



# SITELab

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Multipath Ultrasonic Flowmeter SL3488D Plus

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# About SL3488D Plus

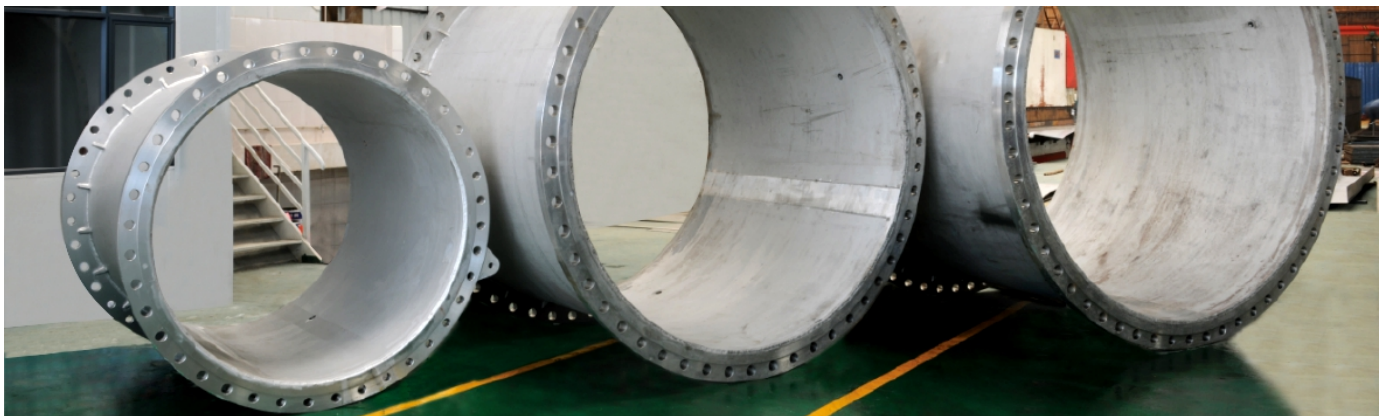
## FEATURES AND CASES



The Model SL3488D Plus Ultrasonic Flowmeter is a state-of-the-art universal transit-time flowmeter designed using ARM COMA technology and low-voltage broadband pulse transmission. While principally designed for clean liquid applications, the instrument is tolerant of liquids with the small amounts of air bubbles or suspended solids found in most industrial environments.

Comparing With other traditional flowmeter or ultrasonic flowmeter, it has distinctive features such as high precision, high reliability, high capability and low cost, the Flowmeter features other advantages:

With ARM COMA chip, low power consumption, high reliability, anti-jamming and outstanding benefits. User-friendly menu designed. Parameters of pipe range, pipe material, pipe wall thickness, output signals, etc can be conveniently entered via the windows. British and Metric measurement units are available. With the TF Card, 512 files can be stored; the time interval can be within 1 second. Parallel operation of positive, negative and net flow totalizer with scale factor and 7 digit display. Internally configured batch controller makes batch control convenient. The flow meter ensures the higher resolution and wider measuring range by the 0.04nS high resolution, high linearity and high stability time measuring circuit and 32 bits digits processing program.



Production Scene(Spool Piece)

We have a 3000m<sup>2</sup> pipeline processing plant, the whole processing include the stainless steel plate cutting, reel pipe, welding and flange mating, then to polishing and pickling etc. Non-destructive testing is districtly carried out during the whole process of welding. With material testing report, it could reach to the design requirements.

# About SL3488D Plus

## SPECIFICATION

### PERFORMANCE SPECIFICATIONS

|               |                                                                                                                                                                                |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flow range    | 0.01~7m/s(0.03~23ft/s)                                                                                                                                                         |
| Accuracy      | Spool piece type: $\pm 0.2\%$ of measured value<br>Insertion type: $\pm 0.5\%$ of measured value                                                                               |
| Repeatability | Spool piece type: 0.07%<br>Insertion type: 0.15%                                                                                                                               |
| Pipe size     | Spool piece type: 100mm~600mm(4"~24")<br>600mm above need additional customization<br>Insertion type: 100mm~5000mm(4"~200")                                                    |
| WiFi          | Frequency range: 2.4-2.4835GHz<br>Transmit power: 12-14dBm<br>Transmission distance: 15-20m (without any obstacle)<br>Wireless standard: IEEE802.11n, IEEE802.11g, IEEE802.11b |

