

## LS501 Smart Pressure Transmitter

LS501 smart pressure transmitter, assembled with advanced, mature, reliable capacitance sensors, has been designed meticulously by combining advanced microprocessor technology and digital capacitance measurement technology. The powerful functions and high-speed computing capability of the microprocessor make it have excellent qualifications such as smart, high precision, high reliability, stable zero and so on. LCD display has many physical parameters (e.g. pressure, temperature, current and so on). It can realize the functions such as zero adjustment, range settings by key-press operation, and it is easy for field testing. LS501 smart pressure transmitter supports HART, FF protocol and can measure pressure, differential pressure, liquid level, flow, and other industrial parameters. It can be widely used in the petroleum, chemical, electric power, water conservancy, metallurgy, heat, food, medical, environmental control, science lab etc.



### Specifications:

Pressure range:	0 to 10Kpa...52Mpa (gauge pressure) 0 to 20Kpa...3Mpa (absolute pressure ) 0 to 14Mpa (differential pressure)
Output signal	2-wired, 4-20mA DC, HART, FF
LCD Display	6 bits or 5 bits
Stability:	0.1%/year
Power supply:	12-42VDC
Protection:	IP65, IP67
Explosion proof	intrinsically safety Ex ia II C T4
Working temperature:	-40 to 85°C (no display) -30 to 70°C (with display) -30 to 60°C (explosion proof)
Range ratio	10:1
Over load	200%FS
Medium	Gas, liquids and steam
Load resistance	0 to 1500ohm (common) 250 to 550ohm (with HART)
Accuracy:	0.1%FS, 0.2%FS, 0.25%FS
Electrical connection	M20*1.5, 1/2NPT.others as required.
Relative humidity:	5-100%RH
Storage temperature:	-40 to 100C ( no display) -40 to 85C ( display)
Start time	≤ 5 seconds
Refresh time	0.2 seconds
diaphragm material	316LSS, Hastelloy
Materials	Isolated Membrane and exhaust/outlet valve:316 stainless steel;

	Flange and connector:316 stainless steel; O-ring: fluororubber; Filled liquid: silicon oil or fluorocarbon oil; Bolt: zinc plating carbon steel;( the material above should be selected at order, if has other requirement, please report in advance) Housing: low copper of albrnze; Coating: dion epoxy resin
Process connection:	1/2NPT, 1/4NPT, others as required.
Weight:	Display type:3.5kg No display type:3.3kg



