

PITOT TUBE FLOW / CONSUMPTION SENSOR S430











Measures air delivery at compressor discharge —

ideal flow meter for compressor performance tests



S430 FEATURES









TOTAL FLOW
High accuracy
and reliable
measurements

S430 FEATURES AT A GLANCE

- Flow and consumption measurement in wet air or high mass flow / velocity applications
- Measurement at compressor outlet
- Tube diameters of 1.25" to 10" through center installation, bigger diameters through non-center installation
- Insertion type, easy installation under pressure through ball valve possible
- High temperature applications up to 230°C
- No mechanical wear parts
- All parts which are in contact with flow medium are made of stainless steel
- Compressor-FAD-Measurement
- Measures Flow, Consumption, Temperature and Pressure

S430 BENEFITS

The S430 is based on the pitot tube principle to measure flow. Properly installed (refer to instruction manual for details) the sensor can measure in wet and dirty gases as occurring, for example, at the discharge of a compressor.

The sensor features long term stability, wide turndown ratio and good temperature stability. It can be used in compressed air and non-corrosive gases.

The sensor can be installed through a ball valve while the system is pressurized.

Various output signals allow the sensor to be connected to SUTO displays and/or third-party displays and PLCs.

S430 TECHNICAL DATA

General Specifications						
Flow range	Refer to table below					
Pressure range	0 1.6 MPa					
Temperature range	-40 +230°C					
Accuracy	Flow: $\pm (1.5\% + 0.3\% \text{ full scale})$ Pressure: 0.5% F.S. Temperature: 0.5°C					
Reference conditions	Programmable, default P = 1000 hPa(a), T = 20°C					
Medium	Wet and dry air, non-corrosive gases					
Output signals	4 20 mA and Pulse (optional) Modbus/RTU (optional) M-Bus (optional) Modbus/TCP (optional)					
Medium temp.	-40 +230°C					
Ambient temp.	-20 +60°C					
Power supply	24 VDC, 150 mA					
Display option	2.4" color graphic display with keypad					
Process connection	3/4" G type (ISO 228-1)					
Sensor material	Stainless steel 1.4404 (SUS 316L)					

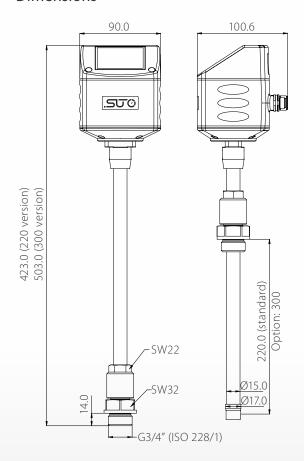
Flow Ranges								
Tube			Volumetric Flow					
Inch	mm	m³/h		m³/	min	cfm		
		Min	Max	Min	Max	Min	Max	
1	27.3	23	229	0.38	3.8	13	135	
11⁄4″	36.0	51	507	0.85	8.5	30	298	
11/2"	41.9	76	756	1.26	12.6	45	445	
2"	53.1	130	1298	2.16	21.6	76	764	
21/2"	68.9	227	2274	3.79	37.9	134	1338	
3"	80.9	318	3175	5.29	52.9	187	1869	
4"	100.0	488	4880	8.13	81.3	287	2872	
5"	125.0	763	7625	12.71	127.1	449	4488	
6"	150.0	1099	10993	18.32	183.2	647	6470	
8"	200.0	1961	19611	32.69	326.9	1154	11543	
10"	250.0	3064	30642	51.07	510.7	1804	18035	
12"	300.0	4412	44125	73.54	735.4	2597	25971	

Flow range for Air at 6 barg, 50 °C and 90 % humidity. For other gas and condition please download Flow Range software from www.suto-itec.com

Stated measuring ranges under following conditions:

- Standard flow in air
- Reference pressure: 1000 hPa
- Reference Temperature: +20°C

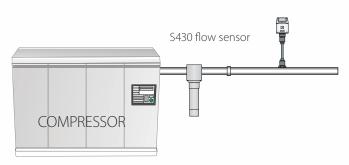
Dimensions



Installation



S430 Installation through a ball valve



Compressor air delivery measurement and FAD calculation



Colour graphic display for online values and sensor settings

S430 ORDERING

Please use the following tables to assist in placing your order with our sales staff.

S430 Pitot Tu	S430 Pitot Tube Flow Sensor, Insertion Type, 220 mm Shaft					
Order No.	Code	Description				
\$6954300	S4300	S430, pitot tube flow sensor, insertion type, 220 mm shaft				
Connection th	Connection thread					
	Α	G ¾" standard				
A1068	В	PT ¾"adaptor				
A1069	C	NPT ¾" adaptor				
Gas type						
A1007	Α	Medium Air				
A1008	В	Medium CO ₂				
A1009	C	Medium O₂ (Oil- & grease-free cleaned)				
A1010	D	Medium N₂				
A1011	E	Medium N₂O				
A1012	F	Medium Ar				
A1013	G	Medium Natural gas (Exact gas mix required)				
A1014	Н	Medium H ₂				
A1015	I	Others (Please specify the gas or gas mix)				
A1016	J	Medium He				
Fieldbus						
A1061	Α	Modbus/RTU				
A1062	В	Analog, Pulse				
A1063	C	M-Bus				
A1064	D	Modbus/TCP (including 5 m M12 cable with RJ45 plug)				
Calibration	Calibration					
	Α	Standard				
A1066	В	Bi-directional				
A1067	C	High speed: Max flow increased by 30%				
Display						
	Α	Without Display				
A1060	В	With Display				



S430 Pitot Tube Flow Sensor, Insertion Type, 300 mm Shaft					
Order No.	Code	Description			
S695 4302	S4302	S430, pitot tube flow sensor, insertion type, 300 mm shaft			
Connection th	Connection thread				
	Α	G ¾" standard			
A1068	В	PT ¾"adaptor			
A1069	C	NPT ¾" adaptor			
Gas type					
A1007	Α	Medium Air			
A1008	В	Medium CO₂			
A1009	C	Medium O₂ (Oil- & grease-free cleaned)			
A1010	D	Medium N₂			
A1011	E	Medium N₂O			
A1012	F	Medium Ar			
A1013	G	Medium Natural gas (Exact gas mix required)			
A1014	Н	Medium H ₂			
A1015	I	Others (Please specify the gas or gas mix)			
A1016	J	Medium He			
Fieldbus					
A1061	Α	Modbus/RTU			
A1062	В	Analog, Pulse			
A1063	C	M-Bus			
A1064	D	Modbus/TCP (including 5 m M12 cable with RJ45 plug)			
Calibration					
	Α	Standard			
A1066	В	Bi-directional			
A1067	C	High speed: Max flow increased by 30%			
Display					
	Α	Without Display			
A1060	В	With Display			

