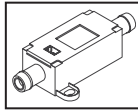




## D6F Gas Flow Sensors



The D6F is a new supersensitive gas flow sensor. It is able to measure both gas velocity and direction at extremely low flow rates, and is ideal for looking at low pressure medical gases, boiler emissions, and HVAC system airflow. It is suitable for measuring the amount of oxygen and nitrogen dioxide, consumed from a respiratory apparatus in surgery. It can also be used for monitoring air circulation in a building and thus improving the performance and efficiency of air conditioning and building comfort systems. The extreme sensitivity is achieved with a tiny heating element, associated with temperature sensors on both sides. The deviation is temperature measured by the two sensors and used to calculate the gas flow and direction, generating a non-linear analogue output in the range of 1V - 5V.

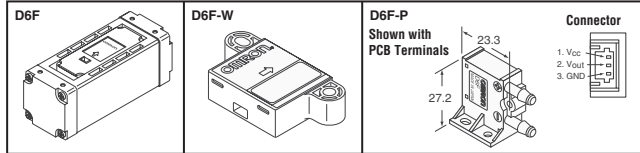
Case Material	Suitable Gas	Flow Range	Digi-Key Part No.	1	Price Each 25	50	Omron Part No.	
PPS	Air	0-1 Liter/minute	Z1671-ND	168.33	151.50	134.66	D6F-01A1-110	
PPS	Air	0-2 Liter/minute	Z1672-ND	168.33	151.50	134.66	D6F-02A1-110	
Aluminum	LNG*	0-5 Liter/minute	Z1673-ND†	201.68	165.49	159.69	D6F-05A2-000	
PPS	Air	0-3 Liter/minute	Z2717-ND	257.55	231.80	206.04	D6F-03A3-0000	
Connector with 2M Cable for D6F Sensors.....				Z2718-ND	8.60	7.74	6.88	D6F-CABLE2

\* Liquid Natural Gas † D6F-05 is a 1/4" pipe thread version using British Taper (Rc) standard.

## D6F Air Flow Sensors

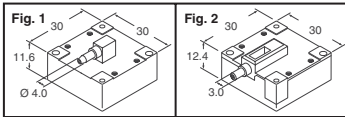


Omron's mass flow sensor will detect flows of 1 - 10 liters per minute up to a 1 - 50 liter per minute version. They use a wide supply voltage range of 5 - 26.4VDC and will output an analog voltage of 0.5 - 5VDC. Perfect for medical apparatus, fuel cell monitoring and measuring instruments.



Description	Digi-Key Part No.	1	Price Each 25	50	Omron Part No.
Flow Sensor 0 - 10 Liters per minute	Z2206-ND	291.50	262.35	233.20	D6F-10A5-000
Flow Sensor 0 - 20 Liters per minute	Z2207-ND	291.50	262.35	233.20	D6F-20A5-000
Flow Sensor 0 - 50 Liters per minute	Z2208-ND	291.50	262.35	233.20	D6F-50A5-000
Dustproof Flow Sensor 0-1 Liter, PCB	Z2785-ND	61.18	55.06	48.94	D6F-P0010A1
Dustproof Flow Sensor 0-1 Liter, Connector	Z2786-ND	61.18	55.06	48.94	D6F-P0010A2
Flow Sensor 0 - 1 Meters per second	Z2631-ND	99.38	89.44	79.50	D6F-W01A1
Flow Sensor 0 - 4 Meters per second	Z2632-ND	99.38	89.44	79.50	D6F-W04A1
Flow Sensor 0 - 3 Meters per second	Z2629-ND	66.25	59.63	53.00	D6F-V03A1
Cable for Air Flow Sensors	Z2209-ND	8.63	7.77	6.90	D6F-CABLE1
Cable for Air Flow Sensors (D6F-W)	Z2630-ND	4.98	4.48	3.98	D6F-W CABLE