Structure and installation

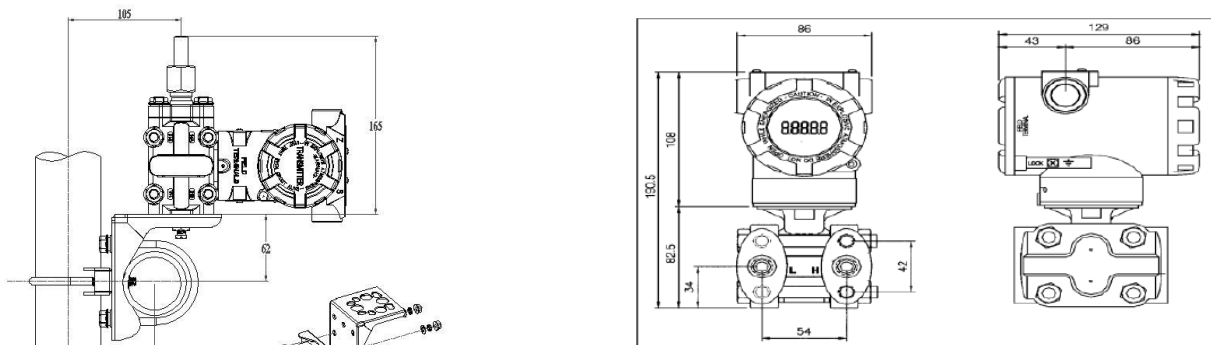
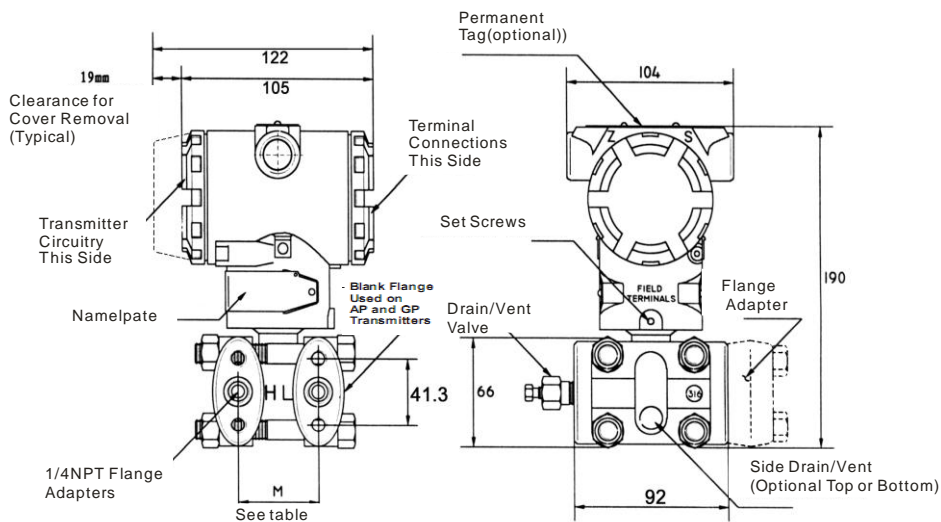
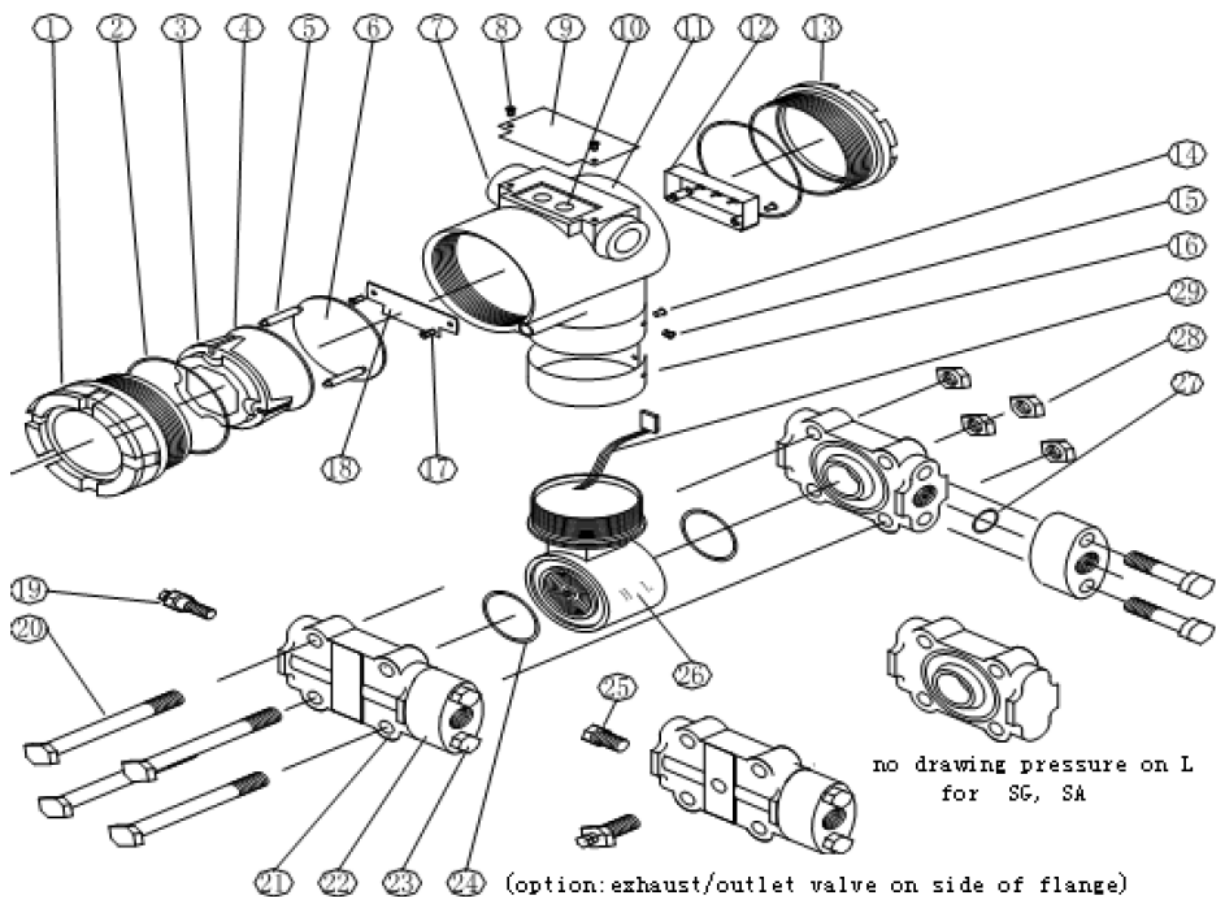
