

- Accuracy:  $\pm 0.5\%$  F.S.
- Measuring range:  $\pm 100 / 0 \sim 100 / 0 \sim 300 / 0 \sim 500 / 0 \sim 1000 / 0 \sim 1500 / 0 \sim 2000 / 0 \sim 2500 / 0 \sim 5000$ pa
- Service in Air and non-combustible, compatible gases
- 4 Digital LCD Display
- Adjustable Zero set point
- Option of Response Time and Measure ange
- Power supply: DC 10~30V; Output: 4~20mA dc

**SPECIFICATION**

- ◆ Accuracy:  $\pm 0.5\%$  F.S.
- ◆ Zero Pressure Offset: 4mA dc
- ◆ Full Scale Output: 20mA dc
- ◆ Max Transfer: 32mA
- ◆ Power Consumption: Supply-10V / 0.020A
- ◆ Max Pressure: 25kPa
- ◆ Dimension Pressure: 50kPa
- ◆ Response Time: 0.8/4s
- ◆ Water Proof: IP54
- ◆ Materials: ABS
- ◆ Electrical Connection: 1.5mm<sup>2</sup>, M12
- ◆ Pressure Connection: Male,  $\phi 5.00$ m and 6.3mm
- ◆ Operating Temperature: -10~50°C
- ◆ Operating Humidity: <95% RH (non-condensing)
- ◆ Storage Temperature: -10~50°C
- ◆ Storage Humidity: <95% RH (non-condensing)
- ◆ Power Supply: DC10~30V
- ◆ With LCD Display Weight: 290 g
- ◆ No LCD Display Weight: 150 g

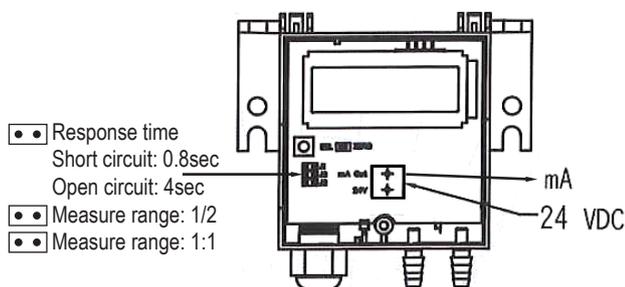
**ORDER INFORMATION**

DPS - Code1 - Code2 - Code3

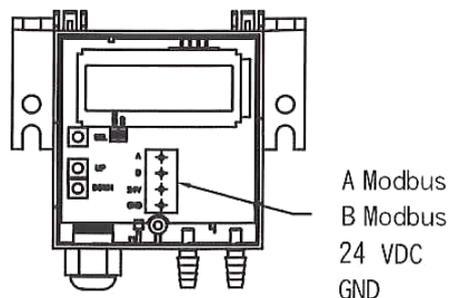
Code1	Input Range	Code2	Display Screen	Code3	Signal Output
N100	$\pm 100$ Pa	N	No	A	DC4-20mA(2W)
100	0~100 Pa	D	Yes	Y	RS-485 Modbus RTU
300	0~300 Pa				
500	0~500 Pa				
1000	0~1000 Pa				
1500	0~1500 Pa				
2000	0~2000 Pa				
2500	0~2500 Pa				
5000	0~5000 Pa				

