

Airflow Sensors

Microbridge Mass Airflow/Amplified

AWM3000 Series

OUTPUT FLOW VS INTERCHANGEABILITY (Note 1)

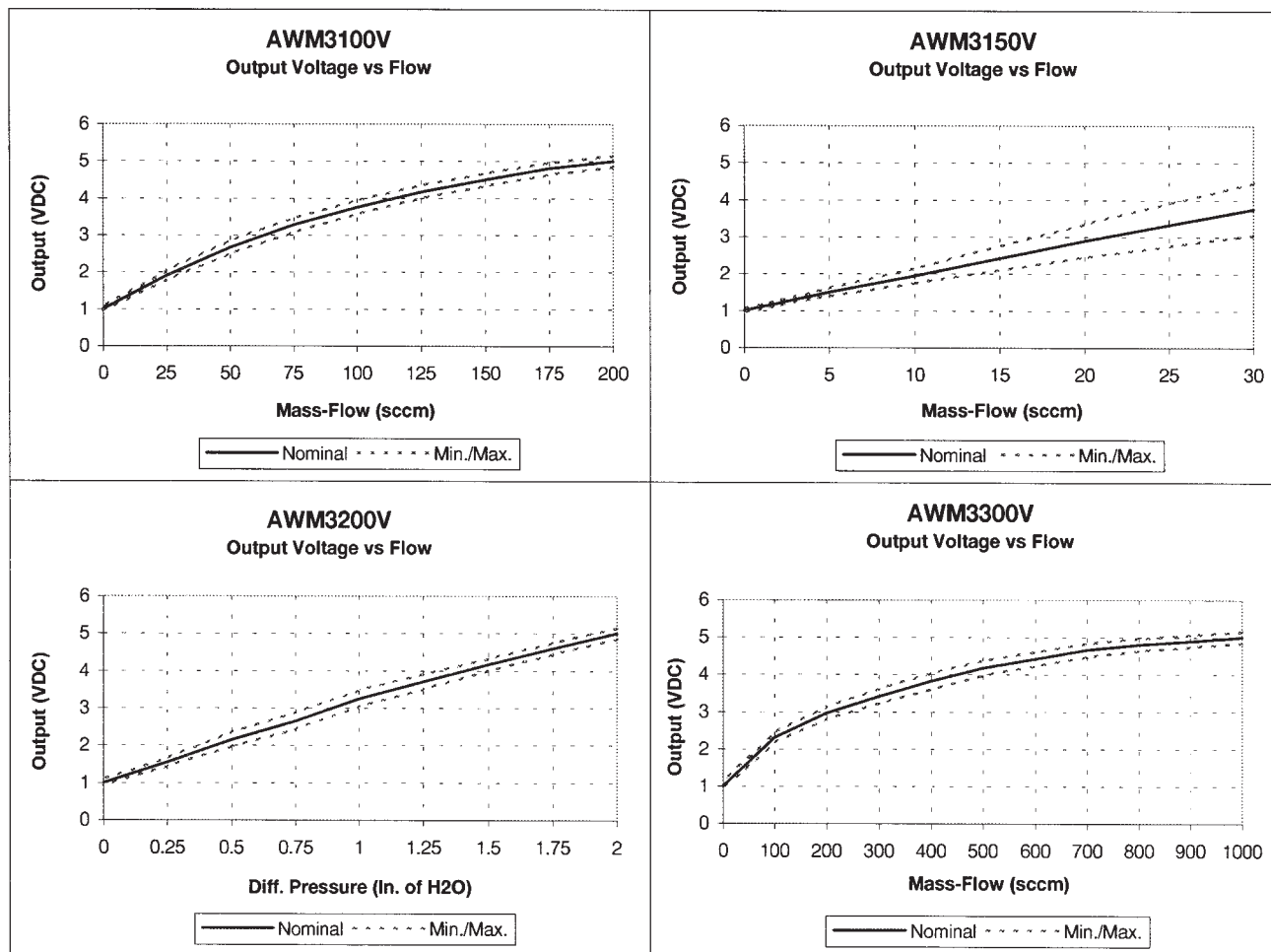
Performance Characteristics @ 10.0 ±0.01 VDC, 25 C