## D8M Pressure Sensors



D8M pressure sensors are precise detecting change of air pressure sensors with outputs of either Analog or Digital signals. Perfect for water level monitoring, liquid level monitoring and HVAC monitoring in the air flow. Features: High Noise Immunity • Pressure Range: D8M-D1= 0 - 5.88kPa, D8M-A1= 0 - 4.9Pa • Current Consumption: D8M-D1= 150mA at output 3VDC, D8M-A1= 2.5mA • Temperature Range: -30° - 70°C • Protection Structure: IP40 • Characteristics: • Output Resolution: 0.01kPa/1 pulse • Output Frequency Range: 150 - 450kHz

Fig.	Pressure Type	Range	Output	Digi-Key Part No.	1	Price Each 25	50	Omron Part No.
1	Gauge	0 - 4.9kPa	Analog	Z2013-ND	55.47	43.97	42.26	D8M-A1
2	Gauge	0 - 5.88kPa	Digital	Z2014-ND	83.15	63.35	60.33	D8M-D1
—	Gauge	0 - 196.13Pa	Frequency	Z2017-ND	112.85	91.84	87.47	D8M-R1

## Inductive Proximity Sensors

Omron's line of inductive sensors are designed for detecting the presence or absence of ferrous metal close to the sensor and provide an output when detected. Because inductive sensors use electromagnetic fields, they excel over photo type sensors in environments containing water, oil, dust and dirt. Shielded sensors are made with a shielding plate around the ferrite core to focus ferrous metal sensing at the sensors head. It also allows the sensor to be located or mounted close to surrounding metals.

