



AFM-10

VORTEX FLOWMETER

GENERAL FEATURES

Ayxaz Vortex Flowmeters work according to the Karman Vortex principle. It provides an advantage to the user in mass and volumetric flow measurement of fluids such as liquid, gas and steam. With this product, measurements can be taken with an accuracy of 0.5% in liquid measurements and 1.0% in gas and steam measurements. For less error rates, precision calibration can be performed in our ISO 17025 certified calibration laboratories, and a high sensitivity of up to 0.2% can be achieved.

In the measurement logic based on the Von Karman Vortex path principle, the flow is divided into two by the effect of the object placed in the direction perpendicular to the flow and eddies rotating in the opposite direction are created. The frequency of these eddies that propagate in waves is measured. Ayxaz Vortex Flowmeter measures the speed by counting the frequencies through the sensor

(piezoelectric element) inside, and the flow rate as a result of mathematical calculations.

These measured frequencies are proportional to the amount of flow. Pressure and temperature data are used directly in mathematical calculations, especially since they directly affect the density in mass flow measurement of gas fluids. In cases where these two values are variable, the compensated model is preferred and the changing density is also calculated to provide accurate flow measurement.

TECHNICAL INFORMATION

Power Supply: 12-32VDC
Applications: Liquid, Gas, Steam
Sensitivity: 0.5% liquid, 1.0% gas, ops. 0.2% with Turkak calibration
Measuring Range: 0.3-7 m/sec velocity liquid, 2-70 m/sec speed gas
Connection: Flanged, Wafer
Display: LCD display
Compressive Strength: 4-100 bar (Standart 6/10/16/25 bar)

Operating Temperature (Ambient):

-20 °C +250 °C with LCD display,
 -40 °C +300 °C without display

Output: 4-20mA opt. with hart indicator model, without Pulse indicator, opt. RS485 Modbus

Adjustable Features: Flow mode, flow unit, scale, density, indication etc.

Alarm: Low flow alarm (3.8mA), high flow alarm (22mA)

Calibration: 2/5 point K-Factor verification

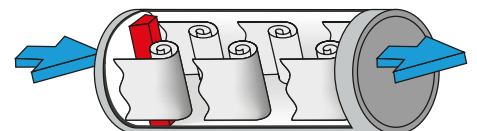
Display: 1st line is instantaneous flow, 2nd line is total flow, 3rd line is flow, temperature, pressure, density etc.

Compensation: Pressure-temperature measurement and compensation is recommended in gas fluid with variable pressure or temperature.

Temperature Pressure Correction: Correction with offset is available.