AWM3100V				AWM3150V				AWM3200V (Note 2)				AWM3300V			
Press. mBar	Flow sccm	Nom. VDC	Tol. ± VDC	Press. mBar	Flow sccm	Nom. VDC	Tol. ± VDC	Flow sccm	Press. " H ₂ O	Nom. VDC	Tol. ± VDC	Press. mBar	Flow sccm	Nom. VDC	Tol. ± VDC
0.49	200	5.00	0.15	2.50	30	3.75	0.70	60.0	2.00	5.00	0.15	3.40	1000	5.00	0.15
0.42	175	4.80	0.16	1.70	20	2.90	0.45	53.0	1.75	4.59	0.15	2.90	900	4.90	0.16
0.35	150	4.50	0.17	0.84	10	1.95	0.20	46.0	1.50	4.16	0.16	2.40	800	4.80	0.17
0.28	125	4.17	0.18	0.42	5	1.50	0.10	38.0	1.25	3.70	0.20	2.00	700	4.66	0.18
0.21	100	3.75	0.19	0.34	4	1.40	0.08	30.0	1.00	3.25	0.22	1.60	600	4.42	0.19
0.14	75	3.27	0.19	0.26	3	1.30	0.08	23.0	0.75	2.65	0.22	1.20	500	4.18	0.20
0.09	50	2.67	0.17	0.17	2	1.20	0.07	16.0	0.50	2.15	0.19	0.80	400	3.82	0.21
0.04	20	1.90	0.13	0.08	1	1.10	0.06	8.0	0.25	1.55	0.11	0.54	300	3.41	0.19
0.00	0	1.00	0.05	0.00	0	1.00	0.05	0.0	0.00	1.00	0.08	0.31	200	2.96	0.17
												0.12	100	2.30	0.14
												0.00	0	1.00	0.10

Notes:

- Numbers in **BOLD** type indicate calibration type, mass flow or differential pressure.
Tolerance values apply to calibration type only.
- Differential pressure calibrated devices are not recommended for flow measurement.
Use flow calibrated devices for flow measurement.

OUTPUT CURVES



Airflow

AWM3000 Series

Catalog Listings	AWM3200CR*	AWM3201CR*	AWM3303V
Flow Range (Full Scale)			±1000 sccm (1 SLPM)
Differential Pressure Range	0 - 2" H ₂ O (5 mBar)	0 - 0.5" H ₂ O (1.25 mBar)	
Output Type	4 - 20 mA DC (linear)	4 - 20 mA DC (linear)	1 - 5 VDC (Note 2)
Output @ Trim Point	20.0 ±1 mA DC @ 2" H ₂ O	20.0 ±1 mA DC @ .05" H ₂ O	5.00 ±0.150 VDC
Null Output	4.00 ±0.3 mA DC	4.00 ±0.4 mA DC	3.00 ±0.050 VDC
Null Shift +25° to -25°C, +25° to +85°C	±2 mA DC (max.)	±2 mA DC (max.)	±.050 VDC (max.)
Output Shift +25° to -25°C +25° to +85°C	+24% Reading -31% Reading (Note 3)	+32% Reading -32% Reading (Note 3)	-5% Reading +5% Reading
Linearity Error	±5% Reading	±5% Reading	N/A
External Output Load	100 - 300 Ω (Note 4)	100 - 300 Ω (Note 4)	N/A
Response Time (Note 1)	60 msec (max.)	60 msec (max.)	3 msec (max.)
Repeatability & Hysteresis, Max.	±0.50% Reading	±0.50% Reading	±1% Reading
Excitation VDC	10 ±0.01	10±0.01	8-15
Power Consumption (mW)	—	50	100
Common Mode Pressure (psi)	—	—	25
Calibration Gas	Nitrogen		
Temperature Range	Operating: -25° to +85°C (-13° to +185°F); Storage: -40° to +90°C (-40° to +194°F)		
Termination	2.54 mm (.100") centers, 0.635 mm (0.025") square		
Weight (grams)	10.8		
Shock Rating	100 g peak (5 drops, 6 axes)		

1. Initial warm-up time for signal conditioned circuitry is 1 minute max.
2. Output Voltage is ratiometric to supply voltage.
3. Temperature shifts when sensing differential pressure correlates to the density change of the gas over temperature.
4. Output load connected from V_{OUT} to GND (current sinking).
5. Maximum allowable rate of flow change to prevent damage: 5.0 SLPM/1.0 sec.

* A 5 micron filter must be used on differential pressure sensors.

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