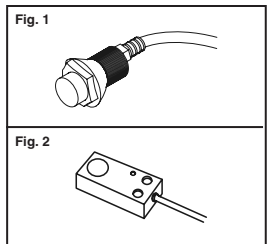


Fig.	Sensing Distance Maximum	Description	Terminal Type	Output Type	Digi-Key Part No.	1	Price Each 25	50	Omron Part No.	
1	0.8mm	4mm Diameter, Short Barrel DC Proxy, Stainless Steel, Shielded	3-Wire	NPN	Z1651-ND	78.02	72.24	67.43	E2E-CR8C1	
	1mm	M5, Short Barrel DC Proxy, Nickel Plated Brass, Shielded	3-Wire	NPN	Z1652-ND	78.02	72.24	67.43	E2E-X1C1	
	1mm	5.4mm Diameter, Short Barrel DC Proxy, Nickel Plated Brass, Shielded	3-Wire	NPN	Z1653-ND	78.02	72.24	67.43	E2E-C1C1	
	1.5mm	M8, Short Barrel DC Proxy, Nickel Plated Brass, Shielded	3-Wire	NPN	Z1062-ND	57.15	52.92	49.40	E2E-X1R5E1	
	1.5mm	M8, Short Barrel AC Proxy, Nickel Plated Brass, Shielded	2-Wire	NPN	Z1063-ND	75.92	70.20	65.52	E2E-X1R5Y1	
	2mm	M8, Short Barrel DC Proxy, Nickel Plated Brass, Shielded	2-Wire	NPN	Z1064-ND	65.71	60.84	56.79	E2E-X2D1-N	
	2mm	M12, Short Barrel DC Proxy, Nickel Plated Brass, Shielded	3-Wire	NPN	Z1085-ND	63.68	58.97	55.04	E2E-X2E1	
	2mm	M12, Short Barrel AC Proxy, Nickel Plated Brass, Shielded	2-Wire	NPN	Z1066-ND	75.82	70.20	65.52	E2E-X2Y1-US	
	3mm	M12, Short Barrel DC Proxy, Nickel Plated Brass, Shielded	2-Wire	NPN	Z1067-ND	66.71	61.77	57.66	E2E-X3D1-N	
	5mm	M18, Short Barrel DC Proxy, Nickel Plated Brass, Shielded	3-Wire	NPN	Z1068-ND	66.71	61.77	57.66	E2E-X3E1	
	5mm	M18, Short Barrel AC Proxy, Nickel Plated Brass, Shielded	2-Wire	NPN	Z1069-ND	80.87	74.88	69.89	E2E-X5Y1-US	
	7mm	M18, Short Barrel DC Proxy, Nickel Plated Brass, Shielded	2-Wire	NPN	Z1070-ND	68.74	63.65	59.41	E2E-X7D1-N	
	10mm	M30, Short Barrel DC Proxy, Nickel Plated Brass, Shielded	3-Wire	NPN	Z1654-ND	69.76	64.59	60.29	E2E-X10E1	
	10mm	M30, Short Barrel AC Proxy, Nickel Plated Brass, Shielded	2-Wire	NPN	Z1655-ND	77.11	71.40	66.64	E2E-X10Y1-US	
	1.5mm	M8, Short Barrel DC Proxy, Plastic Body, Shielded	3-Wire	NPN	Z1075-ND	55.34	51.24	47.83	E2F-X1R5E1	
	2	1.5mm	M8, Short Barrel AC Proxy, Plastic Body, Shielded	2-Wire	NPN	Z1076-ND	69.85	64.68	60.37	E2F-X1R5Y1
		2mm	M12, Short Barrel DC Proxy, Plastic Body, Shielded	3-Wire	NPN	Z1078-ND	53.52	49.56	46.26	E2F-X2E1
		2mm	M12, Short Barrel AC Proxy, Plastic Body, Shielded	2-Wire	NPN	Z1079-ND	69.85	64.68	60.37	E2F-X2Y1
5mm		M18, Short Barrel DC Proxy, Plastic Body, Shielded	3-Wire	NPN	Z1080-ND	54.43	50.40	47.04	E2F-X5E1	
5mm		M18, Short Barrel AC Proxy, Plastic Body, Shielded	2-Wire	NPN	Z1081-ND	71.67	66.36	61.94	E2F-X5Y1-US	
10mm		M30, Short Barrel DC Proxy, Plastic Body, Shielded	3-Wire	NPN	Z1077-ND	65.36	60.53	56.49	E2F-X10E1	
1.5mm		Flat Low Profile DC Proxy, Aluminum Body, Unshielded	3-Wire	PNP	Z1082-ND	48.54	44.94	41.95	TL-W1R5MB1	
1.5mm		Flat Low Profile DC Proxy, Aluminum Body, Unshielded	3-Wire	NPN	Z1083-ND	48.54	44.94	41.95	TL-W1R5MC1	
3mm		Flat Low Profile DC Proxy, Plastic Body, Unshielded	3-Wire	NPN	Z1084-ND	51.48	47.67	44.50	TL-W3MC1	
3mm		Flat Low Profile DC Proxy, Plastic Body, Unshielded	3-Wire	PNP	Z1189-ND	51.48	47.67	44.50	TL-W3MB1	
5mm		Flat Low Profile DC Proxy, Plastic Body, Unshielded	3-Wire	PNP	Z1085-ND	44.00	40.74	38.03	TL-W5MB1	
5mm		Flat Low Profile DC Proxy, Plastic Body, Unshielded	3-Wire	NPN	Z1086-ND	44.00	40.74	38.03	TL-W5MC1	
20mm	Flat Low Profile DC Proxy, Aluminum Body, Unshielded	3-Wire	NPN	Z1660-ND	72.12	66.78	62.33	TL-W20ME1		
Mounting Bracket, Fits M8 Size Sensors.....					Z1656-ND	2.74	2.54	2.37	Y92E-B8	
Mounting Bracket, Fits M12 Size Sensors.....					Z1657-ND	2.74	2.54	2.37	Y92E-B12	
Mounting Bracket, Fits M18 Size Sensors.....					Z1658-ND	2.74	2.54	2.37	Y92E-B18	

◆ RoHS Compliant

## D7A/D7E Vibration Sensors



These vibration sensors are perfect for quick detection of movements that could cause damage to equipment or can be used to safely shut down critical operations. Sensors are auto-resettable and require no manual resetting. D7A is a horizontal keeping vibration sensor that is PC mounted. D7E vibration sensors are low cost sealed vibration sensors with various sensitivities. Use these sensors for industrial equipment, cranes, forklifts, industrial manufacturing and boilers. Use in natural gas meter shutoffs, vending machines, conveyor systems, earthquake sensors or any circuits that require safety shutoff during a period of vibration or tilting.