Coefficient of Friction: $Cd < 2.4$

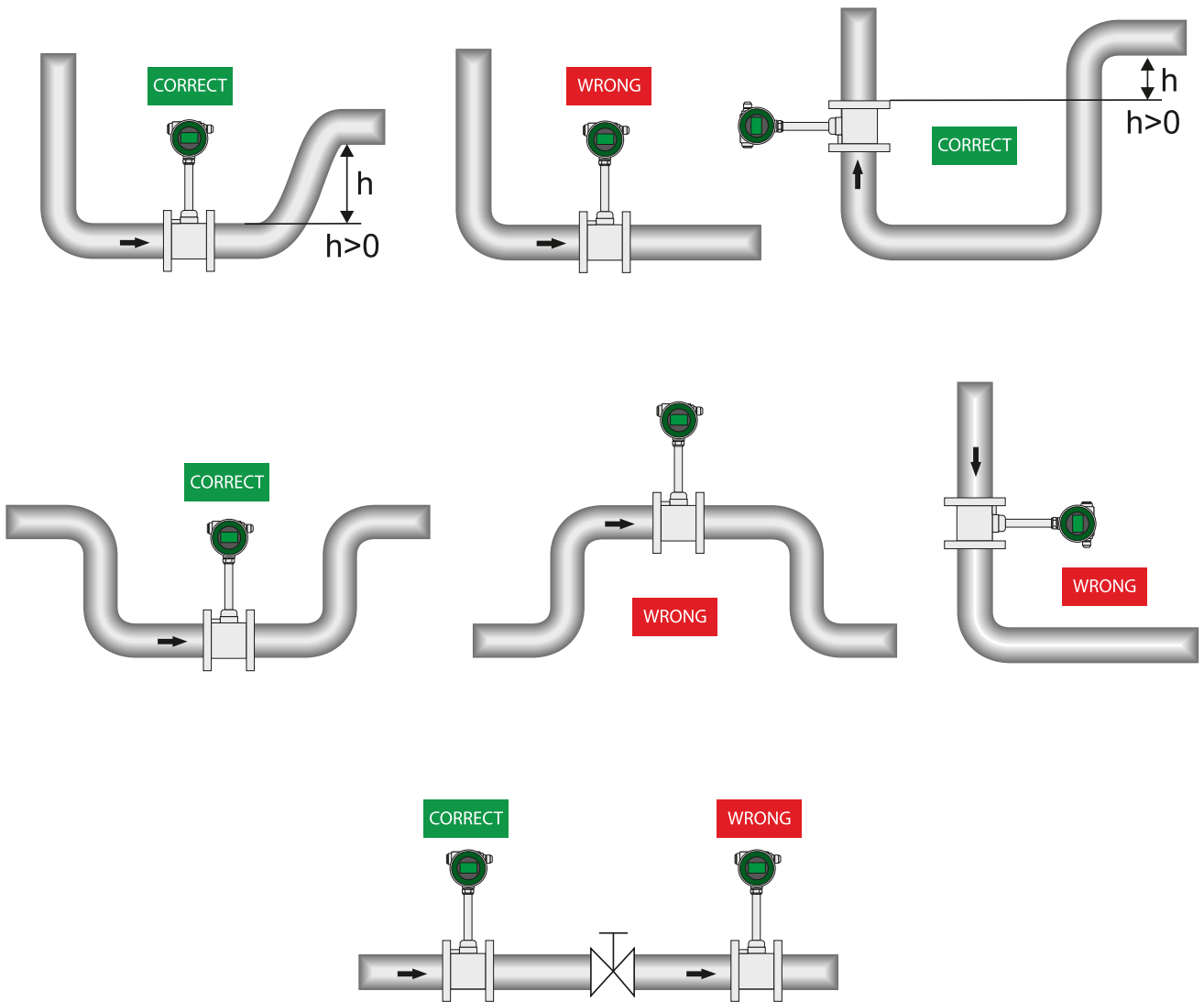
Exproof protection: Ops. EXD Bt4



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MONTAGE

For accurate and precise measurements in liquid fluids, prevent the formation of air bubbles in the pipe. Air bubbles in the line cause erroneous measurements.



PIPE INSTALLATION	STRAIGHT DISTANCE	
	Inlet	Outlet
Concentric Reduced Pipe	15D	5D
Concentric Expanding Tube	35D	5D
90° Elbow	20D	5D
90° Double Elbow (Same Axis)	25D	5D
90° Double Elbow (Diff. Axis)	30D	5D
Valve (Fully open)	20D	5D
Valve (Fully closed)	40D	5D

