

# OMRON Amplified Optical Sensors

Omron's optical sensors are designed to meet the needs of positioning, detection, robotic controls and presence detection. Amplified sensors are not influenced by internal or external lighting and can be powered by a wide supply voltage. Great for plug and play applications such as conveyor sensing and directly interfacing with PLC and Industrial controllers.

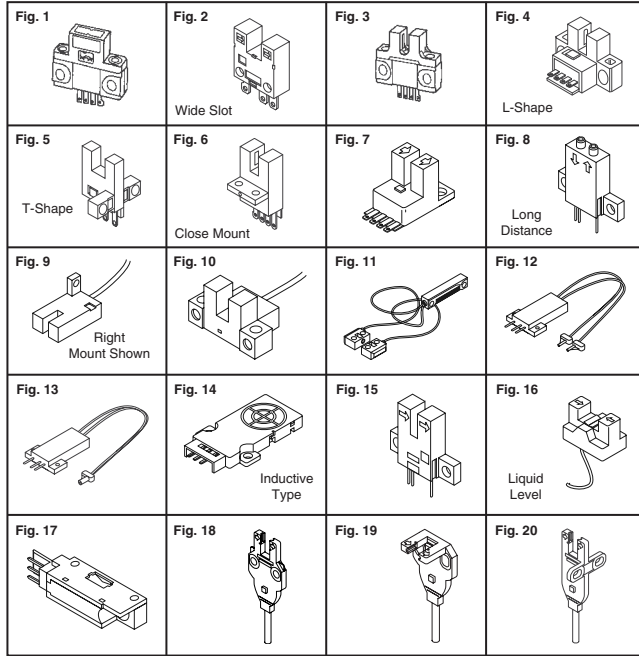


Fig.	Sensor Type/Features	Sensing Distance	Configuration	Digi-Key Part No.	Price Each 1	Price Each 25	Omron Part No.
	Reflective (General Purpose)	5mm	Light-On	OR506-ND	16.34	14.71	EE-SB5V
	Reflective (General Purpose)	5mm	Dark-On	OR507-ND	16.34	14.71	EE-SB5VC
	Reflective (General Purpose)	5mm	Light-On	OR867-ND	18.70	16.83	EE-SB5M
	Reflective (General Purpose)	19mm	Light-On	OR519-ND	22.83	20.55	EE-SB5V-E
	Reflective (Side Detecting)	5mm	Light-On	OR535-ND	44.21	39.80	EE-SPY311
1	Reflective (Side Detecting)	5mm	Light-On	OR536-ND	44.21	39.80	EE-SPY411
	Reflective (Top Detecting)	5mm	Dark-On	OR572-ND	44.21	39.80	EE-SPY312
	Reflective (Top Detecting)	5mm	Light-On	OR868-ND	50.60	45.54	EE-SPY402
	Reflective (Top Detecting)	5mm	Light-On	OR573-ND	44.21	39.80	EE-SPY412
	Reflective (Side Detecting)	5mm	Light/Dark-On	OR531-ND†	26.45	23.81	EE-SY671
	Reflective (Top Detecting)	5mm	Light/Dark-On	OR532-ND†	26.46	23.82	EE-SY672
2	Wide Slot (13mm Slot)	13mm	Dark-On	OR533-ND	47.25	42.53	EE-SPX303
	Wide Slot (13mm Slot)	13mm	Light-On	OR534-ND	47.25	42.53	EE-SPX403
3	Slot (Dust Proof Slit)	5mm	Light/Dark-On	OR528-ND	22.01	19.81	EE-SX670
	Slot - NPN	5mm	Light/Dark-On	OR611-ND	22.01	19.81	EE-SX670A
	Slot - PNP	5mm	Light/Dark-On	OR870-ND	25.18	22.66	EE-SX670P
4	Slot (L-Shaped) - NPN	5mm	Light-On	OR869-ND	26.43	23.79	EE-SX471
	Slot (L-Shaped, Dust Proof Slit)	5mm	Light/Dark-On	OR613-ND	22.41	20.17	EE-SX671
	Slot (L-Shaped, Dust Proof Slit)	5mm	Light/Dark-On	OR612-ND	22.41	20.17	EE-SX671A
5	Slot (T-Shaped, Dust Proof Slit)	5mm	Light/Dark-On	OR530-ND	22.68	20.42	EE-SX672
	Slot (T-Shaped, Dust Proof Slit)	5mm	Light/Dark-On	OR613-ND	22.68	20.42	EE-SX672A
	Slot (T-Shaped) - PNP	5mm	Light/Dark-On	OR871-ND	25.95	23.36	EE-SX672P