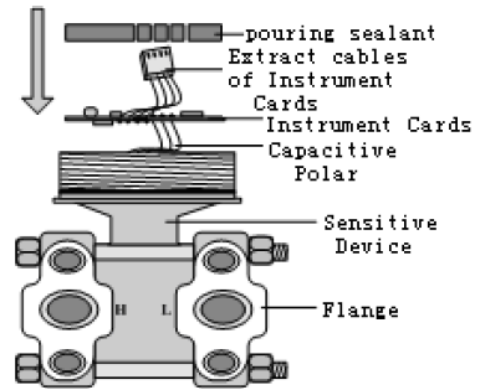
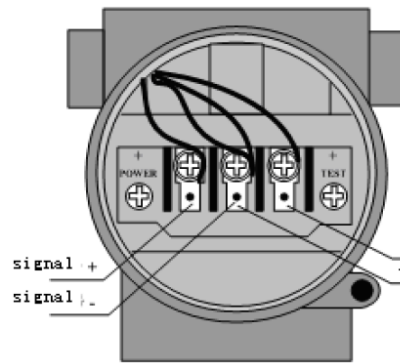
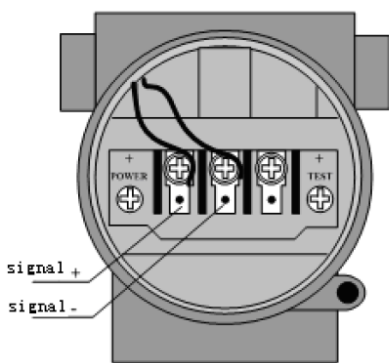
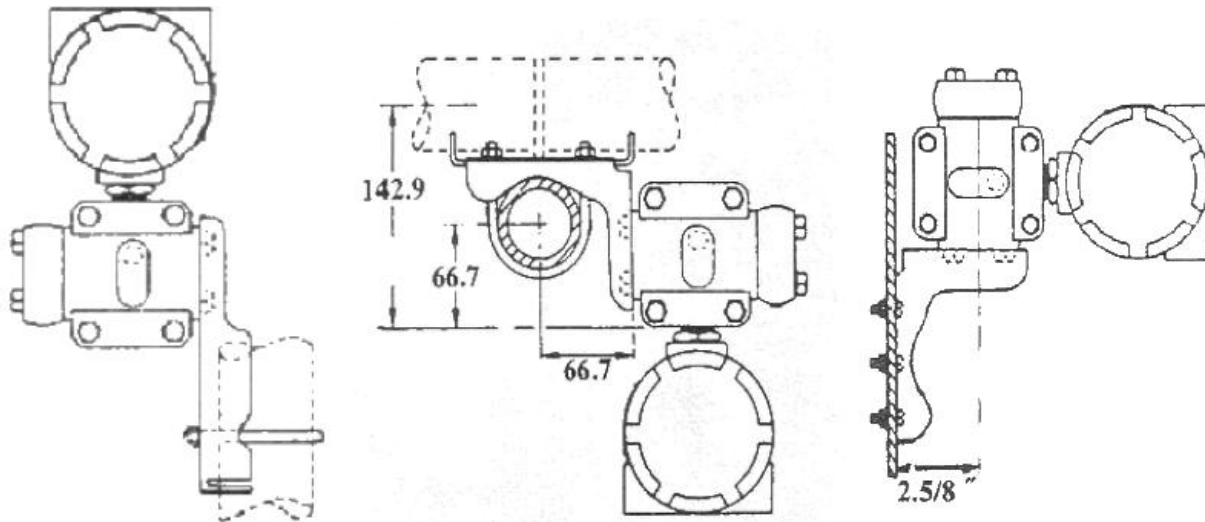


