

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.

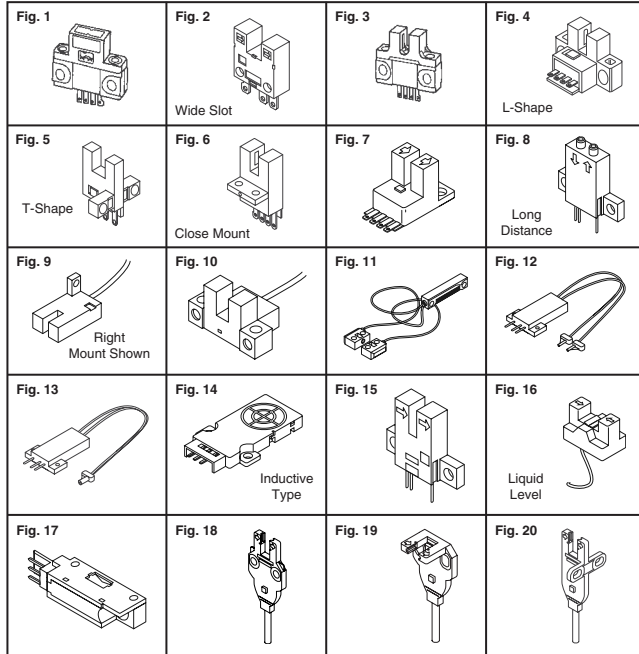


Fig.	Sensor Type/Features	Sensing Distance (mm)	Configuration	Digi-Key Part No.	Price Each 1 25	Omron Part No.
1	Reflective (General Purpose)	5.0	Dark-On	OR507-ND	16.12 14.52	EE-SB5VC
	Reflective (General Purpose)	5.0	Light-On	OR867-ND	16.12 14.52	EE-SB5M
	Reflective (General Purpose)	19	Light-On	OR519-ND	22.52 20.27	EE-SB5-E
	Reflective (Side Detecting)	2.0 - 5.0	Light-On	OR535-ND	43.68 39.32	EE-SPY311
	Reflective (Side Detecting)	5.0	Light-On	OR536-ND	43.68 39.32	EE-SPY411
	Reflective (Top Detecting)	2.0 - 5.0	Dark-On	OR572-ND	43.68 39.32	EE-SPY312
	Reflective (Top Detecting)	5.0	Light-On	OR868-ND	43.68 39.32	EE-SPY402
	Reflective (Top Detecting)	2.0 - 5.0	Light-On	OR573-ND	43.68 39.32	EE-SPY412
	Reflective (Side Detecting)	5.0	Light/Dark-On	OR531-ND†	26.12 23.51	EE-SY671
	Reflective (Top Detecting)	1.0 - 5.0	Light/Dark-On	OR532-ND†	26.12 23.51	EE-SY672
2	Wide Slot (13mm Slot)	13	Light-On	OR534-ND	46.68 42.02	EE-SPX403
	Slot (Dust Proof Slit)	5.0	Light/Dark-On	OR528-ND	23.21 20.89	EE-SX670
3	Slot - NPN	5.0	Light/Dark-On	OR611-ND	20.68 18.62	EE-SX670A
	Slot - PNP	5.0	Light/Dark-On	OR870-ND	21.73 19.57	EE-SX670P
	Slot (L-Shaped) - NPN	5.0	Light-On	OR869-ND	22.80 20.53	EE-SX471
4	Slot (L-Shaped, Dust Proof Slit)	5.0	Light/Dark-On	OR529-ND	22.12 19.91	EE-SX671
	Slot (L-Shaped, Dust Proof Slit)	5.0	Light/Dark-On	OR612-ND	22.12 19.91	EE-SX671A
	Slot (3-Pin Connector)	5.0	Dark-On	OR796-ND	3.22 2.90	EE-SX3009-P1
	Slot (T-Shaped, Dust Proof Slit)	5.0	Light/Dark-On	OR530-ND	22.40 20.16	EE-SX672
5	Slot (T-Shaped, Dust Proof Slit)	5.0	Light/Dark-On	OR613-ND	22.40 20.16	EE-SX672A
	Slot (T-Shaped) - PNP	5.0	Light/Dark-On	OR871-ND	22.40 20.16	EE-SX672P
	Slot (Close Mounting) - NPN	5.0	Light/Dark-On	OR549-ND	23.21 20.89	EE-SX673
6	Slot (Close Mounting) - NPN	5.0	Light/Dark-On	OR614-ND	30.55 27.50	EE-SX673A
	Slot (Close Mounting) - NPN	5.0	Light/Dark-On	OR597-ND	23.86 21.49	EE-SX674
	Slot (Close Mounting) - NPN	5.0	Light/Dark-On	OR872-ND	25.59 23.04	EE-SX674A
7	Slot (Close Mounting) - PNP	5.0	Light/Dark-On	OR873-ND	25.59 23.04	EE-SX674R
	Reflective (Long Distance)	200	Dark-On	OR538-ND	58.69 52.82	EE-SPZ301A
	Reflective (Long Distance)	200	Light-On	OR539-ND	58.69 52.82	EE-SPZ401A
9	Slot (Left Mount with 1M Cable)	3.6	Dark-On	OR541-ND	66.69 60.03	EE-SPX302-W2A
	Slot (Right Mount with 1M Cable)	3.6	Dark-On	OR542-ND	72.03 64.83	EE-SPX304-W2A
	Slot (Top Mount with 1M Cable)	5.0	Dark-On	OR543-ND	74.69 67.23	EE-SPX305-W2A
10	Slot (Top Mount with 1M Cable)	5.0	Light-On	22357-ND	48.40 44.82	EE-SPX405-W2A
	Slot (Wide Sensing Distance)	300	Dark-On	OR546-ND	173.40 156.06	EE-SPW321
11	Slot (Wide Sensing Distance)	300	Light-On	OR547-ND	173.40 156.06	EE-SPW421
	Fiber (19" Optical Fiber)	30	Dark-On	OR552-ND	80.35 72.32	EE-SPZ301W-01
12	Fiber (19" Optical Fiber)	30	Light-On	OR553-ND	80.35 72.32	EE-SPZ401W-01
	Reflective (11" Optical Fiber)	1.0 - 3.0	Dark-On	OR554-ND	88.52	—
13	Reflective (11" Optical Fiber)	1.0 - 3.0	Light-On	OR555-ND	84.04 75.64	EE-SPZ401Y-01
	Inductive (Detects Ferrous Metal)	5.0	N/O Output	OR560-ND	48.05 43.25	E2R-A01
15	Slot (General Purpose)	3.6	Dark-On	OR574-ND	45.00 40.51	EE-SPX301
	Slot (General Purpose)	3.6	Light-On	OR575-ND	45.00 40.51	EE-SPX401
	Slotted Liquid Level Detector	6.0 - 13	Light/Dark-On	OR579-ND	128.38 115.55	EE-SPX613
17	Reflective (General Purpose)	1.0	Dark-On	OR580-ND	13.65 12.29	EE-SPY415
	Slot Type with 2M Cable - NPN	5.0	Dark-On	OR605-ND	30.76 27.69	EE-SX770
18	Slot Type with 2M Cable - PNP	5.0	Dark-On	OR874-ND	30.27 27.25	EE-SX770P
	Slot Type with 2M Cable - NPN	5.0	Light-On	OR606-ND	31.19 28.08	EE-SX870
19	L-Shaped with 2M Cable - NPN	5.0	Dark-On	OR607-ND	30.96 27.87	EE-SX771
	L-Shaped with 2M Cable - NPN	5.0	Light-On	OR608-ND	31.47 28.33	EE-SX871
20	T-Shaped with 2M Cable - NPN	5.0	Dark-On	OR609-ND	32.00 28.81	EE-SX772
	T-Shaped with 2M Cable - NPN	5.0	Light-On	OR610-ND	32.00 28.81	EE-SX872

