

Mass Airflow Sensors

Microbridge

0 – 0.2 l/min to 0 – 1 l/min

Honeywell



- Sensors give signal-conditioned output proportional to the air/gas flow through the device
- Wide range of applications

Connections
1 Output voltage
2 +ve supply voltage
3 Ground

H = 31.5 (excl pins), W = 20.5 (excl ports), D = 15.5 Port O/D = 5.08, Pin spacing = 2.54, Fixing centres = 12.7

Microbridge mass airflow sensors give a signal conditioned output (1V to 5V dc for a 10V dc supply) proportional to the air/gas flow through the device. They are sensitive to flows up to 1 litre/min (0 – 1000 standard cc's/min). The transducers are uni-directional, the air flow going from P1 to P2.

Applications: Air-conditioning (variable air volume), medical ventilation/anaesthesia control, gas analysers, gas metering, fume cabinet and process control.

Excitation voltage	10V dc ±10mV dc	Response time	3ms (max)
Output voltage	5V at full span	Operating temperature	-25°C to +85°C
Null voltage	1.00V dc ±50mV dc	Overpressure	25 psi
Repeatability and hysteresis	±0.5% of reading		

	178-887	178-888*	178-889
Operating Range	0 to 200 sccm (0 to 0.2 litres/min)	0 to 2" H ₂ O (0 to 0.072 psid)	0 to 1000 sccm (0 to 1 litre/min)
Mfrs. List No.	AWM3100V	AWM3200V	AWM3300V

*178-888 is configured as a differential pressure transducer

SEN38X

Flow Range	Order Code	Price Each			
		1+	5+	10+	25+
0 to 200 sccm	.178-887				
0 to 2" H ₂ O	.178-888				
0 to 1000 sccm	.178-889				

Microbridge

0 – 5 l/min to 0 – 20 l/min

Honeywell



L = 163 (overall), W = 32, D = 35, Fixing centres = 43.2 20.3

- Flow ranges from 0 to 5 litres/min. up to 20 litres/min.
- Device has two 1/4" NPT snap-on fittings enabling simpler connection

Microbridge uni-directional mass airflow sensors featuring higher flow ranges. Electrical connection is via 4-pin connector (3 pins on device), the mating connector being supplied with the sensor.

Applications: Mass flow testing/calibration systems, medical insufflators, environmental sampling equipment, oxygen concentrators and patient monitors.

Excitation voltage	10V dc ±10mV dc	Response time	60ms (max.)
Output voltage	5V dc at full span	Operating temp.	-25°C to +85°C
Null voltage	1.00V dc ±50mV dc	Overpressure	50 psi
Repeatability and hysteresis	±0.5% of reading	Calibration	Nitrogen N ₂

SEN123X

Flow Range (litres/min.)	Mfrs. List No.	Order Code	Price Each			
			1+	5+	10+	25+
0 to 5	AWM5101VN	.516-090				
0 to 10	AWM5102VN	.516-107				
0 to 15	AWM5103VN	.516-119				
0 to 20	AWM5104VN	.516-120				

Microbridge – Manifold Mount

Honeywell



H = 30.2 (excl. pins),
W (body) = 30.5, F.C. = 34.0
Pressure ports: bore:2.3,
O-ring dia. = 6.2

- Manifold mount/O-ring sealed
- Unamplified sensors have 6-pin bridge output and ceramic flow tube
- Choice of flow range on unamplified sensors: 0±25 sccm (standard c.c.'s/ min.) and 0±1000 sccm
- Low flow ±25 sccm sensor is suitable for hydrogen and helium
- Amplified sensors have 3-pin signal conditioned outputs
- Choice of flow range on amplified sensors: 0 to +1000 sccm with ceramic flow tube and 0 to +6 slpm (standard litres per minute) with plastic flow tube
- Sensors may be used in high common mode pressure range of 150 psi

Mass airflow sensors for manifold mounting, using dual Wheatstone bridge technology for controlling airflow measurement.

