Low-precision version (±1%FS)
- HM: Hirschmann connector
- C: direct qualification
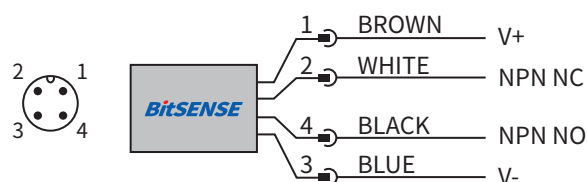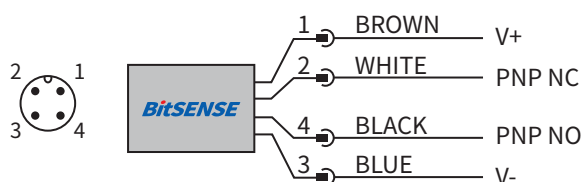- V: 0...10V output

Impedance Level Switch - BLM Series

| Product Features

· Spectrum scanning principle

· Stainless steel Housing + PEEK sensor head

· anti-adhesion effect

· Standard industrial type, food hygiene type, high temperature type, and reverse thread type are available for selection
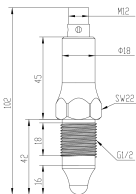
PRODUCT SPECIFICATIONS

PNP output	BLM1P3G	BLM1P3A	BLM1P3R	BLM1P3A-100	BLM1P3A-150	BLM1P3A-200	BLM1P3A-250	BLM1P3H-82	BLM1P3A-T
NPN output	BLM1N3G	BLM1N3A	BLM1N3R	BLM1N3A-100	BLM1N3A-150	BLM1N3A-200	BLM1N3A-250	BLM1N3H-82	BLM1N3A-T
Measuring principle	spectrum scanning								
Applicable Environment	Standard Industry	food hygiene (For use with food clamps)	reverse thread type	Standard Industry -Extended version	Standard Industry -Extended version	Standard Industry -Extended version	Standard Industry -Extended version	food hygiene -Extended version	high-temperature type
probe length	42	50	-	100	150	200	250	117	50
hysteresis	±1mm								
Repeatability	±5mm								
power supply voltage	12~30VDC								
Startup time	< 1s								
response time	0.2s								
Damping time	0~5s（Configurable）								
current consumption	< 40mA								
output current	< 20mA								
Electrical protection	Short-circuit protection, reverse protection, overvoltage protection								
Output logic	NO（Normally Open）+NC（normally closed）								
Medium temperature	-40~80°C								-40~150°C
ambient temperature	-40~85°C								
Storage temperature	-40~85°C								
Pressure rating	< 10MPa								
wetted material	PEEK+316L								
Housing material	316L								
Protection class	IP67								
electrical interface	M12 4-pin Connector								

Wiring Diagram

1	BROWN	V+
2	WHITE	PNP NC
4	BLACK	PNP NO
3	BLUE	V-

PNP output

1	BROWN	V+
2	WHITE	NPN NC
4	BLACK	NPN NO
3	BLUE	V-

NPN output

Product Dimensions Chart

BLM1P3G
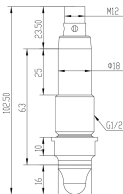
BLM1P3R
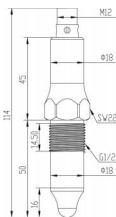
BLM1P3A

BLM1P3A-100
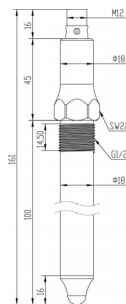
BLM1P3A-150

BLM1P3A-200

BLM1P3A-250

BLM1P3H-82

PRESSURE
SENSOR

BPD series
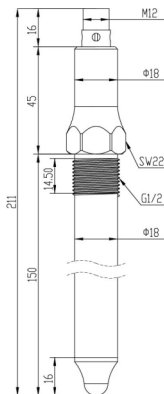BPS series
BPT series
BPH series
BPQ series
BPC series

TEMPERATURE
SENSOR

BTD series
BTS series

FLOW
SENSOR

BFW series
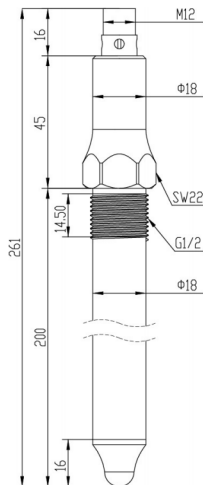BFG series
BFT series
BFV series