### FUNCTION SPECIFICATIONS

|              |                                                                                                                                                                                                                           |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Outputs      | Analog output: 4~20mA, max load: 750 $\Omega$<br>Pulse output: 0~9999Hz, OCT output (adjustable)<br>Relay output: 125VAC@1A or 30VDC@2A<br>Communication: RS232/RS485 Communication Interface,<br>Support Modbus Protocol |
| TF Card      | Max record: 4GB<br>Storage time interval: 1 ~13000 s                                                                                                                                                                      |
| Power supply | 90~250VAC, 48~63Hz or 10~36VDC                                                                                                                                                                                            |
| Keypad       | 24 light tactile keys                                                                                                                                                                                                     |
| Display      | 4.7 inch TFT color screen(English/Traditional Chinese/Simplified Chinese)                                                                                                                                                 |
| Temperature  | Transmitter: -10°C~60°C (14°F~140°F)<br>Transducer: -40°C~80°C (-40°F~176°F)                                                                                                                                              |
| Humidity     | Up to 99% RH, non-condensing                                                                                                                                                                                              |

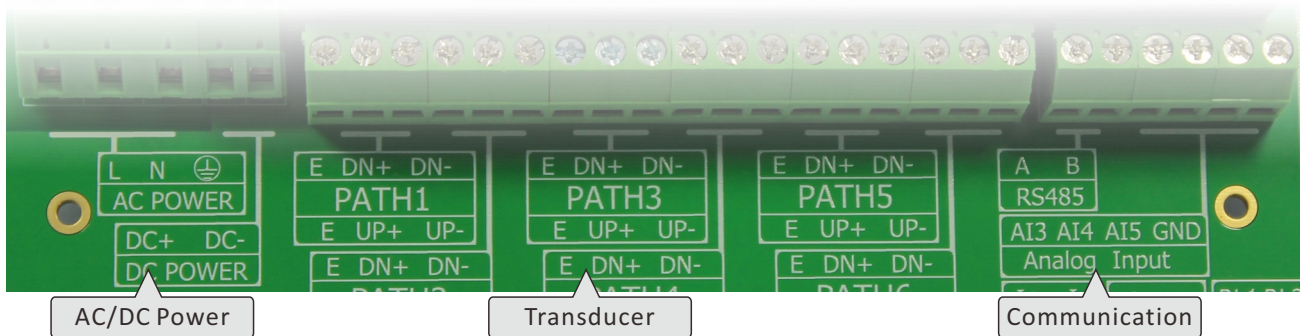
### PHYSICAL SPECIFICATIONS

|             |                                                                                 |
|-------------|---------------------------------------------------------------------------------|
| Transmitter | Die-cast aluminum, IP65                                                         |
| Transducer  | Protection grade: IP68, encapsulated design<br>The standard length of cable: 9m |
| Weight      | Transmitter: 1kg                                                                |

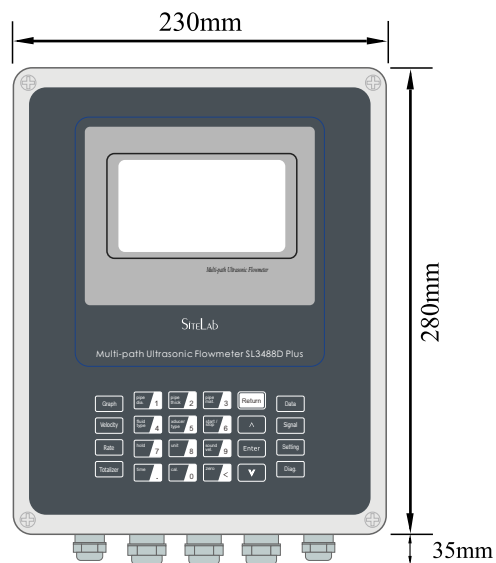
# About SL3488D Plus

## INTERFACE AND SIZE

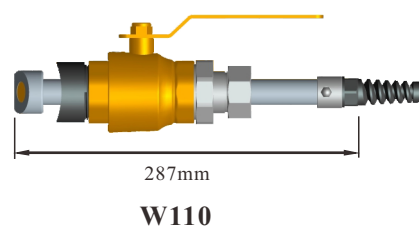
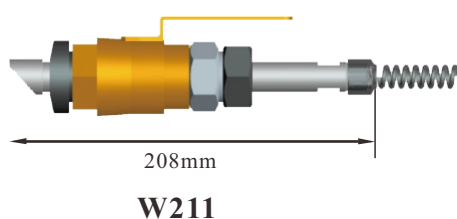
### WIRING DIAGRAM