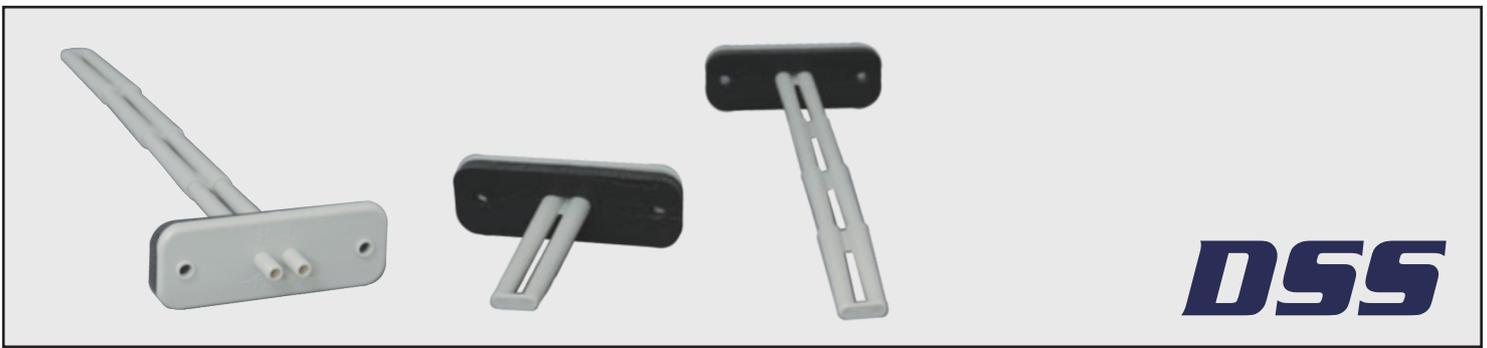
**WIRING CONNECTION**

● 2 wire



● RS-485 Modbus RTU



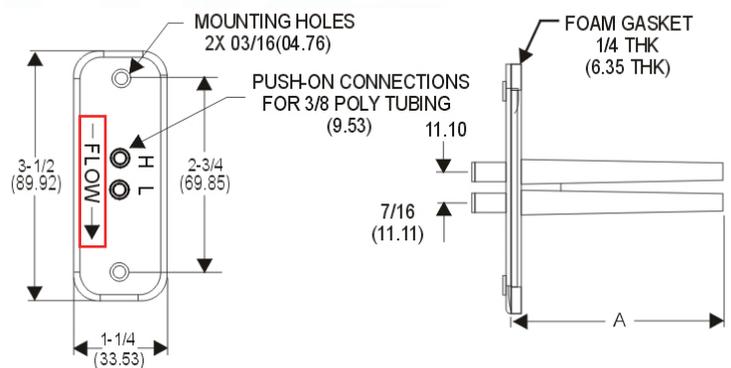


- It can be paired with a differential pressure transmitter.
- A lightweight average wind speed measuring tube, and a multi-point pressure detection hole for differential pressure and dynamic air flow pressure detection of high-pressure and low-pressure combined pressure.
- The characteristics of the gas flow curve in the average pipeline can effectively improve the problem of disturbance flow measurement.

## SPECIFICATION

- ◆ Used for: Air and compatible gases
- ◆ Material: ABS polycarbonate, PVDF fluorinated resin
- ◆ Operating temperature: Polycarbonate: 4-50 °C  
Fluorinated resin: -10~160 °C
- ◆ Connection method: 1/4 "(6mm) ID pipe, 3/8" (10mm) outer diameter pipe
- ◆ Installation direction: Integral flange gasket
- ◆ Weight: 1 ounce (28 grams)

## DIMENSION



\*Please pay attention to the flow direction

## ORDER INFORMATION

DSS-

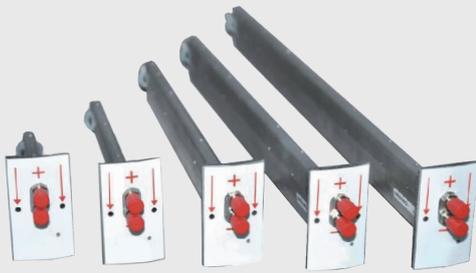
Code	Dimension
1002	3-5/32" (8.02cm)
1003	5-13/32" (13.73cm)
1004	7-21/32" (19.55 cm)
1005	9-29/32" (25.26 cm)
1006	12-1/2" (31.75 cm)
1007	14-3/4" (37.47 cm)
1008	17-1/8"(43.50 cm)
1009	19-13/32" (49.29 cm)
1010	21-21/32" (55.01 cm)
1011	23-29/32" (60.72 cm)

## MEASUREMENT PRINCIPLE

The average wind speed measuring tube is a measuring rod inserted along the diameter into the wind speed calculation formula in the pipe. There are multiple pressure taps in the direction of fluid flow to measure the total pressure. Connect to the full pressure pipe and lead out the average full pressure P1. The backflow surface is connected to the static pressure pipe and leads out static pressure P2. Measure wind speed by measuring the difference between the total pressure and static pressure of the fluid (dynamic pressure). The output dynamic pressure ( $\Delta P$ ) and average fluid velocity ( $V$ ) of the average wind speed measuring tube, according to Bernoulli's theorem.

## INSTALLATION

The DSS-1000 series uses a tube with an inner diameter of 1/4 "(6mm) and an outer diameter of 3/8" (10mm). Firstly, check the connection of the tube for obvious bending, as bending marks may cause air leakage. Connect the "H" high-pressure connection to the high point input of the differential pressure gauge pressure. Connect the "L" low-pressure connection to the low point input of the differential pressure gauge pressure.