LEVEL
SENSOR

BLC series
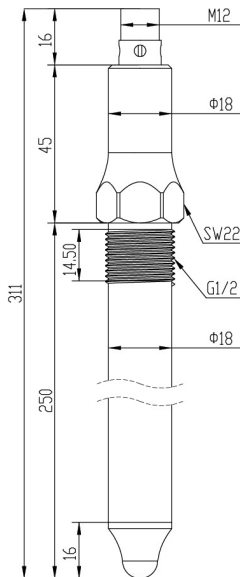BLT series
BLM series
BLF series

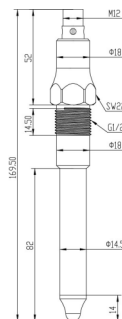# Tuning fork liquid level switch - BLF series

Product Introduction

The BLF1E series tuning fork level switch is a liquid level sensor designed based on the principle of tuning fork vibration, which can be used for level detection of liquids, powders, solid particles, and other materials.
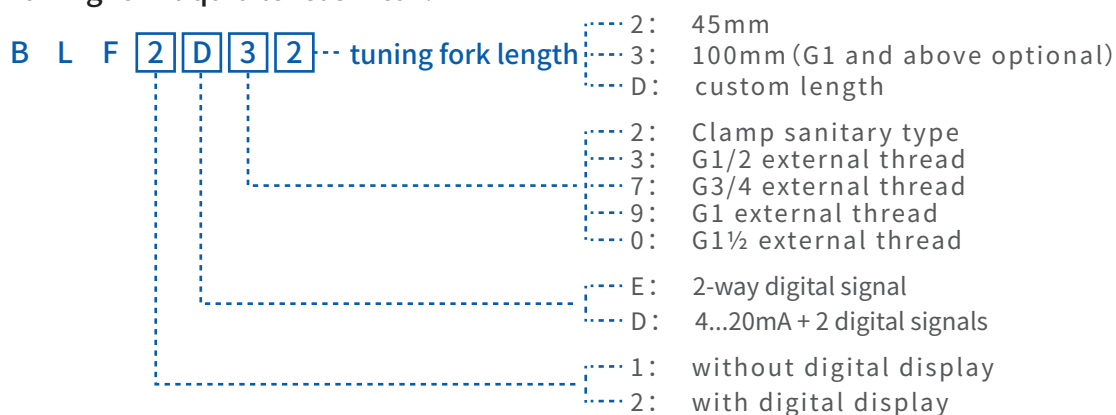
● 316L stainless steel fork body

● 304 stainless steel Housing

● Comprehensive electrical protection against overcurrent, overvoltage, and power polarity reversal

● PNP, NPN dual output (numerous display versions)

● 2-channel switch signal + 1-channel analog signal (digital display version)

● Optional intrinsically safe or explosion-proof type

Technical Parameter

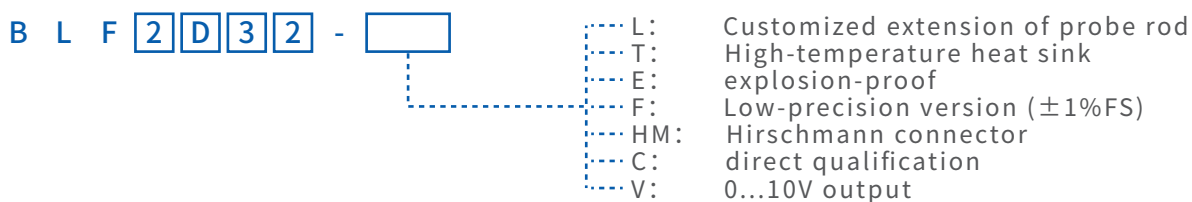|			
probe length	45mm, 100mm, 200mm are optional	Protection class	IP67
power supply voltage	18...30V DC	Sensor housing	304 stainless steel
Measurable media	Liquid, powder, or granular solid	Fork body material	316L stainless steel
Viscosity of the tested liquid	<1000mm2/s	Resistant to vibration	10g/0~500Hz
Density of the measured media	Solid: ≥0.1g/cm3, Liquid: ≥0.7g/cm3	impact resistance	50g/1ms
Tested solid particles	≤10mm	electrical connection	M12 A-code connector
Resistance to ambient temperature	-20 ~ 80°C	Process interface	Clamp, G1/2, G3/4, G1, G3/2 external threads
Resistance to Medium temperature	-40 ~120°C	response time	≤3ms
line protection	Inversion includes，Overload protection，Short-circuit protection	vibration frequency	300±50Hz (no digital display), 1200±50Hz
signal output	PNP/NPN	Switching time	0.2s, with a switch delay time that can be set
current consumption	≤45mA	Analog quantity accuracy	≤±0.5%FS