### TRANSMITTER DIMENSIONS



### TRANSDUCER



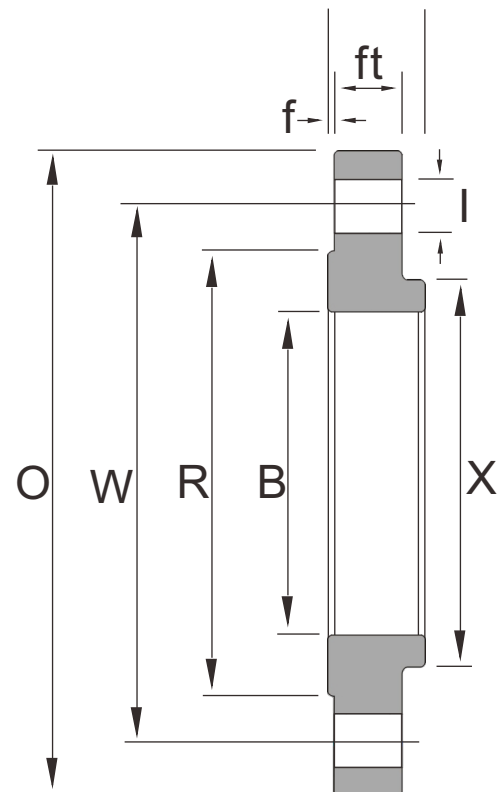
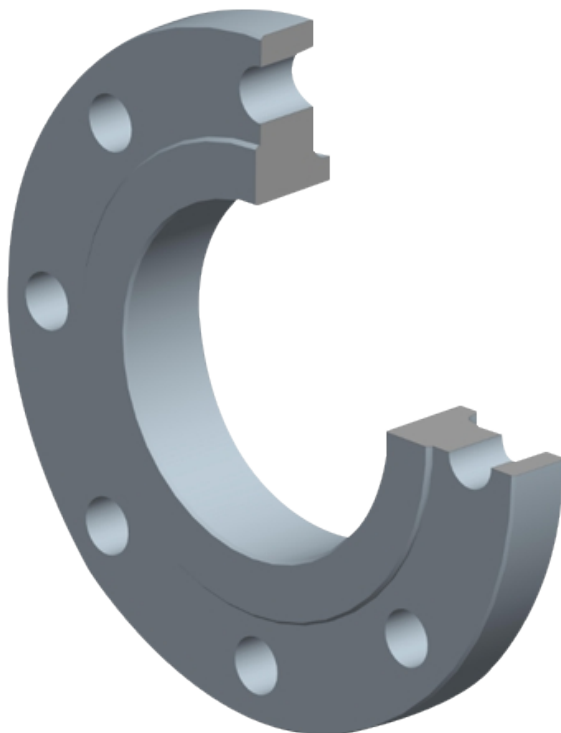
Remarks:

