AVM80 VORTEX FLOW METERS

Armstrong®
EXPERIENCE MATTERS™

AVM80 Specifications

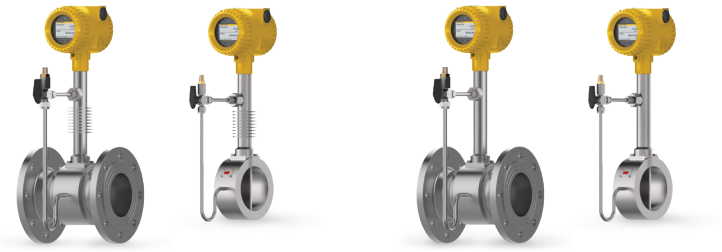
Media Compatibility	Gas/steam/liquid	
Pipe Diameter	1/2"-12" (DN15-DN300)	
Flow Velocity Range	Gas/Steam (standard)	DN15-DN20 6-70m/s DN25-DN32 4-70m/s DN40-DN300 2-70m/s
	Gas/Steam (extension)	DN15-DN20 6-80m/s DN25-DN32 4-120m/s DN40-DN300 2-120m/s
	Liquid	0.3-7m/s
Accuracy	Volume Flow Mass Flow Pressure Temperature	±1%RD ±1.0%RD ±0.5%FS ±1°F
Repeatability	±0.3%RD	
Power Supply	13.5-42V DC	
Output / Comm	3x4 20mA/RS485 passive 1x4 20mA@RS485 passive 1x4 20mA@HART passive	
Medium Temperature	-40 – 302°F (-40 – 150°C) -40 – 482°F (-40 – 250°C) -40 – 662°F (-40 – 350°C)	
Process Pressure	232 psi / 363psi / 580psi / 914psi (1.6Mpa/2.5Mpa/4.0Mpa/6.3Mpa)	
Ambient Temperature	-40 – 185°F (-40 – 85°C)	
Process Connection	Wafer / Flange	
Ingress Protection Grade	IP65 / IP67	
Material	Wet Part: 304 / 316 Transmitter: 304 / 316 Shell: Aluminum	

Armstrong International is pleased to offer the AVM80 Vortex technology, utilizing the Von Karman theory, for measurement of steam, liquid, and gas flows. All AVM in-line models provide multi-variable measurement and mass flow output for applications in industrial and institutional environments.

The flow meter is available from ½" (15 mm) (DN 15) to 12" (300 mm) (DN 300) meter sizes handling process temps from -40°F–662°F (-40°C–350°C) and process connections up to ANSI Class 400 (PN 63). Multi-variable options include temperature, pressure, and velocity measurements for a fully compensated mass flow rate. Output communication is available via analog 4-20mA, pulse, HART™ protocol, and Modbus.

Special Features

- Patent dual-sensor design and optimized signal processing technology to ensure best anti-vibration
- Super low flow measurement down to 2m/s and up to 60:1 superwide turndown ratio
- Wider measuring range and higher accuracy
- Self-diagnostic function plus remote diagnostic function ensures easier troubleshooting
- Built-in temperature and pressure compensation for direct massflow measurement
- Up to (3) 4~20mA analog outputs for temperature, pressure and flow
- 2" (50mm) TFT LCD Color LED display and optical touch button operation with Bluetooth capability



AVM80 Features

Process Fluids	Widely Used Applications	Line Sizes Wafer and flanged type line sizes inches (mm)	Process Connection	Measurable Parameters	Output Signal	Pressures psig (Mpa)
Liquid	Mechanical Manufacturing	.50" (DN15)	Wafer	Mass flow rate	4-20mA (HART@4-20mA)	232 (7.1.6)
Gas	Electronics	.75" (DN20)	Flange	Volumetric flow rate	MODBUS-RTU	362 (2.5)
Steam	Food	1.00" (DN25)	ANSI	Temperature	RS485	580 (4.0)
	Metallurgy	1.50" (DN40)	JIS	Pressure	Pulse	913 (6.3)
	Pharmaceuticals	2.00" (DN50)	DIN standard flanges are optional	Velocity		
	Textiles	2.50" (DN65)				
	Institutional Industries	3.00" (DN80)				
		4.00" (DN100)				
		5.00" (DN125)				
		6.00" (DN150)				
		7.00" (DN175)				
		8.00" (DN200)				
		10.00" (DN250)				
		12.00" (DN300)				

