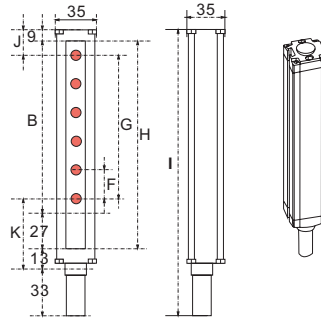




**Features**

- 1mm min. detectable object size
- Less than 1mm beam pitch
- 40 ... 3000mm sensing height
- 250 ... 10000mm sensing range
- Fast to 9µs reaction time
- Built-in electric protection
- -15°C ... +65°C operating temperature
- Cable version
- M12 connector version
- IP65 protection



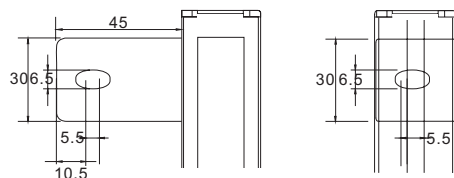
B: Beam panel length  
 F: Beam pitch  
 H: Panel height  
 L: Beam channel number  
 Measuring Height  $G = (L-1) \times F$  mm  
 Overall Height  $I = L \times F + 81$  mm

(Unit: mm)

**Specifications**

Beam pitch	2mm										
Beam channels	22	26	30	34	38	42	46	...			
Sensing height	42mm	50mm	58mm	66mm	74mm	82mm	90mm	...			
Cable version	Emitter	EF2202K03ALA EF2602K03ALA EF3002K03ALA EF3402K03ALA EF3802K03ALA EF4202K03ALA EF4602K03ALA ...									
		Receiver	NPN-NO	EF2202C03ALA EF2602C03ALA EF3002C03ALA EF3402C03ALA EF3802C03ALA EF4202C03ALA EF4602C03ALA ...							
			NPN-NC	EF2202D03ALA EF2602D03ALA EF3002D03ALA EF3402D03ALA EF3802D03ALA EF4202D03ALA EF4602D03ALA ...							
			PNP-NO	EF2202A03ALA EF2602A03ALA EF3002A03ALA EF3402A03ALA EF3802A03ALA EF4202A03ALA EF4602A03ALA ...							
			PNP-NC	EF2202B03ALA EF2602B03ALA EF3002B03ALA EF3402B03ALA EF3802B03ALA EF4202B03ALA EF4602B03ALA ...							
Relay SPDT	EF2202Y03ALA EF2602Y03ALA EF3002Y03ALA EF3402Y03ALA EF3802Y03ALA EF4202Y03ALA EF4602Y03ALA ...										
M12 connector	Emitter	EF2202K03HLA EF2602K03HLA EF3002K03HLA EF3402K03HLA EF3802K03HLA EF4202K03HLA EF4602K03HLA ...									
		Receiver	NPN-NO	EF2202K03HLA EF2602K03HLA EF3002K03HLA EF3402K03HLA EF3802K03HLA EF4202K03HLA EF4602K03HLA ...							
			NPN-NC	EF2202K03HLA EF2602K03HLA EF3002K03HLA EF3402K03HLA EF3802K03HLA EF4202K03HLA EF4602K03HLA ...							
			PNP-NO	EF2202K03HLA EF2602K03HLA EF3002K03HLA EF3402K03HLA EF3802K03HLA EF4202K03HLA EF4602K03HLA ...							
			PNP-NC	EF2202K03HLA EF2602K03HLA EF3002K03HLA EF3402K03HLA EF3802K03HLA EF4202K03HLA EF4602K03HLA ...							
Beam pitch	1mm,2mm,2.5mm,5mm,7.5mm,10mm,15mm,20mm,30mm,40mm,60mm										
Sensing range	3m Standard(1 ... 10m customized sensing range)										
Sensing object	Φ2mm or more opaque object(<2mm sensing object can also be customized)										
Supply voltage	12 to 24V DC ±10% Ripple p-p 10% or less										
Sensing mode	Through beam										
Synchronous mode	Optical Signal Synchronous or Cable Line Synchronous										
Output	NPN	NPN open-collector transistor, Max. Load current:100mA; Voltage Drop: <1.5V									
	PNP	PNP open-collector transistor, Max. load current:100mA; Voltage Drop: <1.5V									
	Relay	Relay SPDT, 5A/250VAC, 5A/30VDC									
Output operation	ON when all beams are received, OFF when one or more beams are interrupted.										
Short-circuit protection	Built-in										
Response time	10ms or less										
Indicator	Emitter	Power indicator: green LEDX2(light up when the power is ON; If emitter is off that is indicated by the number of LEDs lighting up)									
	Receiver	Operation indicator: Red LED(lights up when one or more beams are interrupted), Stable indicator: Green LED(lights up when all beams are stable received)									
Protection	IP65										
Interference prevention function	Incorporated										
Ambient temperature	-15°C ... +65°C										
Ambient humidity	35 to 85% RH										
Ambient illuminance	Sunlight: 10,000L x at the light-receiving face, Incandescent light: 3,000 x at the light-receiving face										
EMC immunity	RFI>10V/m(in 30-1000MHZ), EFT>1KV, ESD>4KV(contact)										
Voltage withstand ability	1,000 V AC for one min. between all supply terminals connected together and enclosure										
Insulation resistance	>100 MΩ										
Vibration resistance	10 to 150 Hz frequency, 0.75 mm 0.030 in amplitude in X, Y and Z directions for two hours each										
Shock resistance	490m/s <sup>2</sup> , acceleration(50G approx) in X, Y and Z directions for three times each										
Emitting	Infrared LED										
Material	Aluminum Enclosure, Polyester lens										
Connection	2m PVC Cable / M12 Connector										
Weight (g)	Approx. 240g ... 570g										

**Mounting brackets**



(Unit: mm)