**DSA**

- Can be fixed in square or circular pipes
- When paired with a digital micro differential pressure transmitter, the average wind speed and air volume measuring piece ensures accurate display, control, or recording of wind speed and air volume, and can be used for all types of air volume systems on other brands.
- The measuring piece can generate dynamic pressure, and the air volume is proportional to the square root of the dynamic pressure
- The number of measuring pieces required in the pipeline and the shape of the pipeline vary depending on the accuracy of the measurement required (One or more sets of measuring plates may vary depending on the application. Please refer to the installation diagram)

## SPECIFICATION

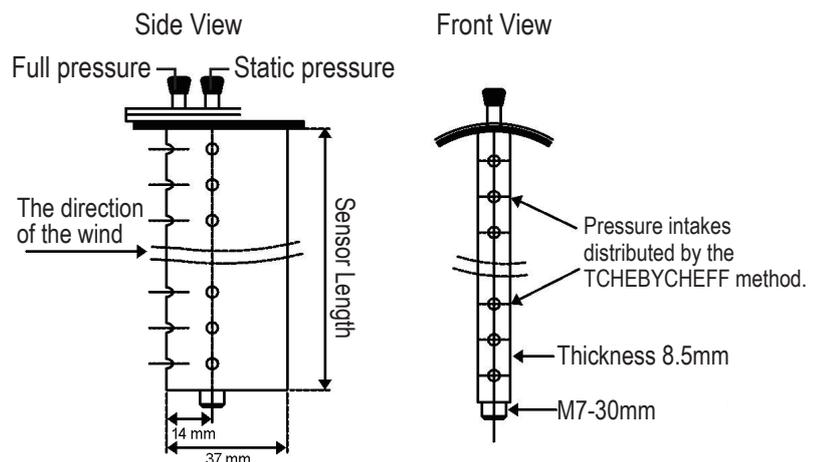
- ◆ Material: Extruded aluminum profile, galvanized steel plate bracket, stainless steel screw
- ◆ Coefficient: 0.8165
- ◆ Operating temperature: Up to 210°C
- ◆ Maximum pressure: Static pressure 2 bar
- ◆ Accuracy: <0.3% (depending on the number of differential pressure gauges and test pieces) (including repeatability)
- ◆ Suggestion: After the test piece is installed, adjust the air flow value connected to the differential pressure gauge to be the same as the actual air flow value measured by the precision anemometer.

## ORDER INFORMATION

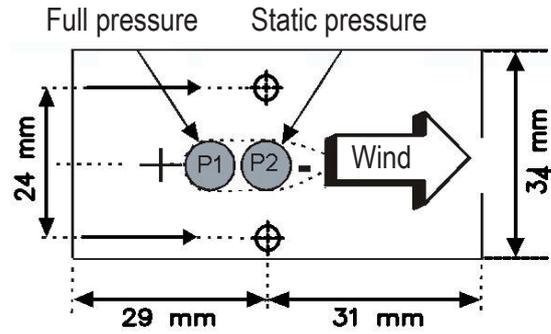
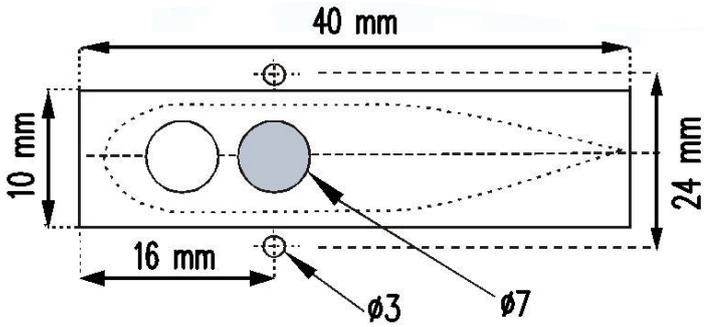
DSA- □ □ □ □

Code1	Dimension	Dimension	Dimension
100	100 mm	125	125 mm
160	160 mm	200	200 mm
250	250 mm	315	315 mm
400	400 mm	500	500 mm
630	630 mm	800	800 mm
1000	1000 mm	1500	1500 mm
2000	2000 mm	2500	2500 mm
3000	3000 mm	O	100~3000mm

## DIMENSION

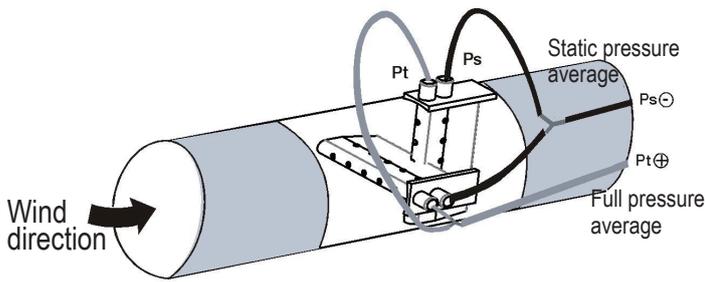


# CUT-OUT PANEL of PIPE



## OPERATING

## CALCULATION PROGRAM



$$\text{Wind speed (m/s)} = K_L \times \sqrt{\text{Full pressure} - \text{static pressure}}$$