Figure 1-1 Smart Transmitter Size (Unit: mm)

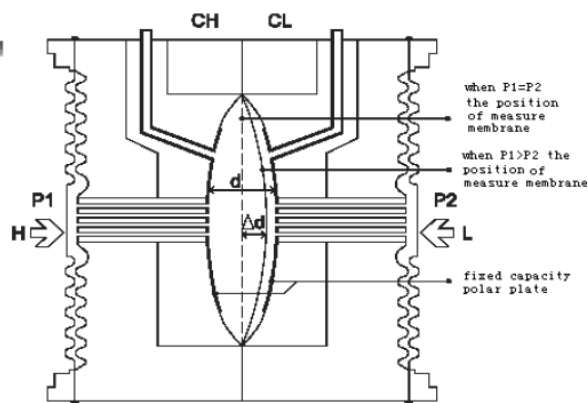
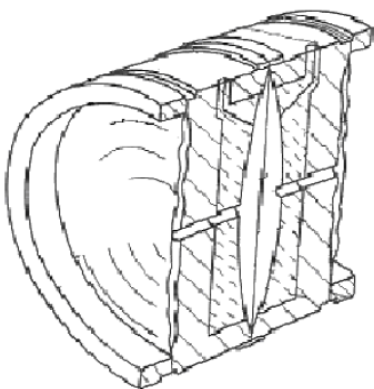