	721-6695	721-6701	721-6713	721-6725
Flow range (full scale)	±25 sccm	±1000 sccm	+1000 sccm	-6 slpm
Output voltage (full scale)	8.5 ±1.5mV dc	54.7 ±3.7mV dc	5 ±0.15V dc	5 ±0.15V dc
Null shift	±0.20mV dc	±0.20mV dc	±0.025V dc	±0.025V dc
Output voltage shift				
-25°C to +25°C	+2.5% reading	+2.5% reading	-5% reading	-5% reading
+25°C to +85°C	-2.5% reading	-2.5% reading	+6% reading	+6% reading
Power consumption (max.)	60mW	60mW	60mW	75mW
Repeatability and hysteresis	±0.35% reading	±1.00% reading	±0.50% reading	±1.00% reading
Pressure drop (in H ₂ O)	—	1.5 typ.	1.02 typ.	8.0 typ.
Excitation voltage	10V dc ±10mV		Calibration gas	Nitrogen
Operating temperature	-25 to +85°C			

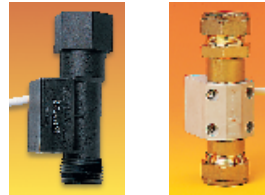
SEN275

Flow Range	Mfrs. List No.	Order Code	Price Each			
			1+	5+	10+	25+
Unamplified Sensors						
0±25 sccm	AWM42150VH	721-6695				
0±1000 sccm	AWM42300V	721-6701				
Amplified Sensors						
0 to +1 l/min.	AWM43300V	721-6713				
0 to +6 l/min.	AWM43600V	721-6725				

Liquid Flow Sensors and Flow Switches

Water and Air Flow Switches

1 l/min



H (overall) = 101.5
Connections = 3/4" BSP
Cable L = 500

H (overall) = 112.5
Connections = 22mm
compression fitting
Cable L = 500

- Flow switches in high grade Noryl housing to **UL94V-1** flammability rating
- Flow switches with brass bodies have compression fittings for direct connection to 2mm dia. pipe, ideal for water or air
- Designed for water flow sensing especially where a small head of water gives low pressure and in turn, low flow
- Noryl body types are British Water Research Council listed for hot (85°C) and cold potable water applications
- Available with either solid state AC or reed switch DC switching for circulation pumps, system controls etc.

Switch point (water)	1 litre/minute, fixed
Mounting	Vertical ±15° (flow direction arrow pointing upwards)
Temperature range	-30°C to +100°C
Max. pressure	10 Bar
Switch rating, a.c. types	250V rms, 3A (reed switch gated triac)
Switch rating, d.c. types	300V dc, 0.5A, 10W (reed switch)
Switch point for air (brass body)	0.00255m ³ /second

Mfrs. List No. FS-01 = 730-798, FS-02 = 730-804, FS-05 = 721-9982, FS06 = 721-9994

SEN246X

Switch Rating	Order Code	Price Each			
		1+	10+	25+	100+
Noryl, 250V ac, 3A	730-798				
Noryl, 300V dc, 0.5A	730-804				
Brass, 250V ac, 3A	721-9982				
Brass, 300V dc, 0.5A	721-9994				

Liquid Flow Switches

1.5 l/min and 3.5 l/min

CRYDOM



- Flow switches in Acetal resin housing, **WRC** approved for use in potable water systems
- Suitable for use with hot or cold water and alcohol or dilute (including organic) acids up to 5% concentration
- Flow switches can be mounted vertically or horizontally, with the cap upwards

15mm types: L = 107, W = 56 (standard type),

70 (triac type), Dia. = 15, Cable L = 250

22mm types: L = 114, W = 58 (standard type),

72 (triac type), Dia. = 22, Cable L = 250

Available 15mm and 22mm diameter for 1.5 litre/min and 3.5 litre/min flows respectively. Triac protected versions are available for switching loads directly, as in powered water systems with relatively high pump turn-on surge currents.

Greater sensitivity is achieved with vertical installation.

Switch point	1.2 to 1.5 litres/min (15mm types), 3.0 to 3.5 litres/min (22mm types)
Switch off flow (max)	0.5 litres/min (15mm types), 1.0 litres/min (22mm types)
Operating temperature	85°C max
Operating pressure	10 bar max
Switching voltage	240V rms/dc
Max. full cycle on state surge	1.0A @ 50Hz (standard types), 10A @ 50Hz (triac types)
Max. full cycle continuous	1.0A @ 50Hz (standard types), 1.5A @ 50Hz (triac types)
Max. switching power	15VA (standard types), 240VA (triac types)

SEN202X

Flow Range	Mfrs. List No.	Order Code	Price Each		
			1+	10+	50+
1.5 l/min, 15VA	FS15A519	730-889			
3.5 l/min, 15VA	FS22A520	730-890			
1.5 l/min, 240VA	FS15T521	730-907			
3.5 l/min, 240VA	FS22T522	730-919			