◆ RoHS Compliant † Built-in sensitivity adjuster

Description	Digi-Key Part No.	Price Each 1 25	Omron Part No.
Optical Sensor Accessories			
IR Reflector for Fig. 8, 60 x 40mm	OR540-ND	15.82 14.25	E39-R1
3 Pin Connector with 1 Meter Cable for Fig. 15	OR561-ND	7.34 6.61	E22-01
Converter from NPN to PNP Output for Amp Sensors	OR550-ND	28.67 25.81	EE-2001
Converter from NPN to PNP Output for AMP Sensors	OR551-ND	28.67 25.81	EE-2002
4 Pin Connector for Fig. 1-6	OR527-ND	2.93 2.64	EE-1001
4 Pin Connector with 2 Meter Cable for Fig. 1-6	OR559-ND	13.73 12.36	EE-1006
Panel Mount Holder Clip for OR559-ND	OR576-ND	4.12 3.71	EE-1006A
3 Pin Connector for Fig. 8, 12, 13 and 16	OR537-ND	2.93 2.64	EE-1002
3 Pin Connector with 2 Meter Cable for Fig. 4, 12 and 13	OR558-ND	5.18 4.67	EE-1003
Panel Mount Holder Clip for OR558-ND	OR583-ND	1.58 1.43	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.

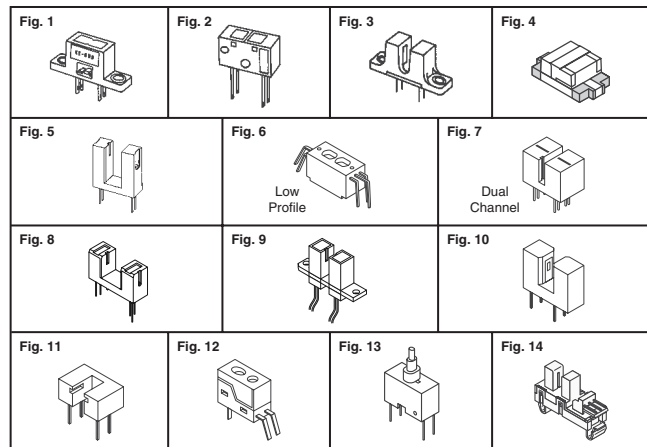
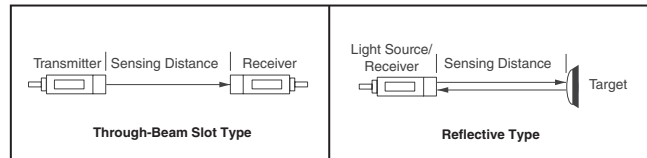