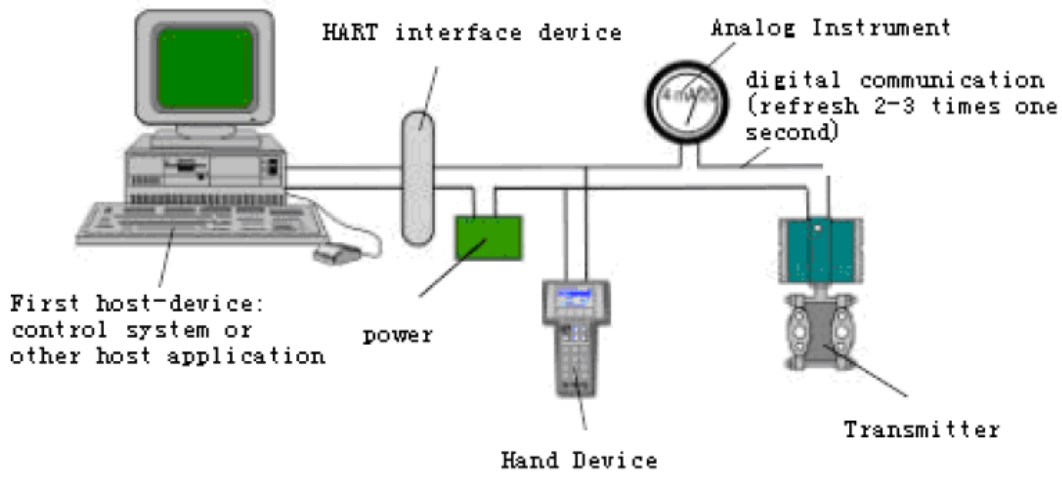
1	Front cover	2	O-ring	3	Display card hosing	4	LCD card
5	Location Column	6	Communication board	7	Wiring hole	8	Name plate screw
9	Name plate	10	Z/S hole	11	Electric housing	12	Pin board
13	Rear cover	14	Lock screw	15	Brand plate screw	16	Brand plate
17	Screw	18	Terminal board	19	Exhaust/outlet valve	20	Bolt
21	Flange	22	Transition joint	23	Bolt	24	O-ring
25	Vent/flange adapter	26	Sensor	27	O-ring	28	Screw
29	Instrument card wire						