6	Slot (Close Mounting) - NPN	5mm	Light/Dark-On	OR549-ND	23.49	21.15	EE-SX673
	Slot (Close Mounting) - PNP	5mm	Light/Dark-On	OR614-ND	23.49	21.15	EE-SX673A
7	Slot (Close Mount) - NPN	5mm	Light/Dark-On	OR597-ND	24.17	21.75	EE-SX674
	Slot (Close Mount) - PNP	5mm	Light/Dark-On	OR872-ND	29.65	26.69	EE-SX674A
	Slot (Close Mount) - PNP	5mm	Light/Dark-On	OR873-ND	29.65	26.69	EE-SX674R
8	Reflective (Long Distance)	200mm	Dark-On	OR538-ND	59.40	53.46	EE-SPZ301A
	Reflective (Long Distance)	200mm	Light-On	OR539-ND	59.40	53.46	EE-SPZ401A
9	Slot (Left Mount with 1M Cable)	3.6mm	Dark-On	OR541-ND	67.50	60.75	EE-SPX302-W2A
	Slot (Right Mount with 1M Cable)	3.6mm	Dark-On	OR542-ND	72.90	65.61	EE-SPX304-W2A
10	Slot (Top Mount with 1M Cable)	5mm	Dark-On	OR543-ND	75.60	68.04	EE-SPX305-W2A
	Slot (Top Mount with 1M Cable)	5mm	Light-On	Z2357-ND	48.99	45.36	EE-SPX405-W2A
11	Slot (Wide Sensing Distance)	300mm	Dark-On	OR546-ND	175.50	157.95	EE-SPW321
	Slot (Wide Sensing Distance)	300mm	Light-On	OR547-ND	175.50	157.95	EE-SPW421
12	Fiber (19° Optical Fiber)	30mm	Dark-On	OR552-ND	81.34	73.21	EE-SPZ301W-01
	Fiber (19° Optical Fiber)	30mm	Light-On	OR553-ND	81.34	73.21	EE-SPZ401W-01
13	Reflective (11° Optical Fiber)	1-3mm	Dark-On	OR554-ND	85.05	76.55	EE-SPZ301Y-01
	Reflective (11° Optical Fiber)	1-3mm	Light-On	OR555-ND	85.05	76.55	EE-SPZ401Y-01
14	Inductive (Detects Ferrous Metal)	5mm	N/O Output	OR560-ND	29.36	26.43	E2R-A01
15	Slot (General Purpose)	3.6mm	Dark-On	OR574-ND	45.56	41.01	EE-SPX301
	Slot (General Purpose)	3.6mm	Light-On	OR575-ND	45.56	41.01	EE-SPX401
16	Slotted Liquid Level Detector	6-13mm	Dark/Light-On	OR579-ND	129.86	116.88	EE-SPX613
17	Reflective (General Purpose)	11mm	Dark-On	OR580-ND	15.83	14.25	EE-SPY415
18	Slot Type with 2M Cable - NPN	5mm	Dark-On	OR605-ND	29.36	26.43	EE-SX770
	Slot Type with 2M Cable - PNP	5mm	Dark-On	OR874-ND	33.60	30.24	EE-SX770P
	Slot Type with 2M Cable - NPN	5mm	Light-On	OR606-ND	29.36	26.43	EE-SX870
19	L-Shaped with 2M Cable - NPN	5mm	Dark-On	OR607-ND	31.05	27.95	EE-SX771
	L-Shaped with 2M Cable - NPN	5mm	Light-On	OR608-ND	31.05	27.95	EE-SX871
20	T-Shaped with 2M Cable - NPN	5mm	Dark-On	OR609-ND	32.40	29.16	EE-SX772
	T-Shaped with 2M Cable - NPN	5mm	Light-On	OR610-ND	32.40	29.16	EE-SX872

