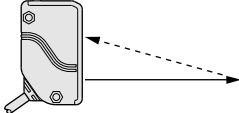



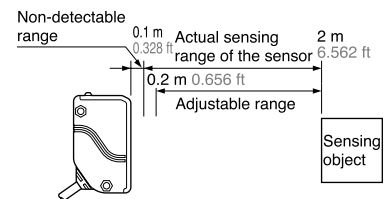
# EQ-30

## ORDER GUIDE

Type	Appearance	Adjustable range (Note)	Model No.	Output
NPN output		 0.2 to 2 m 0.656 to 6.562 ft	<b>EQ-34</b>	NPN open-collector transistor
PNP output			<b>EQ-34-PN</b>	PNP open-collector transistor
Two outputs			<b>EQ-34W</b>	Two NPN open-collector transistor outputs

**NOTE: Mounting bracket is not supplied with the sensor. Please select from the range of optional sensor mounting brackets (two types).**

Note: The adjustable range stands for the maximum sensing range which can be set with the adjuster. The sensor can detect an object 0.1 m 0.328 ft, or more, away. However, the detectable range of Near (Sub) type of **EQ-34W** begins at 0.2 m 0.656 ft.



### Plug-in connector type, 5 m 16.404 ft cable length type

Plug-in connector type (standard: cable type) and 5 m 16.404 ft cable length type (standard: 2 m 6.562 ft) are also available.

#### • Table of Model Nos.

Type	Standard	Plug-in connector type (Note)	5 m 16.404 ft cable length type
NPN output	<b>EQ-34</b>	<b>EQ-34-J</b>	<b>EQ-34-C5</b>
PNP output	<b>EQ-34-PN</b>	<b>EQ-34-PN-J</b>	_____
Two outputs	<b>EQ-34W</b>	_____	<b>EQ-34W-C5</b>

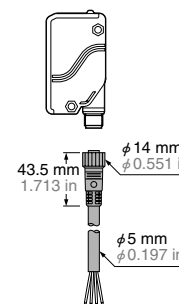
Note: Please order the suitable mating cable separately.

#### • Mating cable for plug-in connector type

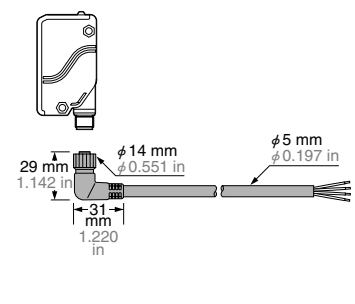
Type	Model No.	Description
Straight	<b>CN-24-C2</b>	Length: 2 m 6.562 ft
	<b>CN-24-C5</b>	Length: 5 m 16.404 ft
Elbow	<b>CN-24L-C2</b>	Length: 2 m 6.562 ft
	<b>CN-24L-C5</b>	Length: 5 m 16.404 ft

0.34 mm<sup>2</sup> 4-core cabtyre cable with connector on one end  
Cable outer diameter:  $\phi 5$  mm  $\phi 0.197$  in

#### • CN-24-C□



#### • CN-24L-C□



## OPTIONS

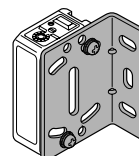
Designation	Model No.	Description
Sensor mounting bracket	<b>MS-EQ3-1</b>	Back angled mounting bracket
	<b>MS-EQ3-2</b>	Foot angled mounting bracket

Note: The plug-in connector type does not allow use of some sensor mounting brackets because of the protrusion of the connector.

### Sensor mounting bracket

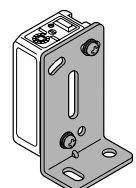
#### • MS-EQ3-1

Two M4 (length 25 mm 0.984 in) screws with washers and two M4 nuts are attached.



#### • MS-EQ3-2

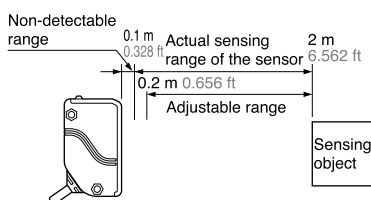
Two M4 (length 25 mm 0.984 in) screws with washers and two M4 nuts are attached.