Model Selection

Tuning fork liquid level switch:

B L F [2] [D] [3] [2] --- tuning fork length

- 2: 45mm
- 3: 100mm (G1 and above optional)
- D: custom length

- 2: Clamp sanitary type
- 3: G1/2 external thread
- 7: G3/4 external thread
- 9: G1 external thread
- 0: G1½ external thread

- E: 2-way digital signal
- D: 4...20mA + 2 digital signals

- 1: without digital display
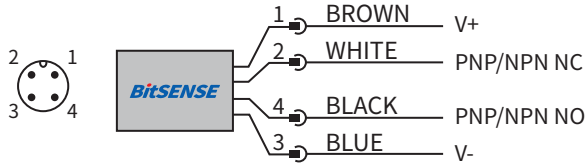- 2: with digital display

*The selection rules do not represent all combinations. Please confirm with the local sales for specific models.

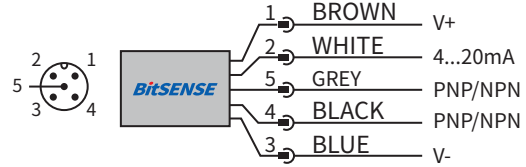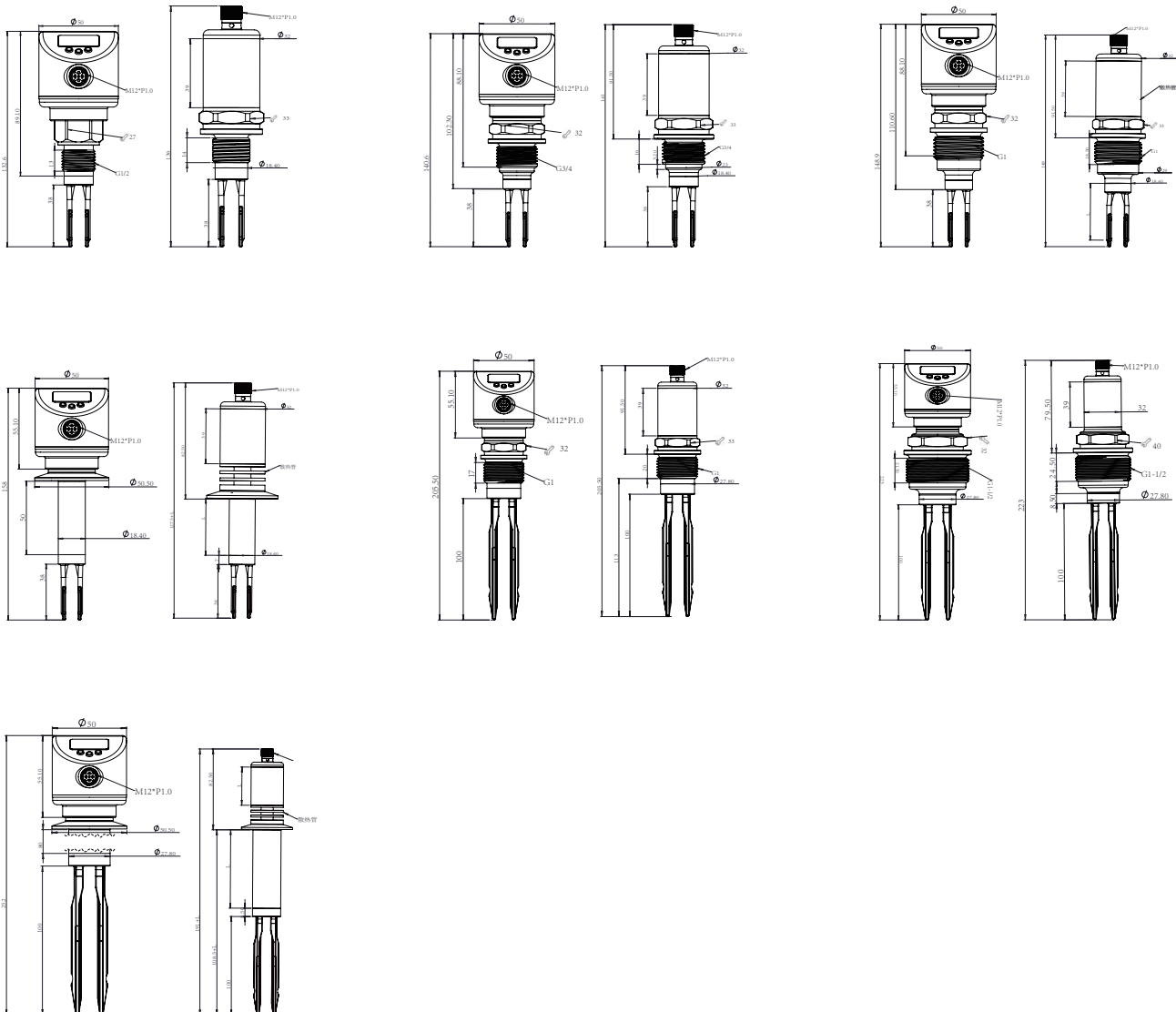### Other customization requirements can be added after the order number:

