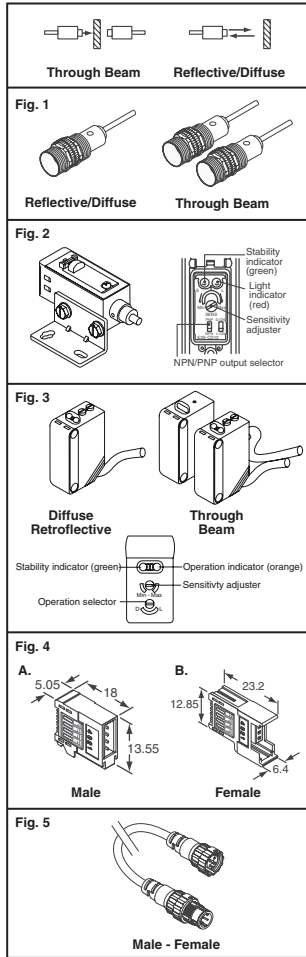


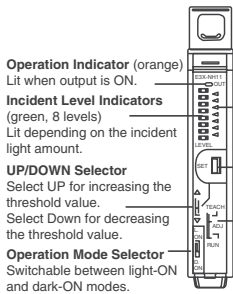
# OMRON Photoelectric Sensors



Photoelectric sensors consist of a light source and detector for object detection. **Through-beam** sensors use a separate transmitter and receiver, which an object must pass between to block the light. **Retroflective** sensors is a combined transmitter/receiver in one body and is reflected. A reflector typically is used to return the beam from the transmitter back to the receiver. Once an object is moved between the reflector and emitter/detector, the receiver output turns on. **Diffuse reflective** is a combined transmitter/receiver in one body. Objects are detected by moving an object closer to the sensor directly from the front, rather than from the side. Once an object has come within the sensing distance, the amount of reflected light is sufficient to trigger the receiver output. **XS5** connectors feature an 1/8 turn smart click connection that is fully IP67 sealed. Offered in both single and double ended styles.