Model Codes

General Model		
AVM80-MV	Vortex mass flowmeter with integral RTD and pressure sensor	Standard
AVM80-N	Vortex flowmeter without integral RTD and pressure sensor (velocity only)	Option

Fluid Type		
1	Liquid	Option
2	Gas	Standard
3	Steam	Option

Process Connection		
IN	Insertion (only for DN300 - DN1000 or 12 inch - 40 inch)	Option
WC	Wafer with carbon steel flanges up to 232 psig (16 barg) / DN15-DN300	Standard
WF	Wafer with stainless steel flanges up to 232 psig (16 barg) / DN15-DN300	Option
D1	Flanged DIN PN16 up to 232 psig (16 barg) / DN15-DN300	Option
D2	Flanged DIN PN25 362 psig (25 barg) / DN15-DN300	Option
D3	Flanged DIN PN40 580 psig (40 barg) / DN15-DN30	Option
D4	Flanged DIN PN63 913 psig (63 barg) / DN15-DN30	Option
C1	Flanged ANSI CL 150 up to 232 psig (16 barg) / 0.5"-12"	Option
C2	Flanged ANSI CL 300 up to 580 psig (40 barg) / 0.5"-12"	Option
C3	Flanged ANSI CL 400 up to 913 psig (63 barg) / 0.5"-12"	Option
J1	JIS 10K up to 232 psig (16 barg) / DN15-DN300	Option
J2	JIS 20K up to 580 psig (40 barg) / DN15-DN300	Option
J3	JIS 30K up to 913 psig (63 barg) / DN15-DN300	Option

Wetted Part Material		
1	0Cr18Ni9 (304)	Standard
2	316	Option
Q	Other	Option

Degreased		
N	Wet part not degreased	Standard
D	Wet part degreased for oxygen measurement	Option

Medium Temperature		
N	T < 302°F (150°C)	Standard
S	T < 482°F (250°C) wafer or flanged	Option
H	T < 662°F (350°C) wafer or flanged	Option

Transmitter		
ML1	Integral transmitter, multi-variable, Bluetooth, RS485, pulse	Standard
ML2	Integral transmitter, multi-variable, Bluetooth, 3x4...20mA, RS485, pulse	Option
ML3	Integral transmitter, multi-variable, Bluetooth, 1x4...20mA@HART, 2x4...20mA, pulse	Option
MR1	Remote transmitter (dual display), multi-variable, Bluetooth, RS485, pulse	Option
MR2	Remote transmitter (dual display), multi-variable, Bluetooth, 3x4...20mA, RS485, pulse	Option
MR3	Remote transmitter (dual display), multi-variable, Bluetooth, 3x4...20mA, RS485, pulse	Option
NL1	Integral transmitter, velocity only, Bluetooth, RS485, pulse	Option
NL2	Integral transmitter, velocity only, Bluetooth, 1x4...20mA, RS485, pulse	Option
NL3	Integral transmitter, velocity only, Bluetooth 3x4...20mA, RS485, pulse	Option
NL4	Integral transmitter, velocity only, Bluetooth 1x4...20mA, HART, pulse	Option
NR1	Remote transmitter (dual display), velocity only, velocity only,, Bluetooth, RS485, pulse	Option
NR2	Remote transmitter (dual display), velocity only, Bluetooth, 1x4...20mA, RS485, pulse	Option
NR3	Remote transmitter (dual display), velocity only, Bluetooth, 3x4...20mA, RS485, pulse	Option
NR4	Remote transmitter (dual display), velocity only, Bluetooth, 1x4...20mA, HART, pulse	Option

Cable Grinder		
M	NPT 1/2	Standard
N	NPT 1/2	Option

Ex-Proof		
N	No Ex-proof	Option

Pipe Size	
015	0.5" (DN15)
020	0.75" (DN20)
025	1.0" (DN25)
032	1.25" (DN32)
040	1.5" (DN40)
050	2.0" (DN50)
065	2.5" (DN65)
080	3.0" (DN80)
100	4.0" (DN100)
125	5.0" (DN125)
150	6.0" (DN150)
200	8.0" (DN200)
250	10.0" (DN250)
300	12.0" (DN300)

AVM80-MV	1	IN	1	V2	N	ML1	M	N	015

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