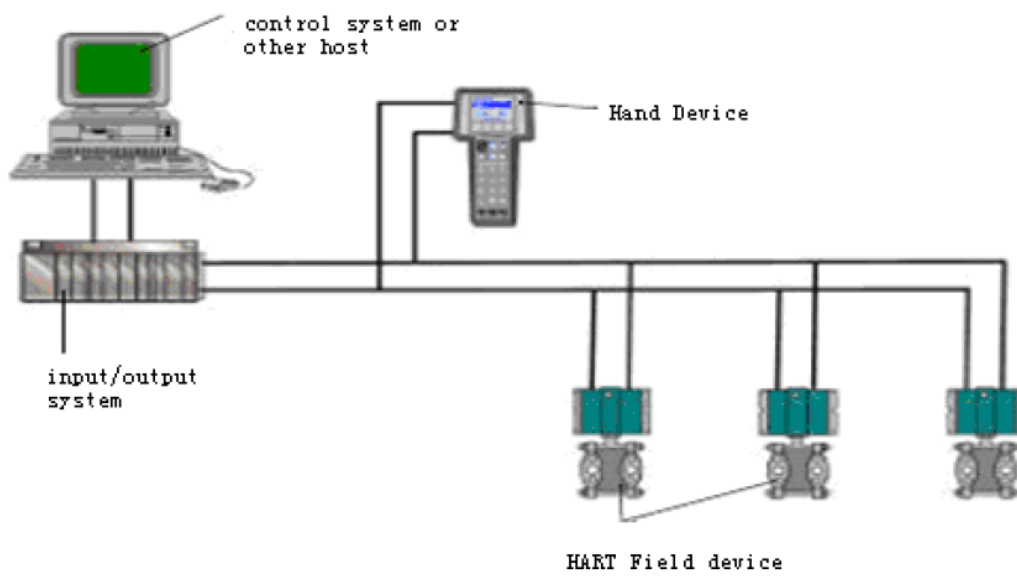
Sensor and Instrument Board



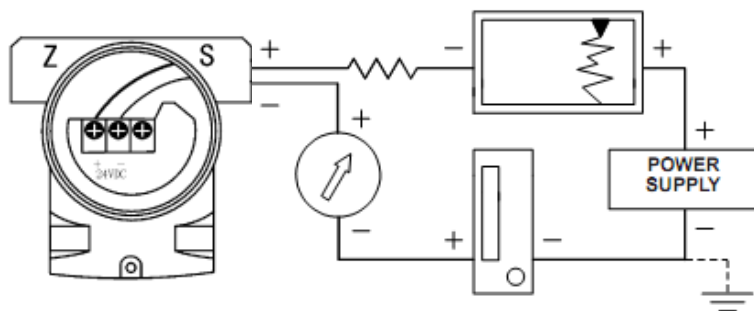
Sensor Capacitance Membrane



**Point-to-Point Connection**



**Multi-Point Connection**



## Model &amp; Ordering guide

LS501 Smart pressure transmitter							
LS501		Smart pressure transmitter					
Pressure type					LS501G	LS501A	LS501D
G	Gauge pressure				Y		
A	Absolution pressure					Y	
D	Differential pressure						Y
Pressure range:							
1	0.075kPa to 7.5kPa				Y		Y
2	0.374Kpa to 37.4Kpa				Y	Y	Y
3	1.86Kpa to 186.8Kpa				Y	Y	Y
4	6.9Kpa to 690Kpa				Y	Y	Y
5	20.68Kpa to 2068Kpa				Y	Y	Y
6	68.9Kpa to 6890Kpa				Y	Y	Y
7	206.8Kpa to 2068Kpa				Y		
8	413.7Kpa to 41370Kpa				Y		
Communication:							
H	Hart				Y	Y	Y
F	FF				Y	Y	Y
Structure material							
	Flange	Vent/Drain valve	Isolated Membran	Filled liquid			
11	316SS	316SS	316SS	Silicon	Y	Y	Y
Display							
W	LCD display				Y	Y	Y
N	No display				Y	Y	Y
Explosion proof							
DA	Ex d IIC T6				Y	Y	Y
IA	Ex ia IIC T6				Y	Y	Y
IB	Ex ia IIC T5				Y	Y	Y
IC	Ex ia IIC T4				Y	Y	Y

Optional				
Mounting bracket		LS501G	LS501A	LS501D
B1	Pipe mounting bracket (angle type)	Y	Y	Y
B2	Pipe mounting bracket (flat type)	Y	Y	Y
B3	Plate mounting bracket (angle type)	Y	Y	Y
Drawing Pressure connector				
N2	1/2NPT	Y	Y	Y
M2	M20*1.5	Y	Y	Y
Three way manifold material				
T1	Carbon steel	Y	Y	
T2	Stainless steel	Y	Y	

## LS501L Direct Flanged Level Pressure Transmitter

LS501L direct flanged level pressure transmitter, assembled with capacitance sensors and flush flange, has been designed meticulously by combining advanced microprocessor technology and digital capacitance measurement technology. The powerful functions and high-speed computing capability of the microprocessor make it have excellent qualifications such as smart, high precision, high reliability, stable zero and so on. It can realize the functions such as zero adjustment, range settings by key-press operation, and it is easy for field testing. LS501L direct flanged level pressure transmitter supports HART protocol and can measure differential pressure, liquid level, flow, etc. It can be widely used in the petroleum, chemical, electric power, water conservancy, metallurgy, heat, food, medical, environmental control, science lab etc.



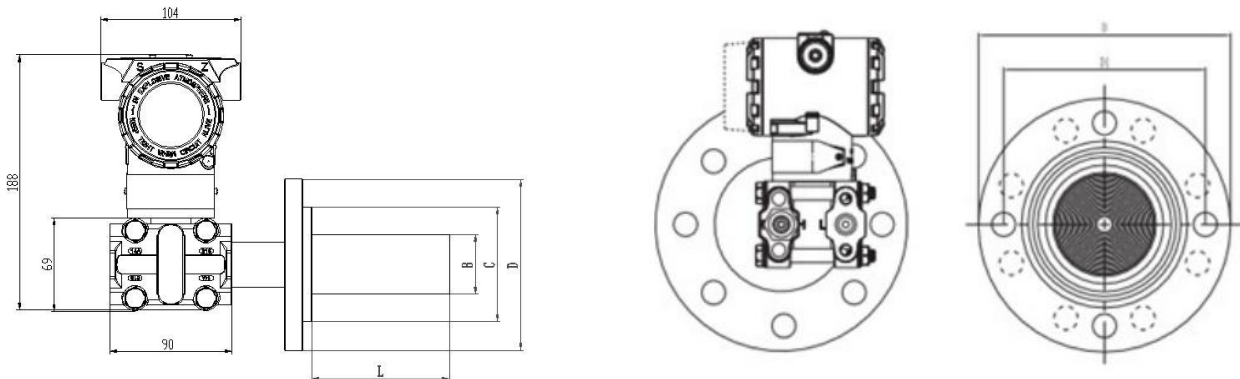
### Specifications:

Pressure range:	0 to 6Kpa...20Mpa
Communication:	2-wired, 4-20mA DC, HART
Display	LCD, LED, 0-100% pointer, 4.5 digits display
Stability:	0.1%/year
Power supply:	16-45VDC
Protection:	IP65, IP67
Explosion proof	intrinsically safety Ex ia II C T4, ExdIIBT4
Working temperature:	-40 to 70C
Range rato	50:1
Over load	200%FS
Medium	Liquids level in open/closed vessel
Load resistance	≥250ohm
Accuracy:	0.1%FS, 0.2%FS, 0.5%FS
Thread connection	M20*1.5. .others as required.
Relative humidity:	0-95%RH
Diaphragm material	316LSS, Hastelloy, Tantalum
Flange	Flange size: DN50, DN80, DN100, 2", 3", 4" Flange type: Flush Flange material: carton steel, stainless steel Flange mounting: left size high, right size high, bottom
Materials	Isolated Membrane and exhaust/outlet valve: 316 stainless steel; Flange and connector: steel; O-ring: fluoro rubber; Filled liquid: silicon oil or fluorocarbon oil; Bolt: zinc plating carbon steel:(the material above should be



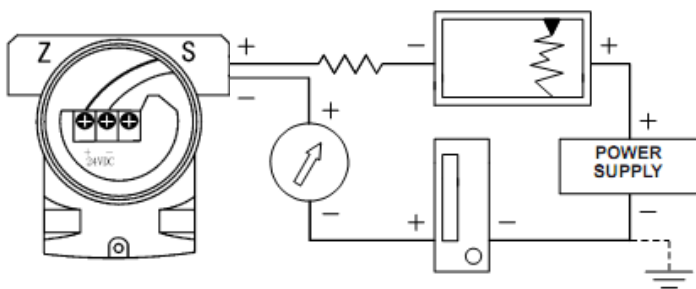
	selected at order,if has other requirement,please report in advance) Housing: low copper of bronze; stainless steel Coating: epoxy resin.
Electrical connection:	Direct wire, terminal, explosion proof wiring terminal.
Weight:	3.5kg (not including accessories, except with Flange) Flange: 3-5kg

**Structure:**

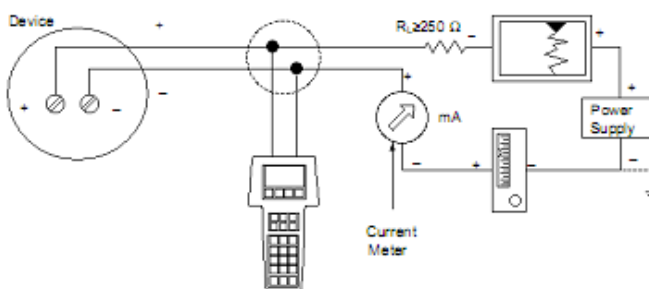


flange size						bolt hole		
dimensions	type	diameter D	A	B	C	number	diameter (d)	diameter distribution (D1)
2"	1501b	150	20	58	99	4	19	120
<b>3"</b>	<b>1501b</b>	<b>190</b>	<b>20</b>	<b>66</b>	<b>127</b>	<b>4</b>	<b>19</b>	<b>152</b>
4"	1501b	228	20	89	157	8	19	190
2"	3001b	165	20	58	99	8	19	127
3"	3001b	210	35	66	127	8	22	168
4"	3001b	254	38	89	157	8	22	200

**Electrical connection:**



**Zero, range, span adjustment by communicator:**



## Model &amp; Ordering guide

LS501L Direct Flanged Level pressure transmitter	
LS501L	Direct Flanged Level pressure transmitter
Pressure type	
H	0.1%FS
M	0.2%FS
S	0.5%FS
Pressure range	
1	0-40kPa
2	0-500Kpa
3	20.68Kpa-2068Kpa
4	68.9Kpa-6890Kpa
5	206.8Kpa-20680Kpa
Communication	
H	4-20mA,Hart
Diaphragm material	
S	316LSS
H	Hastelloy-C
T	Tantalum
Process flange size	
2	2",DN50
3	3", DN80
4	4", DN100
Flange rate	
A1	ANSI/ASME B16.5 Class 150
A3	ANSI/ASME B16.5 Class 300
P1	PN10-18
P4	PN40
Flange material	
C	Cast steel
S	Stainless steel
Flange mounting type	
L	Left size, high presure
R	Right size, high pressure
B	Bottom
Display	
A	0-100% Analog display
C	LCD display
E	LED display
N	No display
Explosion proof	
DC	Ex d IIC T4

