

# OMRON Pressure, Flow and Vibration Sensors



## OMRON 2SMPP SERIES: MEMS GAUGE PRESSURE SENSORS

### Specifications:

- Pressure type: Gauge pressure
- Applicable gas: Air (Non-corrosive, dust free)
- Withstand pressure: Max. 53kPa
- Supply current: 100µADC
- Current consumption: Max. 130µADC

### Features:

- Piezo resistive element provides electrical characteristics that are superior to capacitive type pressure sensors
- Low power consumption of 0.2mW
- Low temperature influence

### Applications:

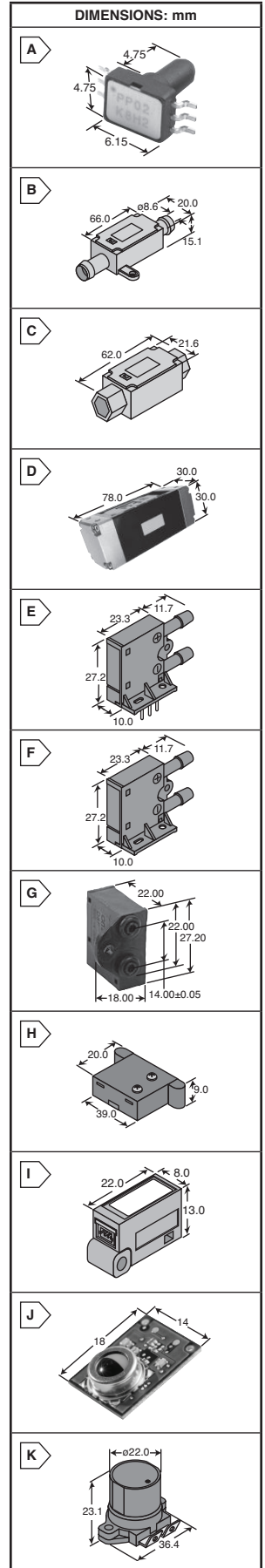
- Medical equipment
- Home appliance
- Air movement control
- Level indicators
- Leak detection



RoHS Compliant

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Omron Part No.	Fig.	Description	Price Each		
				1	25	50
653-2SMPP-02	2SMPP-02	A	Micro-flow sensor 0 to 37kPa (0 to 280mHg)	3.50	3.41	3.29
653-2SMPP-03	2SMPP-03	A	Absolute pressure sensor -50 to 50kPa (300 to 1100hPa)	4.50	4.05	3.60



## OMRON D6F SERIES: GAS MASS-FLOW SENSORS

### Specifications:

- Dielectric strength: 500VAC between terminals and base
- Operating temperature: -10°C to 60°C
- Power supply (Vcc max.): 26.4VDC

### Features:

- Small size
- Fast response
- Applicable to air, non-corrosive gas, LNG
- Ideal for looking at low pressure medical gases, boiler emissions, and HVAC system airflow

### Applications:

- Medical equipment
- Combustion control
- Analysis instruments

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Omron Part No.	Fig.	Rated Range	Applicable Fluid	Case Material	Power Supply (Vcc Max.)	Output Voltage (Vout Max.)	Price Each		
								1	2	5
653-D6F-01A1-110	D6F-01A1-110	B	0-1L/min.	Air	PPS	26.4VDC	6VDC	130.85	128.29	114.42
653-D6F-05N2-000	D6F-05N2-000	C	0-5L/min.	Liquid Natural Gas	Aluminum	26.4VDC	6VDC	158.62	155.53	138.71

## OMRON 50A SERIES: MEMS AIRFLOW SENSORS

### Specifications:

- Dielectric strength: 500VAC between lead terminals
- Operating temperature: -10°C to 60°C

### Features:

- Precision mass-airflow up to 50LPM
- Stable output across full scale
- Low power consumption

### Applications:

- Industrial processes
- Medical respirators and ventilators
- Mass-flow controllers
- Fuel cell controls



For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Omron Part No.	Fig.	Flow Range	Case Material	Type	Applicable Gas	Price Each		
							1	2	5
653-D6F-50A6-000	D6F-50A6-000	D	0-50 LPM	Thermoplastic	Built-in orifice, straight connect with 1/4" BPST threads	Air	238.26	225.38	218.94

## OMRON D6F-P SERIES: MEMS MASS-FLOW SENSORS

### Specifications:

- Power supply: 4.75-5.25VDC
- Output voltage: Vout, 0.5-2.5VDC
- Flow range/pressure range: +1.0 SLM (+0.84 in H2O)
- Applicable gas: Air
- Operating temperature: -10°C to 60°C

### Features:

- Compact, highly reliable flow sensor with unique Dust Segregation System (DSS)
- Cyclone flow structure diverts particulate from sensor element
- High-accuracy, reliable mass-flow measurement
- Alternative to differential pressure sensing
- High-resolution and repeatability even at low-flow rates