Fig. 1 — D7A

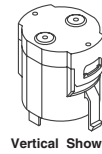
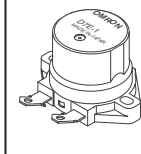


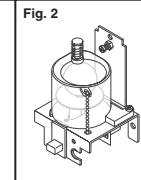
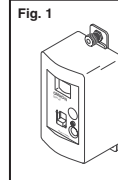
Fig. 2 — D7E



Specifications: • Various sensitivities • Contact Capacity: (D7A) 5µA - 1mA@3VDC; (D7E) 100mA@5-30VDC • Contact Form: (D7A) SPST-NO; (D7E) SPST-NC • Operating Temperature: (D7A) -30°C - 70°C; (D7E) -25°C - 60°C • Dielectric Strength: AC250V 50/60Hz

Fig.	Description	Digi-Key Part No.	1	Price Each 25	50	Omron Part No.
1	90 - 170 gal. Vertical Switch, 1mA	Z2004-ND	25.29	20.95	20.05	D7A-1
	90 - 170 gal. Horizontal Switch, 1mA	Z2005-ND	25.29	20.95	20.05	D7A-2
	90 - 170 gal. Chassis Mount Switch, 1mA	Z2006-ND	26.86	22.25	21.29	D7A-3
2	130 - 200 gal. Vibration Switch, 0.1A	Z2007-ND	9.01	6.90	6.52	D7E-1
	100 - 170 gal. Vibration Switch, 0.1A	Z2008-ND	6.72	3.88	3.66	D7E-2
	50 - 80° Tilt Switch, 0.1A	Z2009-ND	11.06	7.58	7.16	D7E-3

## D7H Equipment Vibration Sensors

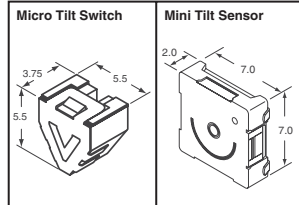


These vibration switches feature a highly durable stainless steel diaphragm that allows detection of very small movements. Used to prevent secondary damage after earthquakes and to replace mercury with a simple mechanical system. Manually resettable, vertically mounted sensor in either an enclosed case or open sensor.

Specifications: • 100 - 170 gallon, 10A 125VAC, 0.1A 30VDC • Operating Temperature: -10°C - 70°C

Fig.	Description	Digi-Key Part No.	1	Price Each 25	50	Omron Part No.
1	Enclosed Vibration Detection Switch - 10A	Z2010-ND	166.21	135.26	128.82	D7H-A1
2	Open Cased Vibration Detection Switch - 10A	Z2011-ND	54.47	43.18	41.50	D7H-B1
	Open Cased Vibration Detection Switch - 0.1A	Z2012-ND	54.47	43.18	41.50	D7H-B2

## D6B Tilt Switch



Ideal for equipment tilt detection. Will give you a separate output when tilted left or right. Perfect for signaling a screen to rotate from portrait to landscape view in keeping with product orientation. Can be used in space heaters.

Specifications: • Output Current: 1mA • Oper. Temperature: -10°C - 60°C • Characteristics: • Supply Voltage: D6B- 2.7V - 3.3V; D6B-N: 2.4V - 3.6V • Output High Voltage: D6B- Vdd - 0.5V min.; D6B-N: Vdd - 0.4V min. • Output Low Voltage: D6B- 0.5V max.; D6B-N: 0.4V max. • Current Consumption: D6B- 20µA max.; D6B-N: 10µA max. • Oper. Angle: D6B- 45° - 75°; D6B-N: 40° - 80°

Description	Digi-Key Part No.	1	Price Each 25	50	Omron Part No.
Micro SMD Tilt Switch - Left/Right	Z2003-ND	14.25	12.83	11.40	D6B-1
Micro SMD Tilt Switch - Left/Right	Z2506CT-ND	6.46	5.78	5.13	D6B-2P
Mini SMD Tilt Sensor - Left/Right	Z2676CT-ND	4.38	3.94	3.50	D6B-N-IP
	Z2676TR-ND	5470.00/2,500			D6B-N-IP

◆ RoHS Compliant † Cut Tape ‡ Tape and Reel