◆ RoHS Compliant † Built-in sensitivity adjuster

Description	Digi-Key Part No.	Price Each 1	Price Each 25	Omron Part No.
<b>Optical Sensor Accessories</b>				
IR Reflector for Fig. 8, 60 x 40mm	OR540-ND	16.10	14.49	E39-R1
3 Pin Connector with 1 Meter Cable for Fig. 15	OR561-ND	7.85	7.07	E22-01
Converter from NPN to PNP Output for Amp Sensors	OR550-ND	29.03	26.13	EE-2001
Converter from NPN to PNP Output for AMP Sensors	OR551-ND	29.03	26.13	EE-2002
4 Pin Connector for Fig. 1-6	OR527-ND	2.97	2.68	EE-1001
4 Pin Connector with 2 Meter Cable for Fig. 1-6	OR559-ND	13.91	12.52	EE-1006
Panel Mount Holder Clip for OR559-ND	OR576-ND	4.19	3.77	EE-1006A
3 Pin Connector for Fig. 8, 12, 13 and 16	OR537-ND	4.70	4.23	EE-1002
3 Pin Connector with 2 Meter Cable for Fig. 4, 12 and 13	OR558-ND	5.27	4.74	EE-1003
Panel Mount Holder Clip for OR558-ND	OR583-ND	1.62	1.46	EE-1003A

◆ RoHS Compliant

## Unamplified Optical Sensors

Omron's unamplified optical sensors are low cost detection sensors for design in processes. Inputs generally require a current limiting resistor and care must be taken with reducing external lighting influences. Outputs switch at very high speeds and operating lifetimes extend beyond 10,000 operating hours.

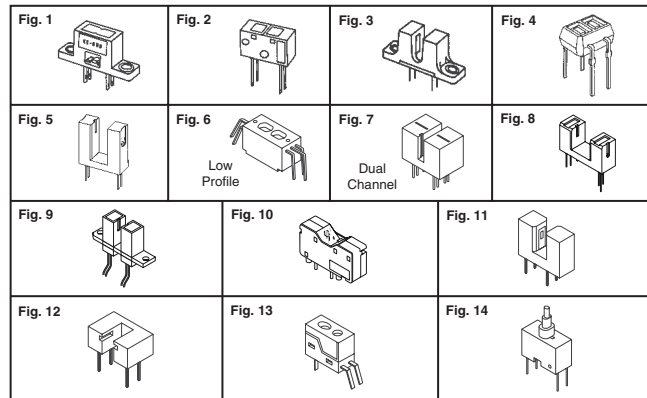
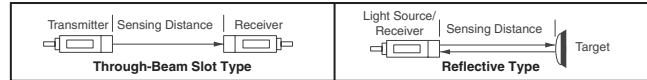
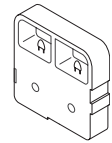