Fig.	Sensing Method	Sensing Distance (mm)	Terminal Type	Typical ton/loff (µsec.)	Digi-Key Part No.	Price Each 1 25 100	Omron Part No.
1	Reflective	5.0	Solder	30/30	OR500-ND	4.24 3.83 3.06	EE-SB5
	Reflective	5.0	PC Board	30/30	OR501-ND	4.24 3.83 3.06	EE-SB5-B
2	Reflective	5.0	Solder	30/30	OR502-ND	4.17 3.76 3.01	EE-SF5
	Reflective	5.0	PC Board	30/30	OR503-ND	4.17 3.76 3.01	EE-SF5-B
3	Slot	3.6	Solder	4/4	OR504-ND	3.19 2.87 2.30	EE-SG3
	Slot	3.4	Solder	4/4	OR713-ND	2.91 2.63 2.11	EE-SH3
	Slot	3.4	PC Board	4/4	OR779-ND	3.38 3.04 2.44	EE-SH3-G
	Slot	3.4	Solder	4/4	OR714-ND	3.62 3.26 2.61	EE-SV3
	Slot	3.4	PC Board	4/4	OR780-ND	3.19 2.87 2.30	EE-SV3-B
	Slot	3.4	PC Board	4/4	OR715-ND	3.74 3.37 2.70	EE-SX305
4	Slot	3.4	PC Board	3/20	OR782-ND	2.00 1.80 1.44	EE-SX4088
	Slot	3.6	PC Board	4/4	OR505-ND	3.19 2.87 2.30	EE-SG3-B
	Reflective	1.0	SMT	20/20	Z3020CT-ND	1.65 1.49 1.19	EE-SY199
5	Slot	5.0	PC Board	4/4	OR518-ND	1.48 1.34 1.07	EE-SX1042
	Slot	4.6	PC Board	500Hz	OR556-ND	1.72 1.56 1.25	EE-SX1061
	Slot	3.0	PC Board	70/70	OR601-ND	1.72 1.56 1.25	EE-SX298
6	Reflective	5.0	PC Board	50Hz	OR525-ND	3.07 2.76 2.21	EE-SY310
	Reflective	5.0	PC Board	50Hz	OR526-ND	3.07 2.76 2.21	EE-SY410
	Reflective	4.4	PC Board	3/20	OR604-ND	3.31 2.98 2.39	EE-SY413
7	Slot	3.4	PC Board	4/4	OR523-ND	3.63 3.27 2.62	EE-SX1031
	Slot	8.0	PC Board	3KHz	OR716-ND	1.80 1.62 1.30	EE-SX3070
	Slot	8.0	PC Board	3KHz	OR524-ND	1.71 1.55 1.24	EE-SX4070
	Slot	8.0	PC Board	3KHz	OR571-ND	1.48 1.34 1.07	EE-SX1070
	Slot	5.0	PC Board	3KHz	OR781-ND	1.71 1.55 1.24	EE-SX4081
9	Vertical Slot	3.4	61cm Wires	4/4	OR562-ND	9.06 8.16 6.53	EE-SX1088-W1
	Horizontal Slot	3.4	61cm Wires	4/4	OR563-ND	13.71 12.34 9.87	EE-SX1096-W1
10	Slot	3.0	PC Board	3/20	OR783-ND	1.71 1.55 1.24	EE-SX498
	Slot	3.4	PC Board	4/4	Z2991-ND	2.82 2.54 2.04	EE-SJ3-C
	Slot	3.4	PC Board	4/4	OR569-ND	2.82 2.54 2.04	EE-SJ3-D
	Slot	2.8	PC Board	4/4	OR598-ND	1.81 1.64 1.31	EE-SX1025
	Slot	5.2	PC Board	4/4	OR599-ND	1.88 1.70 1.36	EE-SX1035
11	Slot	3.0	PC Board	4/4	OR570-ND	2.58 2.32 1.86	EE-SX1046
	Slot	2.0	PC Board	3/20	OR600-ND	2.61 2.35 1.88	EE-SX493
12	Red LED Reflect	4.0	PC Board	30/30	OR561-ND	10.09 9.09 7.27	EE-SY169
	IR Reflective	4.0	PC Board	30/30	OR582-ND	8.37 7.53 6.03	EE-SY169A
13	Actuator	Contact	PC Board	—	OR712-ND	2.39 2.15 1.72	EE-SA105
	Slot	5.0	Snap-In	—	OR1002-ND	2.58 2.32 1.86	EE-SX460-P1
	Transmissive	15.0	Snap-In	—	Z3028-ND	5.11 4.60 3.68	EE-SX461-P11
14	Transmissive	5.0	Snap-In	—	Z3029-ND	2.08 1.88 1.50	EE-SX4235A-P2

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