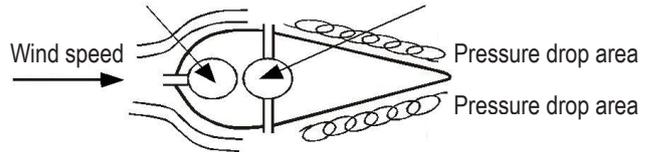
$$\text{Wind quantity (m}^3/\text{h)} = K_L \times \sqrt{\text{Dynamic Pressure}} \times S \times 3600$$

$K_L$ : SSA sensing plate coefficient

$S$ : Pipeline cross-sectional area ( $\text{m}^2$ )

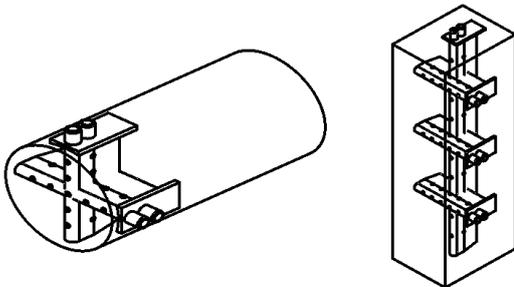
Total pressure average  
(High voltage end)

Static pressure average  
(Low voltage end)

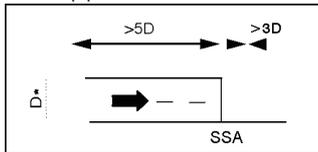


## INSTALLATION

## INSTALLATION SUGGESTION

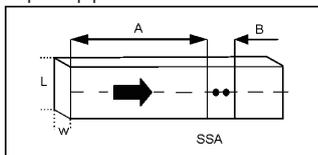


Round pipe



Install SSA measuring plates in the pipeline.  
Before SSA measurement, it is recommended to have a minimum length of straight pipe:  $5 \times D$ .  
After SSA measurement, it is recommended to have a minimum straight pipe length of  $3 \times D$ .  
 $D$  is the diameter of the pipeline.

Square pipe



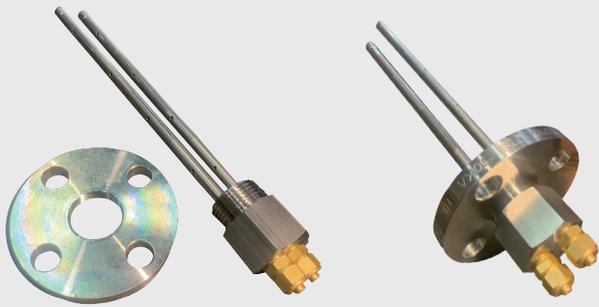
Install SSA measuring piece in square pipeline  
Before SSA testing, it is recommended to minimize the length of straight pipes:

$$A > 5 \times \sqrt{\frac{4 \times L \times W}{\pi}}$$

After SSA testing, it is recommended to minimize the length of straight pipes:

$$B > 3 \times \sqrt{\frac{4 \times L \times W}{\pi}}$$

$L$  is the length of the pipeline,  
 $W$  is the width of the pipeline,  
and the unit is M



**DSL**

- Can be fixed in square or circular pipes
- When paired with a digital micro differential pressure transmitter, the average wind speed and air volume measuring film ensures accurate display, control, or recording of wind speed and air volume, and it can be used for measuring all types of air flow systems on other brands to generate dynamic pressure.
- The air flow is proportional to the square root of the dynamic pressure
- The number of measuring pieces required in the pipeline and the shape of the pipeline vary depending on the accuracy of the measurement required (One or more sets of measuring plates may vary depending on the application. Please refer to the installation diagram).

## SPECIFICATION

- ◆ Material: SUS316L
- ◆ Connection port: Mouth type (1 "PT) flange type (1/2" -10K)
- ◆ Operating temperature: -10~300°C
- ◆ Maximum pressure: Static pressure 2ba
- ◆ Accuracy: <0.3% (depending on the number of differential pressure gauges and test pieces) (including repeatability)
- ◆ Suggestion: After the test piece is installed, adjust the air flow value connected to the differential pressure gauge to be the same as the actual air flow value measured by the precision anemometer.

## ORDER INFORMATION

DSL-     -

Code1	Dimension	Code2	Fixed method
55	55 mm	10K	1/2"-10K Flange
100	100 mm	PT	1"PT
125	125 mm		
160	160 mm		
200	200 mm		
250	250 mm		
315	315 mm		
400	400 mm		
500	500 mm		
630	630 mm		
800	800 mm		
1000	1000 mm		

## DIMENSION

