

Microbridge Airflow Sensors

Gas Media Compatibility – Note #4

The microbridge mass airflow sensor incorporates a limited number of wetted materials in the construction of the device. The wetted materials in the sensor are fairly non-reactive and are compatible with a wide variety of gaseous media. Table 1 and Table 2 list wetted sensor materials and associated media compatibility.

NOTICE

Filtering is highly recommended for use in applications that may contain dust particle contamination that can degrade sensor performance over time. See Particle Contamination and Filter Manufacturers, page 126, for more information.

CAUTION

PRODUCT DAMAGE

AWM Series microbridge mass airflow sensors are **NOT** designed to sense liquid flow and will be damaged by liquid flow through the sensor.

MICROBRIDGE—WETTED SENSOR MATERIALS

Sensor material	AWM1000	AWM2000	AWM3000	AWM40000	AWM5000
Silicon	X	X	X	X	X
Silicon nitride	X	X	X	X	X
Gold	X	X	X	X	X
Aluminum oxide	X	X	X	X	X
Epoxy sealant	X	X	X	X	X
Fluorocarbon				X	X
Polyester					X
Polyetherimide	X	X	X	6 SLPM Only	
316 Stainless steel	AWM1200V	AWM2200V	AWM3200V		

MICROBRIDGE—GAS MEDIA COMPATIBILITY

Gas Media	AWM1000	AWM2000	AWM3000	AWM40000	AWM5000
Air	X	X	X	X	X
Nitrogen	X	X	X	X	X
Oxygen	X	X	X	X	X
Argon	X	X	X	X	X
Helium	15 VDC Supply	15 VDC Supply	15 VDC Supply	15 VDC Supply	15 VDC Supply
Hydrogen*	Special listing	Special listing	Special listing	Special listing	Special listing
Natural Gas	X	X	X	X	X
Nitrous oxide	X	X	X	X	X
Anesthetic Gasses	N/A	N/A	N/A	N/A (Except 6 SLPM)	X
Carbon dioxide	X	X	X	X	X
Nitric oxide	Dry Gas Only	Dry Gas Only	Dry Gas Only	Dry Gas Only	Dry Gas Only
Sulfur oxide	Dry Gas Only	Dry Gas Only	Dry Gas Only	Dry Gas Only	Dry Gas Only
Water vapor	Non-Condensing	Non-Condensing	Non-Condensing	Non-Condensing	Non-Condensing
Ammonia gas	Dry Gas Only, <1%	Dry Gas Only, <1%	Dry Gas Only, <1%	Dry Gas Only, <1%	Dry Gas Only, <1%
Chlorine gas	<0.1%	<0.1%	<0.1%	<0.1%	<0.1%
Hydrogen sulfide	<0.1%	<0.1%	<0.1%	<0.1%	<0.1%

***Note:** Applications involving hydrogen gas sensing require the use of a sensor identified by the letter "H" in the catalog order guide. Current hydrogen stable catalog listings are: AWM2100VH, AWM2300VH, and AWM42150VH. Other listings may be established as hydrogen stable devices. Please contact the Application Center for assistance at 1-800-537-6945.