Fig.	Description	Sensing Distance	Type	Digi-Key Part No.	1	Price Each 25	50	Omron Part No.
1	M18, Diffused Photoelectric Sensor, 10 - 30VDC, Nickel Plated Brass	3.94" (10cm)	NPN	Z1087-ND	62.60	57.96	54.10	E3F2-DS10C4-N
	M18, Diffused Photoelectric Sensor, 24 - 240VAC, Plastic Housing	3.94" (10cm)	NPN	Z1088-ND	72.35	66.99	62.53	E3F2-DS10Z1-N
	M18, Retroflective Photoelectric Sensor, 24 - 240VAC, Plastic Housing	6.56" (2m)	Light - On	Z1090-ND	74.39	68.88	64.29	E3F2-RZ21
	M18, Through-Beam Photoelectric Sensor, 10 - 30VDC, Plastic Housing	9.84" (3m)	Light - On	Z1091-ND	108.86	100.80	94.08	E3F2-3Z1
2	Diffused Photoelectric Sensor, 10 - 30VDC, Metal Body Horizontal	27.6" (70cm)	NPN/PNP	Z1096-ND	153.32	141.96	132.50	E3S-CD11
	Diffused Photoelectric Sensor, 10 - 30VDC, Metal Body Horizontal	6.56" (2m)	NPN/PNP	Z1097-ND	165.11	152.88	142.69	E3S-CD12
	Diffused Photoelectric Sensor, 10 - 30VDC, Metal Body Vertical	27.6" (70cm)	NPN/PNP	Z1098-ND	153.32	141.96	132.50	E3S-CD61
	Diffused Photoelectric Sensor, 10 - 30VDC, Metal Body Vertical	6.56" (2m)	NPN/PNP	Z1099-ND	165.11	152.88	142.69	E3S-CD62
	Retroflective Photoelectric Sensor, 10 - 30VDC, Metal Body, Horizontal	9.84" (3m)	NPN/PNP	Z1100-ND	153.32	141.96	132.50	E3S-CR11
	Retroflective Photoelectric Sensor, 10 - 30VDC, Metal Body, Vertical	9.84" (3m)	NPN/PNP	Z1101-ND	153.32	141.96	132.50	E3S-CR61
3	Through-Beam Photoelectric Sensor, 10 - 30VDC, Metal Body, Horizontal	98.43' (30m)	NPN/PNP	Z1102-ND	186.88	173.04	161.51	E3S-CT11
	Through-Beam Photoelectric Sensor, 10 - 30VDC, Metal Body, Vertical	98.43' (30m)	NPN/PNP	Z1103-ND	186.88	173.04	161.51	E3S-CT61
	Compact Long Distance, Photoelectric Sensor, IR Through-Beam	49.21' (15m)	NPN	Z1106-ND	97.98	90.72	84.68	E3Z-T61
	Compact Long Distance, Photoelectric Sensor, IR Retroflective	13.12' (4m)	NPN	Z1107-ND	78.02	72.24	67.43	E3Z-R61
—	PCB 4 Position Socket, Single Socket Type for PCB Mount	3.94" (10cm)	NPN	Z1108-ND	68.49	63.42	59.20	E3Z-D61OMS
	PCB 4 Position Socket, Quad Socket Type for PCB Mount	3.28" (1m)	NPN	Z1109-ND	73.03	67.62	63.12	E3Z-D62
<b>XS2 Photo Sensor Connectors (e-CON) — RoHS Compliant</b>								
4A	Discrete 4 Position Cable Plug - Free Hanging - Spring Clamp Type			Z2787-ND	6.27	5.65	5.02	XN2A-1430
4B	Discrete 4 Position Cable Socket - Free Hanging - Spring Clamp Type			Z2788-ND	7.27	6.55	5.82	XN2B-1430
—	PCB 4 Position Socket, Single Socket Type for PCB Mount			Z2789-ND	4.08	3.68	3.27	XN2D-1431
	PCB 4 Position Socket, Quad Socket Type for PCB Mount			Z2790-ND	7.87	7.09	6.30	XN2D-4431
<b>XS5 Waterproof Connectors and Cables — RoHS Compliant</b>								
5	Single Sided Cable Assembly - 4 Conductor - Female, 2m			Z2791-ND	30.85	27.77	24.69	XS5F-D421-D80-A
	Single Sided Cable Assembly - 4 Conductor - Female, 5m			Z2792-ND	37.42	33.68	29.94	XS5F-D421-G80-A
	Single Sided Cable Assembly - 4 Conductor - Female, 10m			Z2793-ND	88.62	79.76	70.90	XS5F-D421-J80-A
	Single Sided Cable Assembly - 4 Conductor - Male, 2m			Z2794-ND	30.85	27.77	24.69	XS5H-D421-D80-A
	Single Sided Cable Assembly - 4 Conductor - Male, 5m			Z2795-ND	37.42	33.68	29.94	XS5H-D421-G80-A
	Single Sided Cable Assembly - 4 Conductor - Male, 10m			Z2796-ND	88.62	79.76	70.90	XS5H-D421-J80-A
	Double Sided Cable Assembly - 4 Conductor - Male to Female, 1m			Z2797-ND	45.15	40.64	36.13	XS5W-D421-C81-A
	Double Sided Cable Assembly - 4 Conductor - Male to Female, 2m			Z2798-ND	53.99	48.60	43.20	XS5W-D421-D81-A
	Double Sided Cable Assembly - 4 Conductor - Male to Female, 3m			Z2799-ND	53.60	48.25	42.89	XS5W-D421-E81-A
	Double Sided Cable Assembly - 4 Conductor - Male to Female, 5m			Z2800-ND	56.87	51.19	45.50	XS5W-D421-G81-A
Double Sided Cable Assembly - 4 Conductor - Male to Female, 10m			Z2801-ND	102.80	92.52	82.24	XS5W-D421-J81-A	

## Optical Fiber Optic Amplifiers



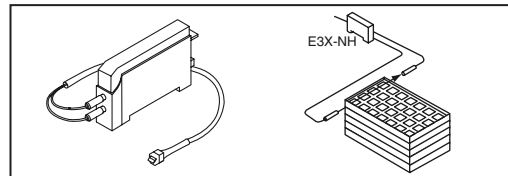
**Threshold Indicators** (red, 13 levels)  
Indicates threshold level.