B L F [2] [D] [3] [2] - [   ]

- L: Customized extension of probe rod
- T: High-temperature heat sink
- E: explosion-proof
- F: Low-precision version (±1%FS)
- HM: Hirschmann connector
- C: direct qualification
- V: 0...10V output

Wiring Diagram

BROWN — V+
WHITE — PNP/NPN NC
BLACK — PNP/NPN NO
BLUE — V-

BLF1E series

BROWN — V+
WHITE — 4...20mA
GREY — PNP/NPN
BLACK — PNP/NPN
BLUE — V-

BLF2D series

Product Dimensions Chart

Product Overview:

Pressure Sensor

Temperature Sensor

Level Sensor

Flow Sensor

RFID Identification System

IO-Link Module

Laser Sensor

Proximity Sensor

Photo Sensor

Ultrasonic Sensor

Connecting Cable

Accesory

6
CORE VALUE

CUSTOMIZED DESIGN

INNOVATIVE TECHNOLOGY

Excellence IN QUALITY

DIVERSE PRODUCT LINE

QUICK RESPONSE

360 SERVICES
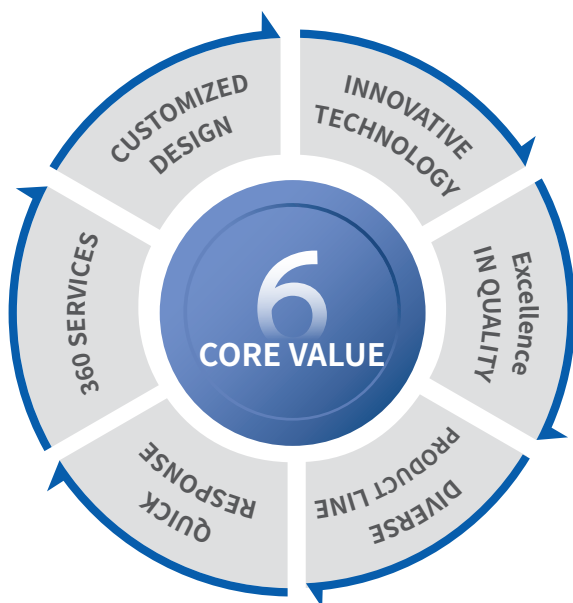
BitSENSE Electronics (Suzhou) Co., Ltd

URL：www.bitsense.cn
E-mail：info@bitsense.cn
TEL：0512-66961798
Service Line：400-021-2555
Add：No. 96, Weixi Road, Suzhou Industrial Park

If there are any changes to the information in this document, no further notice will be given.

Printing may cause differences between the product images and the actual product samples. Please refer to the actual product when making a purchase.