SL3488D Plus-W210 Pipe size:100-1200mm SL3488D Plus-W110 Pipe size:100-3000mm

# About SL3488D Plus

# TRANSDUCER INSTALLATION METHODS

## FLANGE DIMENSIONS



## PIPE MATERIAL: CARBON STEEL

| NPS | DN    | Overall Diameter O | Diameter of Circle Holes W | Bolt Hole Diameter I | Number of Holes n | Face Diameter R | Raised Face f | Flange Thickness ft | Threaded/s lip-on/socket Welding Y | Hub Diameter X | Inside Diameter B |
|-----|-------|--------------------|----------------------------|----------------------|-------------------|-----------------|---------------|---------------------|------------------------------------|----------------|-------------------|
| 4   | DN100 | 230                | 190.5                      | 19.1                 | 8                 | 157.2           | 2             | 23.9                | 32                                 | 135            | 116.1             |
| 5   | DN125 | 255                | 215.9                      | 22.3                 | 8                 | 185.7           | 2             | 23.9                | 35                                 | 164            | 143.8             |
| 6   | DN150 | 280                | 241.3                      | 22.3                 | 8                 | 215.9           | 2             | 25.4                | 38                                 | 192            | 170.7             |
| 8   | DN200 | 345                | 298.5                      | 22.3                 | 8                 | 269.9           | 2             | 28.6                | 43                                 | 246            | 221.5             |
| 10  | DN250 | 405                | 362.0                      | 25.4                 | 12                | 323.8           | 2             | 30.2                | 48                                 | 305            | 276.2             |
| 12  | DN300 | 485                | 431.8                      | 25.4                 | 12                | 381.0           | 2             | 31.8                | 54                                 | 365            | 327.0             |
| 14  | DN350 | 535                | 476.3                      | 28.6                 | 12                | 412.8           | 2             | 35.0                | 56                                 | 400            | 359.2             |
| 16  | DN400 | 595                | 539.8                      | 28.6                 | 16                | 469.9           | 2             | 36.6                | 62                                 | 457            | 410.5             |
| 18  | DN450 | 635                | 577.9                      | 31.8                 | 16                | 533.4           | 2             | 39.7                | 67                                 | 505            | 461.8             |
| 20  | DN500 | 700                | 635.0                      | 31.8                 | 20                | 584.2           | 2             | 42.9                | 71                                 | 559            | 513.1             |
| 24  | DN600 | 815                | 749.3                      | 35.0                 | 20                | 692.2           | 2             | 47.7                | 81                                 | 663            | 616.0             |

The above Chart quotes the ASME B16.5-2009 flange.

P64: Chart 4 - Flange processing surface dimensions

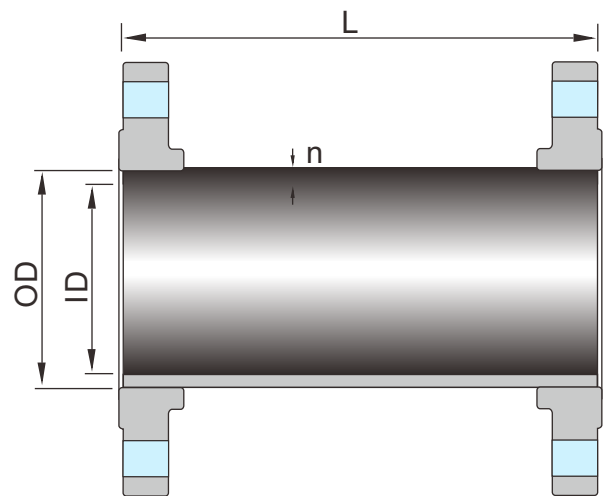
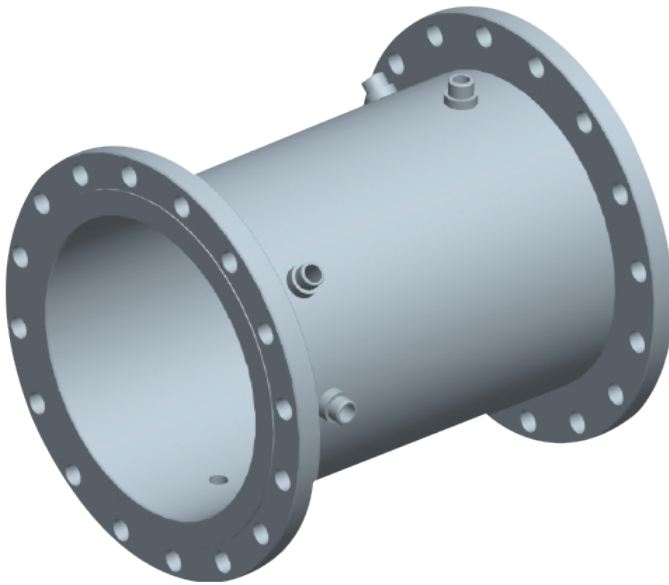
P71: Chart 7 – 150 Grade flange drill template