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SATURATED STEAM

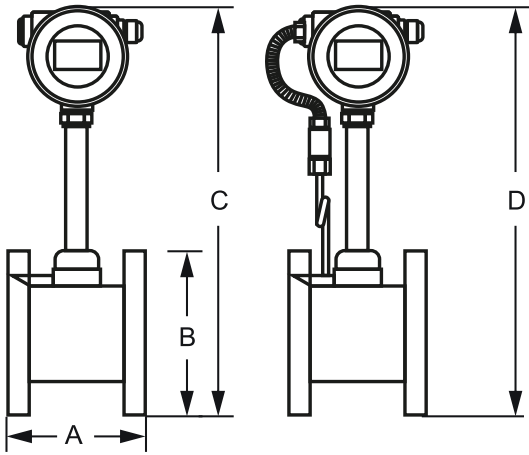
DN	Flowrate	Flowrate (kg/h)								
		1 bar	2 bar	4 bar	6 bar	8 bar	10 bar	15 bar	20 bar	25 bar
15	Min	2,2	3,2	5,1	7,1	8,9	10,8	15,5	20,2	25,0
	Max	54,5	79,6	128,4	176,3	223,7	270,8	388,2	505,9	624,5
20	Min	3,8	5,6	9,0	12,3	15,7	19,0	27,2	35,4	43,7
	Max	95,4	139,2	224,6	308,5	391,4	473,9	679,3	885,3	1092,9
25	Min	6,1	8,9	14,4	19,8	25,2	30,5	43,7	56,9	70,3
	Max	153,4	223,7	361,0	495,7	629,1	761,6	1091,8	1422,8	1756,5
32	Min	10,2	14,9	24,1	33,0	41,9	50,8	72,8	94,9	117,1
	Max	255,6	372,9	601,7	826,2	1048,4	1269,3	1819,7	2371,4	2927,5
40	Min	15,7	22,9	36,9	50,7	64,3	77,9	111,6	145,4	179,6
	Max	392,0	571,8	922,6	1266,9	1607,6	1946,3	2790,1	3636,1	4488,8
50	Min	23,9	34,8	56,2	77,1	97,9	118,5	169,8	221,3	273,2
	Max	596,5	870,1	1404,0	1927,8	2446,3	2961,8	4245,9	5533,2	6830,7
65	Min	49,1	71,6	115,5	158,6	201,3	243,7	349,4	455,3	562,1
	Max	1227,0	1789,9	2888,2	3965,8	5032,5	6092,8	8734,4	11382,6	14051,8
80	Min	61,4	89,5	144,4	198,3	251,6	304,6	436,7	569,1	702,6
	Max	1533,8	2237,4	3610,3	4957,3	6290,6	7616,0	10918,0	14228,2	17564,7
100	Min	95,4	139,2	224,6	308,5	391,4	473,9	679,3	885,3	1092,9
	Max	2385,8	3480,4	5616,0	7711,3	9785,3	11847,1	16983,5	22132,8	27322,9
125	Min	150,0	218,8	353,0	484,7	615,1	744,7	1067,5	1391,2	1717,4
	Max	3749,2	5469,3	8825,2	12117,8	15376,9	18616,8	26688,4	34780,1	42935,9
150	Min	204,5	298,3	481,4	661,0	838,7	1015,5	1455,7	1897,1	2342,0
	Max	5112,5	7458,1	12034,3	16524,2	20968,5	25386,6	36393,2	47427,4	58549,0
200	Min	374,9	546,9	882,5	1211,8	1537,7	1861,7	2668,8	3478,0	4293,6
	Max	9373,0	13673,2	22062,9	30294,4	38442,3	46542,0	66720,9	86950,3	107339,9
250	Min	599,9	875,1	1412,0	1938,8	2460,3	2978,7	4270,1	5564,8	6869,8
	Max	14996,8	21877,1	35300,6	48471,0	61507,7	74467,3	106753,4	139120,4	171743,8
300	Min	852,1	1243,0	2005,7	2754,0	3494,8	4231,1	6065,5	7904,6	9758,2
	Max	21302,2	31075,4	50142,9	68850,9	87368,9	105777,4	151638,4	197614,2	243954,2

LIQUID - GAS

DN	Liquid (m ³ /h)	Gas (m ³ /h)
15	0.5-5	3-20
20	0.6-10	5-40
25	1-16	8-60
32	1.8-18	20-120
40	2-30	30-180
50	3-50	40-350
65	5-50	70-650
80	7-100	90-900
100	15-180	150-1500
125	20-210	250-2200
150	30-400	350-3500
200	50-700	600-7000
250	70-1000	1000-9000
300	100-1800	1500-14000

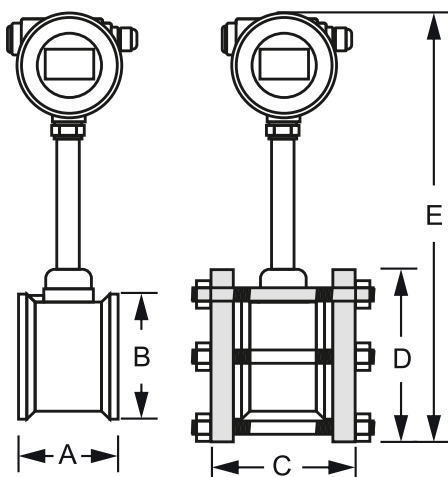
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FLANGED TYPE



DN	A	B	C	D
15	170	95	430	460
20	170	105	430	460
25	170	115	440	470
32	170	132	450	480
40	160	150	480	510
50	160	160	480	510
65	160	180	530	560
80	180	195	530	560
100	180	215	550	580
125	180	245	560	590
150	180	280	590	620
200	200	340	620	680
250	200	405	710	740
300	350	460	750	780