Fig.	Sensing Method	Sensing Distance	Terminal Type	Typical on/off (µsec.)	Digi-Key Part No.	Price Each 1	Price Each 25	Price Each 100	Omron Part No.
1	Reflective	5mm	Solder PC Board	30/30	OR500-ND	4.78	4.30	3.44	EE-SB5
	Reflective	5mm	Solder PC Board	30/30	OR501-ND	4.78	4.30	3.44	EE-SB5-B
2	Reflective	5mm	Solder PC Board	30/30	OR502-ND	4.70	4.23	3.39	EE-SF5
	Reflective	5mm	Solder PC Board	30/30	OR503-ND	4.70	4.23	3.39	EE-SF5-B
3	Slot	3.6mm	Solder PC Board	4/4	OR504-ND	3.58	3.22	2.58	EE-SG3
	Slot	3.4mm	Solder PC Board	4/4	OR713-ND	3.97	3.58	2.86	EE-SH3
	Slot	3.4mm	Solder PC Board	4/4	OR714-ND	4.92	4.44	3.55	EE-SV3
	Slot	3.4mm	PC Board	4/4	OR715-ND	5.08	4.58	3.67	EE-SX305
	Slot	3.6mm	PC Board	4/4	OR505-ND	3.58	3.22	2.58	EE-SG3-B
4	Reflective	1mm	PC Board SMT	35/25	OR520-ND	1.90	1.71	1.37	EE-SY124
	Reflective	1mm	SMT	35/25	OR557-ND	1.90	1.71	1.37	EE-SY125
5	Slot	5mm	PC Board	4/4	OR518-ND	1.68	1.51	1.21	EE-SX1042
	Slot	4.6mm	PC Board	500Hz	OR556-ND	1.95	1.76	1.41	EE-SX1061
	Slot	3mm	PC Board	70/70	OR601-ND	1.95	1.76	1.41	EE-SX298
6	Reflective	5mm	PC Board	50Hz	OR525-ND	3.45	3.11	2.49	EE-SY310
	Reflective	5mm	PC Board	50Hz	OR526-ND	3.45	3.11	2.49	EE-SY410
	Reflective	4.4mm	PC Board	3/20	OR603-ND	3.68	3.31	2.65	EE-SY313
	Reflective	4.4mm	PC Board	3/20	OR604-ND	3.68	3.31	2.65	EE-SY413
7	Slot	3.4mm	PC Board	4/4	OR523-ND	4.08	3.67	2.94	EE-SX1031
8	Slot	8mm	PC Board	3KHz	OR716-ND	2.45	2.21	1.77	EE-SX3070
	Slot	8mm	PC Board	3KHz	OR524-ND	1.93	1.74	1.39	EE-SX4070
	Slot	8mm	PC Board	3KHz	OR571-ND	1.68	1.51	1.21	EE-SX1070
9	Vertical Slot	3.4mm	61cm Wires	4/4	OR562-ND	7.08	6.37	5.10	EE-SX1088-W1
	Horizontal Slot	3.4mm	61cm Wires	4/4	OR563-ND	6.68	6.01	4.81	EE-SX1096-W1
10	Reflect./Vert.	4.5mm	PC Board	30/30	OR564-ND	10.50	9.45	7.56	EE-SY190
	Reflect./Horz.	4.5mm	PC Board	30/30	OR565-ND	10.50	9.45	7.56	EE-SY191
11	Slot	3.4mm	PC Board	4/4	OR569-ND	3.18	2.86	2.29	EE-SJ3-D
	Slot	2.8mm	PC Board	4/4	OR598-ND	2.03	1.83	1.46	EE-SX1025
	Slot	5.2mm	PC Board	4/4	OR599-ND	2.13	1.92	1.53	EE-SX1035
12	Slot	3mm	PC Board	4/4	OR570-ND	2.90	2.61	2.09	EE-SX1046
	Slot	2mm	PC Board	3/20	OR600-ND	2.93	2.64	2.11	EE-SX493
13	Red LED Reflect	4mm	PC Board	30/30	OR581-ND	10.53	9.48	7.58	EE-SY169
	IR Reflective	4mm	PC Board	30/30	OR582-ND	9.40	8.46	6.77	EE-SY169A
14	Actuator	Contact	PC Board	—	OR712-ND	3.09	2.78	2.23	EE-SA105

## D6A Air Flow Sensor

The industry first D6A filter sensor contains a microprocessor with a complex algorithms that provides a temperature reference point to see if a filter fan is moving the right amount of air. If the sensor indicates it is not, then the user knows the filter is clogged. With its sensing capabilities, the D6A provides reliability protection, ensuring the dependability of continued operation of expensive equipment. This clogged filter sensor is excellent for servers, high end routers and network devices. Other applications include uninterruptible power supplies, cash registers and other types of machines that use a filter fan.



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Specifications: • Supply Voltage: DC12V • Current Consumption: 60mA (Maximum)

Description	Digi-Key Part No.	Price Each 1	Price Each 25	Price Each 50	Omron Part No.
Air Flow Sensor - .5 - 1.5M/1 Second	Z2002-ND	57.90	45.90	44.11	D6A-N

More Product Available Online: [www.digkey.com](http://www.digkey.com)

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