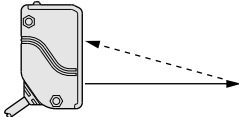


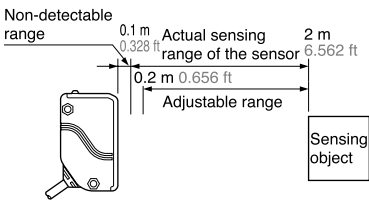
EQ-30

ORDER GUIDE

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

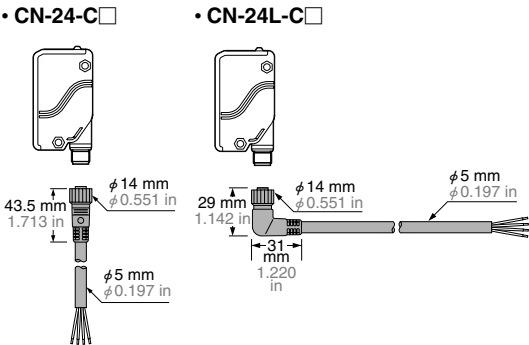
Type	Standard	Plug-in connector type (Note)	5 m 16.404 ft cable length type
NPN output	EQ-34	EQ-34-J	EQ-34-C5
PNP output	EQ-34-PN	EQ-34-PN-J	—
Two outputs	EQ-34W	—	EQ-34W-C5

Note: Please order the suitable mating cable separately.

• Mating cable for plug-in connector type

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

0.34 mm² 4-core cabtyre cable with connector on one end
Cable outer diameter: $\phi 5$ mm $\phi 0.197$ in



OPTIONS

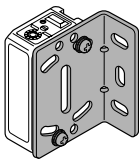
Designation	Model No.	Description
Sensor mounting bracket	MS-EQ3-1	Back angled mounting bracket
	MS-EQ3-2	Foot angled mounting bracket

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

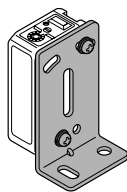
• MS-EQ3-1

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



• MS-EQ3-2

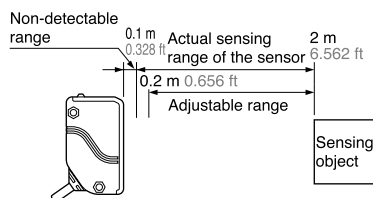
Two M4 (length 25 mm 0.984 in) screws with washers and two M4 nuts are attached.



SPECIFICATIONS

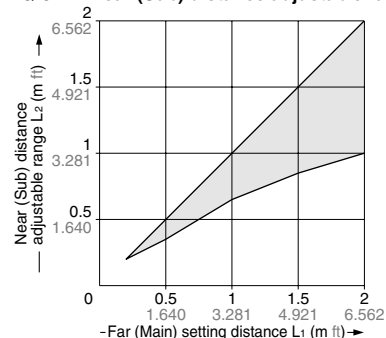
Item	Type	NPN output	PNP output	Two outputs
	Model No.	EQ-34	EQ-34-PN	EQ-34W
Adjustable range (Note 1)		0.2 to 2 m 0.656 to 6.562 ft		Far (Main): 0.2 to 2 m 0.656 to 6.562 ft Near (Sub): Refer to diagram in (Note 2)
Sensing range (with white non-glossy paper at setting distance 2 m 6.562 ft)		0.1 to 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 ² 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 ² 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 ² , 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, L₂, changes with the setting of the Far (Main) distance, L₁, as shown in the table below.

EQ-34W Near (Sub) distance adjustable range



EQ-34W	
Far (Main) setting distance L ₁	Near (Sub) distance adjustable range L ₂
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