**SET Button**  
For teaching or for fine threshold adjustment.

**Mode Selector**  
Switchable among TEACH, ADJ, and RUN modes.

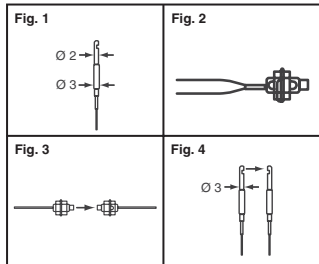
Omron's E3X-NH series of high performance Fiber Optic Amplifiers contain true 16 Bit processor which allows a very fine tuning sensitivity feature. Three separate teach modes for hassle free setup for different applications. Ideal for detecting very small objects or fine wires.

The E3X series feature high performance, fast switching response times. Set-mode blinking output aids in alignment. Sensing distances vary with the type of fiber used.



Description	Output Type	Features	Digi-Key Part No.	1	Price Each 25	50	Omron Part No.
High Precision General Purpose Fiber Optic Amplifier, 12-24VDC	NPN	None	Z1110-ND	169.65	157.08	146.61	E3X-NH11
High Precision General Purpose Fiber Optic Amplifier, 12-24VDC	PNP	None	Z1111-ND	169.65	157.08	146.61	E3X-NH41
High Precision General Purpose Fiber Optic Amplifier with Timer 12-24VDC	NPN	with Delay Off	Z1112-ND	169.65	157.08	146.61	E3X-NH21
High Precision General Purpose Fiber Optic Amplifier with Timer 12-24VDC	PNP	with Delay Off	Z1113-ND	169.65	157.08	146.61	E3X-NH51
High Performance General Purpose Fiber Optic Amplifier with Timer 10-30VDC	NPN	with Delay Off	Z1116-ND	149.69	138.60	129.36	E3X-A21

## Fiber Cables for E3X Amplifiers



Pre-made fiber optic cables that enable very confined mounting spaces and very fast target detection. Use **Through-beam** for long distance detection where the transmit and receive cable are separated. Use **Concentric Beam** for depth detection or changing target distances where eliminating background objects is required. Periscope sensing heads (Side Beam) save space in right angle detecting. Most fiber cables offer IP67 protection and temperature ratings of -40°C - 70°C.

Fig.	Description	Distance Maximum	Terminal Type	Digi-Key Part No.	1	Price Each 25	50	Omron Part No.
1	Diffuse Side Beam Fiber Optic Cable, 2mm diameter	.6" (1.5cm)	2m Cable	Z1118-ND	101.61	94.08	87.81	E32-D24
	Diffuse Top Beam Fiber Optic Cable, Concentric Beam, 2mm diameter	.79" (2cm)	2m Cable	Z1119-ND	69.17	64.05	59.78	E32-D32
2	Diffuse Top Beam Fiber Optic Cable, Low Cost, M6 THD	.79" (2cm)	2m Cable	Z1120-ND	47.63	44.10	41.16	E32-DC200
	Diffuse Top Beam Fiber Optic Cable, Mini, M3 THD	.71" (1.8cm)	2m Cable	Z1121-ND	57.83	53.55	49.98	E32-DC200E
	Diffuse Top Beam Fiber Optic Cable, Concentric Beam, M6 THD	3" (7.5cm)	2m Cable	Z1122-ND	52.84	48.93	45.67	E32-CC200
	Cable Fiber Optic, Top Beam, High Temperature, M6 THD	1.8" (4.5cm)	2m Cable	Z1187-ND	210.47	194.88	181.89	E32-D61
3	Diffuse Top Beam Fiber Optic Cable, Through Beam, M3 THD	4.72" (12cm)	2m Cable	Z1123-ND	47.63	44.10	41.16	E32-TC200A
	Cable Fiber Optic, Through Beam, Low Cost, M4 THD	7.88" (20cm)	2m Cable	Z1188-ND	47.63	44.10	41.16	E32-TC200
4	Through Beam Fiber Optic Cable, Side Beam, 3mm diameter	4.72" (12cm)	2m Cable	Z1124-ND	79.38	73.50	68.60	E32-T14L

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

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