## SPECIFICATIONS

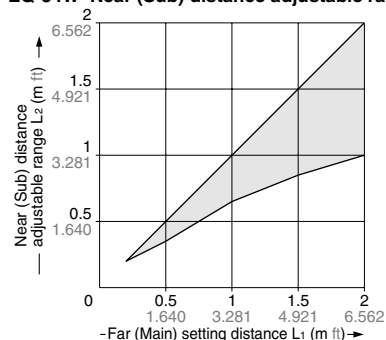
Item	Type	NPN output	PNP output	Two outputs
	Model No.	EQ-34	EQ-34-PN	EQ-34W
Adjustable range (Note 1)		0.2 to 2 m 0.656 to 6.562 ft		Far (Main): 0.2 to 2 m 0.656 to 6.562 ft Near (Sub): Refer to diagram in (Note 2)
Sensing range (with white non-glossy paper at setting distance 2 m 6.562 ft)		0.1 to 2 m 0.328 to 6.562 ft		Far (Main): 0.1 to 2 m 0.328 to 6.562 ft Near (Sub): 0.2 to 2 m 0.656 to 6.562 ft [with Near (Sub) distance for adjuster at max.]
Hysteresis		10 % or less of operation distance		
Repeatability		Along sensing axis: 10 mm 0.394 in or less, Perpendicular to sensing axis: 1 mm 0.039 in or less (with white non-glossy paper)		
Supply voltage		10 to 30 V DC Ripple P-P 10 % or less		
Current consumption		50 mA or less	55 mA or less	90 mA or less
Output		NPN open-collector transistor • Maximum sink current: 100 mA • Applied voltage: 30 V DC or less (between output and 0 V) • Residual voltage: 1 V or less (at 100 mA sink current) 0.4 V or less (at 16 mA sink current)	PNP open-collector transistor • Maximum source current: 100 mA • Applied voltage: 30 V DC or less (between output and +V) • Residual voltage: 1 V or less (at 100 mA source current) 0.4 V or less (at 16 mA source current)	<Far (Main) output, Near (Sub) output> NPN open-collector transistor • Maximum sink current: 100 mA • Applied voltage: 30 V DC or less [between Far (Main) output and 0 V] [between Near (Sub) output and 0 V] • Residual voltage: 1 V or less (at 100 mA sink current) 0.4 V or less (at 16 mA sink current)
	Utilization category	DC-12 or DC-13		
	Output operation	Switchable either Detection-ON or Detection-OFF		
	Short-circuit protection	Incorporated		
Response time		2 ms or less		
Operation indicator		Red LED (lights up when the output is ON)		Far (Main) output: Red LED [lights up when the Far (Main) output is ON] Near (Sub) output: Red LED [lights up when the Near (Sub) output is ON]
Stability indicator		Green LED (lights up under stable light received condition or stable dark condition) (Note 3)		
Distance adjuster		2-turn mechanical adjuster with pointer		Far (Main): 2-turn mechanical adjuster with pointer Near (Sub): Variable adjuster
Automatic interference prevention function		Incorporated (Two units of sensors can be mounted close together.)		
Environmental resistance	Pollution degree	3 (Industrial environment)		
	Protection	IP67 (IEC)		
	Ambient temperature	- 20 to + 55 °C - 4 to + 131 °F (No dew condensation or icing allowed), Storage: - 25 to + 70 °C - 13 to + 158 °F		
	Ambient humidity	35 to 85 % RH, Storage: 35 to 85 % RH		
	Ambient illuminance	Sunlight: 10,000 lx at the light-receiving face, Incandescent light: 3,000 lx at the light-receiving face		
	EMC	EN 50081-2, EN 50082-2, EN 60947-5-2		
	Voltage withstandability	1,000 V AC for one min. between all supply terminals connected together and enclosure		
	Insulation resistance	20 MΩ, or more, with 250 V megger between all supply terminals connected together and enclosure		
	Vibration resistance	10 to 55 Hz frequency, 1.5 mm 0.059 in amplitude (10 G max.) in X, Y and Z directions for two hours each		
Shock resistance	500 m/s <sup>2</sup> acceleration (50 G approx.) in X, Y and Z directions for three times each			
Emitting element	Infrared LED (modulated)			
Material	Enclosure: Polyallylate and Polyethylene terephthalate, Lens: Polyallylate			
Cable	0.3 mm <sup>2</sup> 3-core (EQ-34W: 4-core) cabtyre cable, 2 m 6.562 ft long			
Cable extension	Extension up to total 100 m 328.084 ft is possible with 0.3 mm <sup>2</sup> , or more, cable.			
Weight	150 g approx.			
Accessory	Adjusting screwdriver: 1pc.			

Notes: 1) The adjustable range stands for the maximum sensing range which can be set with the adjuster. The sensor can detect an object 0.1 m 0.328 ft, or more, away. However, the detectable area of the Near (Sub) type of the EQ-34W begins at 0.2 m 0.656 ft.



2) The Near (Sub) distance adjustable range, L<sub>2</sub>, changes with the setting of the Far (Main) distance, L<sub>1</sub>, as shown in the table below.

EQ-34W Near (Sub) distance adjustable range



EQ-34W	
Far (Main) setting distance L <sub>1</sub>	Near (Sub) distance adjustable range L <sub>2</sub>
2 m 6.562 ft	1 to 2 m 3.281 to 6.562 ft
1.5 m 4.921 ft	0.85 to 1.5 m 2.789 to 4.921 ft
1 m 3.281 ft	0.65 to 1 m 2.133 to 3.281 ft
0.5 m 1.640 ft	0.35 to 0.5 m 1.148 to 1.640 ft
0.2 m 0.656 ft	0.2 m 0.656 ft