



Average Flow Measuring Tube

AFMT

High temperature resistance
Corrosion resistant, Anti-clogging
Data convert to flow rate quickly

| Feature |

- Stainless steel housing, high temperature resistant, corrosion resistance, dust resistance, can measure micro flow rates
 - If connect with eYc micro differential transmitter PHM33 or PMD33 with Multi-function display SD06 or DPM02 is a great solution for measure the dynamic pressure(ΔP) of the airflow in the pipeline and calculate the wind speed, air volume and temperature
 - Applied in harsh environments, exhaust gas emission, environmental protection engineering, installation location is not restricted
- ※Can be customized according to customer needs



| Introduction |

AFMT and differential pressure transmitter are often being used in the measurement of flow. With several pressure detecting holes on the AFMT, we can get the average of the flow inside the duct and improve the problem happened in the flow measuring where disturbance occurs when there's no adequate space inside the straight inlet.

AFMT is a probe we inserted into the duct(along with the whole diameter) to measure the flow. When the probe encounters the flow, will sense and get the average total pressure P1 in windward side and static pressure P2 in leeward. AFMT then gets the flow velocity by measuring the difference between total pressure and static pressure(i.e.) dynamic pressure(ΔP) and flow average velocity(V).



Application:

Ventilation pipes / Flue industry / Exhaust gas emission / Environmental protection engineering / Air conditioning systems / Vacuum cleaning / Especially high temperature and chimney, wind speed measurement of dusty air and high flow rate in environmental testing



| Specification |

Item		Function & Parameter
Output	Operating pressure	Max.10 bar
	Operating temperature	Max.250°C
	Measuring medium / Coefficient	Air / Flow coefficient(K) : 1
Installation mounting	Tube / Flue installation	Tube type
Material	Measuring tube	SUS316
	Connection screw	Copper or stainless steel(Optional)
Connection screw	Installation connection	4 ... 12" below 3/4" PT movable thread 18 ...40 " below 1" PT movable thread
Connecting pipe	Outlet connection	1/8" G inside thread or 1/4" G inside thread
	Length(mm)	100 / 150 / 200 / 300 / 450 / 600 / 800 / 1000 mm

| Air Velocity formula |

■ Flow rate formula

$$V = K \sqrt{\frac{2}{\rho} \Delta P}$$

■ Flow formula

$$qv = k\varepsilon A \sqrt{\frac{2}{\rho} \Delta P}$$

$$qm = qv \times \rho$$

v = Velocity of the liquid(m/s)

ΔP = Difference between total pressure and static pressure(Dynamic pressure)(Pa)

ρ = Flow density(kg/m³)

K = Flow coefficient

qv = Volume flow of liquid(m³/s)

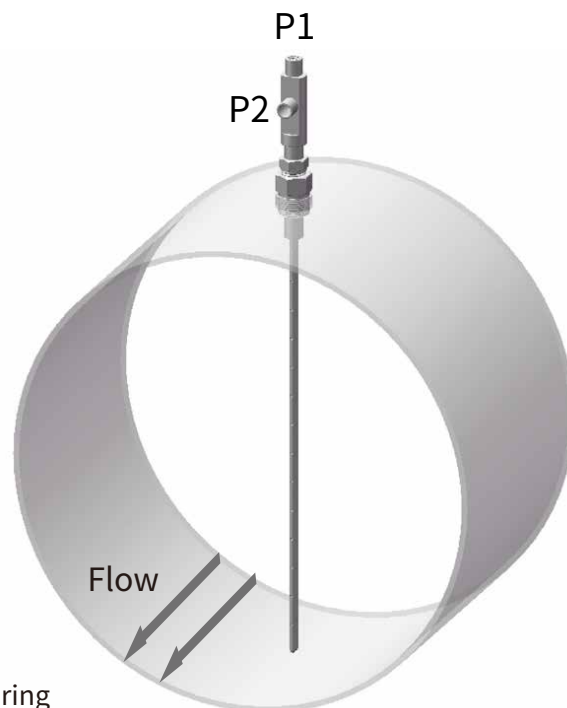
qm = Mass flow of liquid(kg/s)