IA	Ex ia IIC T6
NA	Without explosion proof
<b>Housing material</b>	
A	Aluminum
S	Stainless steel
<b>Electrical connection / Conduit entry size</b>	
N2	1/2NPT
M2	M20*1.5
ET	Explosion proof wiring terminal

## LS501R Remote Flange Level Pressure Transmitter

LS501R Remote flange level pressure transmitter, assembled with capacitance sensors and flush flange, capillary, is designed for level and pressure measurement. The powerful functions and high-speed computing capability of the microprocessor make it have excellent qualifications such as smart, high precision, high reliability, stable zero and so on. It can realize the functions such as zero adjustment, range settings by key-press operation, and it is easy for field testing. LS501R remote flange level pressure transmitter supports HART protocol and can measure differential pressure, liquid level, flow, etc. It can be widely used in the petroleum, chemical, electric power, water conservancy, metallurgy, heat, food, medical, environmental control, science lab etc.

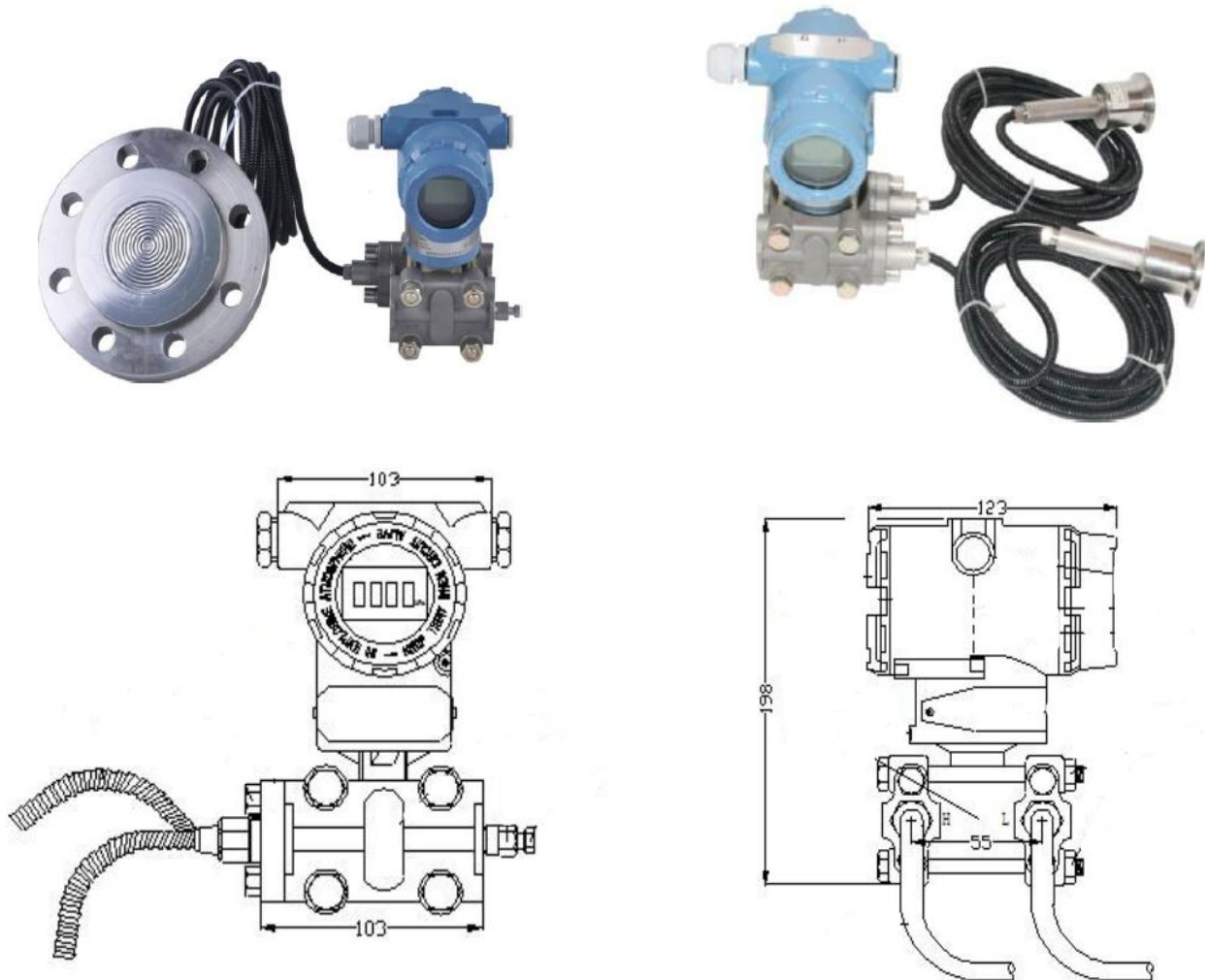


### Specifications:

Pressure range:	0 to 6Kpa...20Mpa
Communication:	2-wired, 4-20mA DC, HART
Display	LCD, LED, 0-100% pointer, 4.5 digits display
Stability:	0.1%/year
Power supply:	16-45VDC
Protection:	IP65, IP67
Explosion proof	intrinsically safety Ex ia II C T4, ExdIIBT4
Working temperature:	-40 to 70C
Range rato	50:1
Over load	200%FS
Medium	Liquids level in open/closed vessel
Load resistance	≥250ohm
Accuracy:	0.1%FS, 0.2%FS, 0.5%FS
Thread connection	M20*1.5. .others as required.
Relative humidity:	0-95%RH
Diaphragm material	316LSS, Hastelloy, Tantalum
Flange	Flange size: DN50, DN80, DN100, 2", 3", 4" Flange type: Flush Flange material: carton steel, stainless steel Flange mounting: remote flange Capillary: 1-15 meters
Materials	Isolated Membrane and exhaust/outlet valve: 316 stainless steel; Flange and connector: steel; O-ring: fluoro rubber; Filled liquid: silicon oil or fluorocarbon oil; Bolt: zinc plating carbon steel: (the material above should be selected at order, if has other requirement, please inform in

	advance) Housing: low copper of bronze; stainless steel Coating: epoxy resin.
Electrical connection:	Direct wire, terminal, explosion proof wiring terminal.
Weight:	3.5kg (not including accessories, except with Flange) Flange:3-5kg/pc

Picture and structure:



Model & Ordering guide

LS501R Remote flange level pressure transmitter	
LS501R	Remote flange Level pressure transmitter
Pressure type	
H	0.1%FS
M	0.2%FS
S	0.5%FS
Pressure range	
1	0-40kPa
2	0-200Kpa

3	20.68Kpa-2068Kpa
4	68.9Kpa-6890Kpa
5	206.8Kpa-20680Kpa
<b>Communication</b>	
H	4-20mA,Hart
<b>Flange 1</b>	
<b>Diaphragm material</b>	
S	316LSS
H	Hastelloy-C
T	Tantalum
<b>Process flange size</b>	
2	2",DN50
3	3", DN80
4	4", DN100
<b>Flange rate</b>	
A1	ANSI/ASME B16.5 Class 150
A3	ANSI/ASME B16.5 Class 300
P1	PN10-18
P4	PN40
<b>Flange material</b>	
C	Cast steel
S	Stainless steel
<b>Flange mounting type</b>	
L	Left size, high pressure
R	Right size, high pressure
B	Bottom
<b>Capillary length (m)</b>	
01	1 meter
02	2 meter
03	3 meter
04	4 meter
05	5 meter
06	6 meter
07	7 meter
08	8 meter
**	others , please write directly
<b>Flange 2</b>	
<b>Diaphragm material</b>	
S	316LSS
H	Hastelloy-C
T	Tantalum
<b>Process flange size</b>	
2	2",DN50
3	3", DN80

4	4", DN100
<b>Flange rate</b>	
A1	ANSI/ASME B16.5 Class 150
A3	ANSI/ASME B16.5 Class 300
P1	PN10-18
P4	PN40
<b>Flange material</b>	
C	Cast steel
S	Stainless steel
<b>Flange mounting type</b>	
L	Left size, high pressure
R	Right size, high pressure
B	Bottom
<b>Capillary length (m)</b>	
01	1 meter
02	2 meter
03	3 meter
04	4 meter
05	5 meter
06	6 meter
07	7 meter
08	8 meter
**	others , please write directly
<b>Display</b>	
A	0-100% Analog display
C	LCD display
E	LED display
N	No display
<b>Explosion proof</b>	
DC	Ex d IIC T4
IA	Ex ia IIC T6
NA	Without explosion proof
<b>Housing material</b>	
A	Aluminum
S	Stainless steel
<b>Electrical connection / Conduit entry size</b>	
N2	1/2NPT
M2	M20*1.5
ET	Explosion proof wiring terminal

**Liide Technology & Equipment CO, Ltd**

**500 Series Pressure Transmitter**

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