P73: Chart 8 - 150 Grade Flange dimensions

# About SL3488D Plus

# INSTALLATION SITE SELECTION

## SPOOL PIECE DIMENSIONS



## PIPE MATERIAL: CARBON STEEL

| NPS | DN    | Length<br>L | Outer<br>Diameter<br>OD | Inner<br>Diameter<br>ID | Thickness<br>n | Flang<br>Weight<br>KG | Spool Piece<br>Weight<br>KG |
|-----|-------|-------------|-------------------------|-------------------------|----------------|-----------------------|-----------------------------|
| 4   | DN100 | 400         | 114.30                  | 102.26                  | 6.02           | 5.7                   | 18.8                        |
| 5   | DN125 | 420         | 141.30                  | 128.20                  | 6.55           | 6.5                   | 22.7                        |
| 6   | DN150 | 450         | 168.30                  | 154.08                  | 7.11           | 7.7                   | 29.0                        |
| 8   | DN200 | 510         | 219.10                  | 202.74                  | 8.18           | 12.2                  | 46.5                        |
| 10  | DN250 | 580         | 273.00                  | 254.46                  | 9.27           | 16.2                  | 66.5                        |
| 12  | DN300 | 640         | 323.80                  | 304.74                  | 9.53           | 25.0                  | 97.2                        |
| 14  | DN350 | 680         | 355.60                  | 336.54                  | 9.53           | 33.7                  | 122.5                       |
| 16  | DN400 | 740         | 406.40                  | 387.34                  | 9.53           | 41.6                  | 151.8                       |
| 18  | DN450 | 780         | 457.00                  | 437.94                  | 9.53           | 46.2                  | 173.9                       |
| 20  | DN500 | 860         | 508.00                  | 488.94                  | 9.53           | 59.5                  | 219.9                       |
| 24  | DN600 | 980         | 610.00                  | 590.94                  | 9.53           | 83.2                  | 303.4                       |

The above Chart quotes the ASME B36.10M-2004 flange.

P5: Chart 1 – The weld and rolled seamless steel tube dimension and weight

Remarks:

We also provide the DIN, JIS EN and other different standard pipe and flange.

Here customer need to provide operation standard and drawing, then the prices are re-definition.

Customer also need to provide operation standard and drawing for large pipe and flange.

# About SL3488D Plus

## ORDERING INFORMATION

### MODEL

### DESCRIPTION

|              |                                                                                                                                                                                                                                                                    |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SL3488D Plus | Multipath Ultrasonic Flowmeter<br>Installation Method:Wall mount<br>Flow Range:0.03~±23ft/s(0.01~±7m/s)<br>Accuracy:±0.5% of measured value<br>Repeatability:0.15%<br>Keyboard:24 light tactile keys<br>Display:4.7 inch TFT LCD<br>Power Supply:90-250VAC,48-63Hz |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### CODE

### OUTPUT

|   |                                                                                  |
|---|----------------------------------------------------------------------------------|
| 1 | 4-20mA,OCT pulse output,relay output,RS-232 / RS-458 terminal<br>Modbus Protocol |
|---|----------------------------------------------------------------------------------|

### CODE

### TRANSMITTER ENCLOSURE AREA CLASSIFICATION

|   |                                           |
|---|-------------------------------------------|
| 1 | IP65,die-cast aluminum machined enclosure |
| 2 | Explosion-proof enclosure,Exd II BT4      |

### CODE

### TYPE OF SENSOR

|   |                                  |
|---|----------------------------------|
| 2 | 2 channel (pipe size over DN150) |
| 3 | 3 channel (pipe size over DN300) |
| 4 | 4 channel (pipe size over DN400) |
| 6 | 6 channel (pipe size over DN600) |

### CODE

### TYPE OF TRANSDUCERS

|      |                                                                    |
|------|--------------------------------------------------------------------|
| W210 | Wetted transducer,Operating temperature:-40°F~+176°F (-40°C~+80°C) |
| W110 | Wetted transducer,Operating temperature:-40°F~+176°F (-40°C~+80°C) |

### CODE

### TRANSDUCER CABLE LENGTH

|     |                                                          |
|-----|----------------------------------------------------------|
| 030 | Standard 30ft(9m)                                        |
| xxx | Maximum lengthen to 105m(344ft),per 5m is lengthen unit. |

Standard Model:SL3488D Plus-1-1-2-W110-030

Description:Multipath Ultrasonic flowmeter,4-20mA output,two channel path  
wetted transducer with 9m cable.

## **Gentos Measurement & Control Co., Ltd.**

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