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Omron Part No.	Fig.	Flow Range	Mounting Method	Connection	Price Each		
						1	2	5
653-D6F-P0001A1	D6F-P0001A1	E	0-0.1LPM	Flange mount	PCB terminals	47.56	46.63	42.85
653-D6F-P0010A1	D6F-P0010A1	E	0-1.0LPM	Flange mount	PCB terminals	47.56	46.63	42.85
653-D6F-P0010A2	D6F-P0010A2	F	0-1.0LPM	Flange mount	Connector	47.56	46.63	42.85
653-D6F-P0010AM2	D6F-P0010AM2	G	0-1.0LPM	Manifold mount	Connector	47.56	46.63	42.85

## OMRON D6F-W, -V SERIES: MEMS AIR VELOCITY SENSORS

### Specifications:

- Operating temperature: -10°C to 60°C
- Insulation resistance: 20MΩ min. @ 500VDC between lead terminal and the case

### Features:

- Integral passive Dust Segregation System (DSS) prevents contamination of sensor element
- Full-scale repeatable accuracy achieves consistent air velocity measurement in a cost efficient package

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Omron Part No.	Fig.	Flow Range	Applicable Gas	Case Material	Power Supply (Vcc Max.)	Output Voltage (Vout Max.)	Price Each		
								1	2	5
653-D6F-W04A1	D6F-W04A1	H	0-4m/sec	Air	PPS	26.4VDC	6VDC	107.41	101.89	90.89
653-D6F-W10A1	D6F-W10A1	H	0-10m/sec	Air	PPS	26.4VDC	6VDC	79.20	77.66	71.36
653-D6F-V03A1	D6F-V03A1	I	0-3m/sec	Air	PBT	12.0VDC	3VDC	20.67	20.14	19.97

## OMRON D6T SERIES: MEMS THERMAL IR SENSORS

### Specifications:

- Target temperature: Detection range: 5-50°C
- Output accuracy: within +/- 1.5°C
- Power supply voltage: DC4.5-5.5V
- Output form: Binary code (10 times detected temperature (°C))
- Temperature resolution (NETD): 0.14°C

### Features:

- High sensitivity enables detection of stationary human presence
- MEMS and ASIC technologies achieve high SNR
- Superior noise immunity with a digital output
- High-precision area temperature detection with low crosstalk field of view characteristics
- Application notes available upon request

### Applications:

- Energy-saving household appliances
- Building and office energy conservation systems
- Security systems
- Factory automation



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MOUSER STOCK NO.	Omron Part No.	Fig.	Element Type	Field of View		Price Each			
				X Direction (°)	Y Direction (°)	1	10	25	50
653-D6T-44L-06	D6T-44L-06	J	4x4	44.2	45.7	49.53	36.16	34.45	33.68
653-D6T-8L-06	D6T-8L-06	J	1x8	62.8	6.0	44.72	32.65	31.28	30.41

## OMRON D7 SERIES: VIBRATION SENSORS

### Specifications:

- Terminal type: QC
- Operating temperature: -25°C to 60°C
- Service life: 5000 operations min.

### Features:

- Quick detection of movements that could cause damage to equipment
- Auto-resettable - no manual setting required

### Applications:

- Industrial equipment
- Any system requiring safety shut-off during a period of vibration or tilting



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MOUSER STOCK NO.	Omron Part No.	Fig.	Detection Sensitivity	Contact Form	Description	Contact Rating	Price Each		
							1	5	10
653-D7E-1	D7E-1	K	130-200gal	SPST-NC	Sealed vibration sensor	0.1mA @ 5VDC / 100mA @ 30VDC	10.48	9.90	9.31
653-D7E-2	D7E-2	K	100-170gal	SPST-NC	Sealed vibration sensor	0.1mA @ 5VDC / 100mA @ 30VDC	8.06	7.66	7.16
653-D7E-3	D7E-3	K	- - -	SPST-NC	Tilt switch, 50-80° detection angle	0.1mA @ 5VDC / 100mA @ 30VDC	12.59	12.20	11.88

## ACCESSORIES

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Omron Part No.	Recommended Optional Cable For Use With Sensors	Price Each		
			1	25	50
653-D6F-CABLE1	D6F-CABLE1	D6F-01, D6F-02, D6F-05, D6F-10, D6F-20, D6F-20A, D6F-50A Series	8.16	7.33	6.94
653-D6F-CABLE2	D6F-CABLE2	D6F-03, D6F-V Series or D6F-P0010A2 or D6F-P0010AM2	8.29	7.33	6.94
653-D6F-WCABLE	D6F-WCABLE	D6F-W Series	4.36	3.99	3.79