K = Flow coefficient of average flow measuring

ε = Inflation coefficient of liquid going thru measuring tube during operation

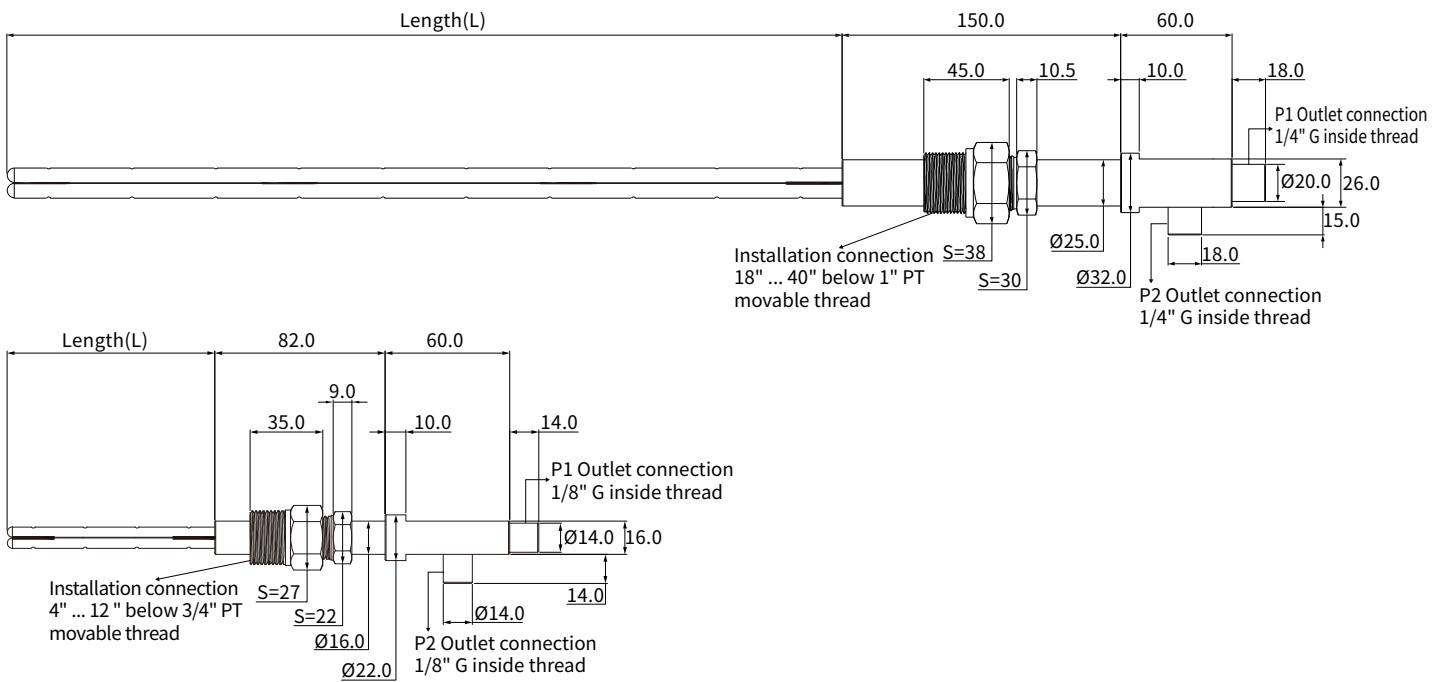
A = Cross-sectional area of duct during operation(m²)

| Installation direction |



Average Flow Measuring Tube

Dimension | Unit:mm



Ordering Guide

	Installation	Material	Length
AFMT	04	2	450
	Duct-mounting	SUS316	4": 100 mm
			6": 150 mm
			8": 200 mm
			12": 300 mm
			18": 450 mm
			24": 600 mm
			32": 800 mm
			40": 1000 mm

Additional Option (ILAC / TAF) Test Report



Additional option: (ILAC / TAF) Test report - Standard calibration laboratory (TAF accreditation: 3032, complying with ISO / IEC 17025)
TAF has mutual recognition arrangement with ILAC MRA

Project	Measurand level or range
Anemometer	0.2 ... 60 m/s (8 basic points on average or specified by customer)