WAFER TYPE



DN	A	B	C	D	E
15-20 25-32	68	54	96	100	440
40	82	78	110	140	460
50	85	87	110	145	490
65	84	105	112	165	510
80	88	120	116	176	540
100	91	140	120	200	560
125	92	168	126	230	580
150	96	194	130	265	600
200	101	248	140	320	630
250	114	300	160	370	660
300	128	350	170	445	690

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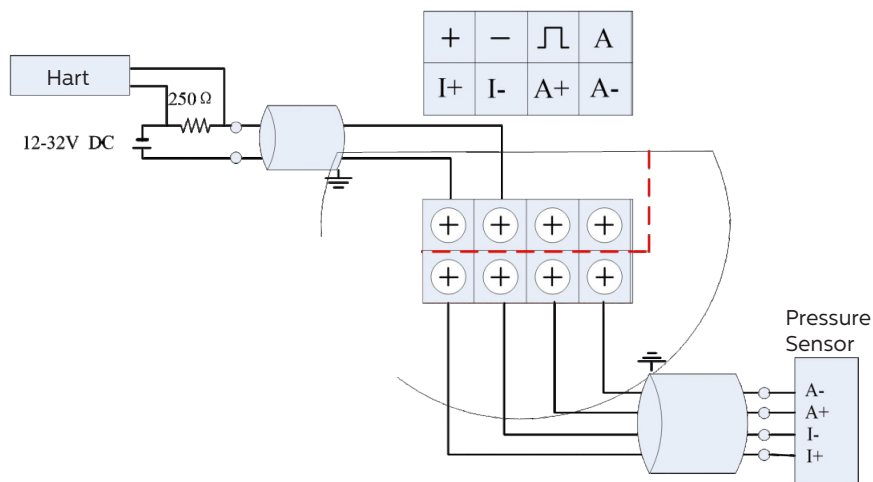
FLOW COMPUTER

Ayvaz Flow computer; It can be used with vortex flowmeter, turbine flowmeter, electromagnetic flowmeter, constricted area flowmeter, gear flowmeter and other flowmeters. The flow computer uses a high-performance processor and standard equation calculation, unlike standard adders, to avoid errors and measurement errors made by traditional adders. For this, new generation integrated and components are used. The LCD screen of the product is designed in English and Chinese (Optional). The keyboard of the product is user-friendly and simple to use. Signal inputs have high current protection; in this way, the equipment can be used more safely. Additionally, GPRS remote access system can be added to the device.

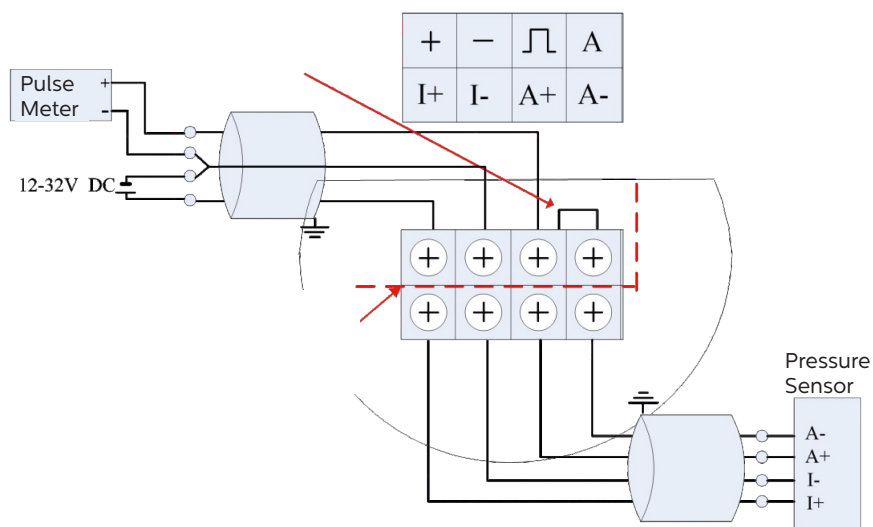


ELECTRICAL CONNECTION

4-20mA Output + HART + External Pressure



Pulse Output + External Pressure and Temperature Sensor





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