

Small spot/mark (amplifier separated)

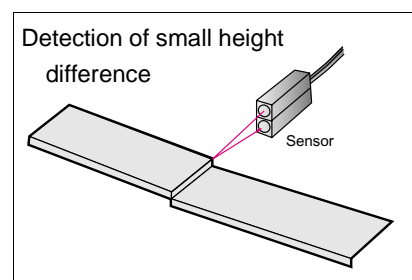
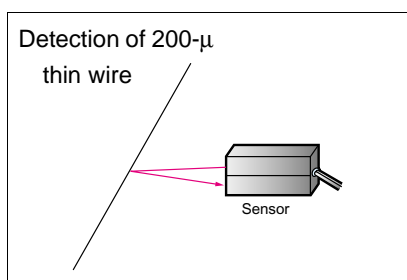
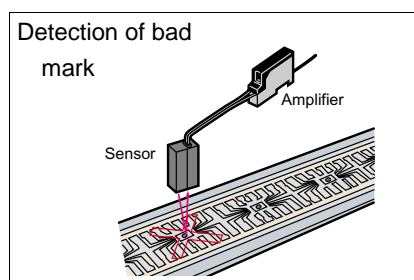
E3C-VS/VM

Extremely thin beam ensures sharp sensing

- Ideal for detection of small objects and delicate color differences



Applications



Ordering Information

Sensors

Sensor Units

Red light Green light

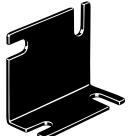
Sensor type	Shape	Connection method	Sensing distance	Model
Reflective model (for mark detection)		Pre-wired type	10 ± 2 mm	E3C-VS1G
			30 ± 5 mm	E3C-VS3R
			35 ± 5 mm	E3C-VM35R
			70 ± 10 mm	E3C-VS7R

Amplifier Units

Power supply	Application	Shape	Functions	Model
AC	Standard models		---	E3C-A
			Timer	E3C-C
DC	Slim type		Self diagnosis	E3C-JC4P
	Small type		---	E3C-GE4
	Front terminal type		---	E3C-WE4
---		E3C-WH4F		

Accessories (Order Separately)

Mounting Brackets

Shape	Model	Quantity	Remarks
	E39-L42	2	Can be used with the E3C-VS1G or E3C-VS3R.

* If a through-beam model is used, order two Mounting Brackets for the emitter and receiver respectively.

Rating/performance

Sensors

Item	Sensor type Model	Reflective model (for mark detection)			
		E3C-VS1G	E3C-VS3R	E3C-VM35R	E3C-VS7R
Sensing distance		10±2 mm	30±5 mm	35±5 mm	70±10 mm
Minimum sensing object (black mark on white)		0.7 mm at central sensing distance	2 mm at central sensing distance	0.2 mm at central sensing distance	0.6 mm at central sensing distance
Light source (wave length)		Green LED (565 nm)	Red LED (680 nm)	Red LED (660 nm)	
Ambient illuminance		Incandescent lamp: 1,000 lux max. Sunlight 3,000 lux max.			
Ambient temperature		Operating: -10 to 70°C, Storage: -25 to 70°C (with no icing or condensation)		Operating: -25 to 70°C, Storage: -25 to 70°C (with no icing or condensation)	
Ambient humidity		Operating: 35% to 85% RH, Storage: 35% to 95% RH (with no icing or condensation)			
Insulation resistance		20 M Ω min. at 500 VDC			
Dielectric strength		500 VAC at 50/60 Hz for 1 minute			
Vibration resistance		10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions			
Shock resistance		Destruction: 500 m/s ² for 3 times each in X, Y, and Z directions			
Protective structure		IEC60529 IP64 (Limited to indoor use)		IEC60529 IP50 (Limited to indoor use)	
Connection method		Pre-wired models (standard length: 2 m)			
Weight (Packed state)		Approx. 50 g		Approx. 60 g	
Material	Case	Polycarbonate		Heat-resistant ABS resin	
	Lens	Polycarbonate		Glass	
	Mounting Brackets	---		Steel	
Accessories		Instruction manual		Mounting bracket, cross-shaped recess/slotted head screw M3×16, with spring washer, flat washer, nut M3	Mounting bracket, cross-shaped recess/slotted head screw M3×16, with spring washer, flat washer, nut M3, instruction manual

Precautions

Correct Use

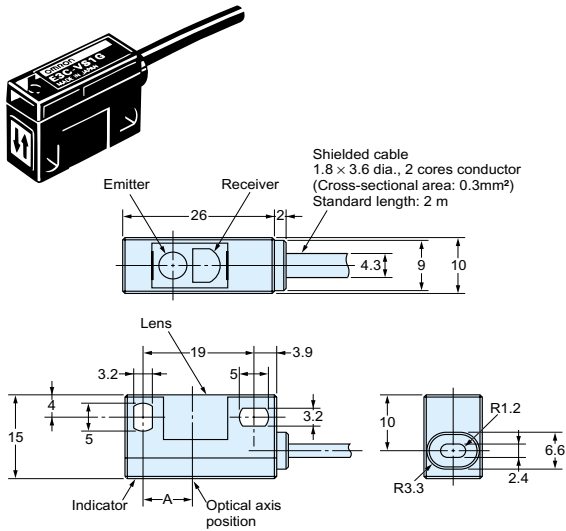
Wiring Considerations

Dimensions (Unit: mm)

Sensors

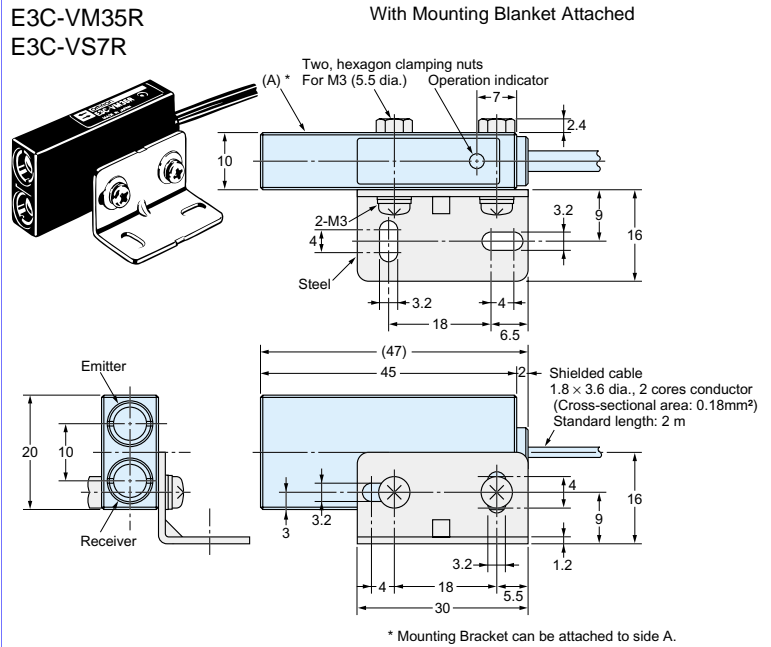
Sensors

E3C-VS1G
E3C-VS3R



Model	Dimension A (mm)	CAD file
E3C-VS1G	6±1	E3C_17
E3C-VS3R	6.5±1	E3C_18

E3C-VM35R
E3C-VS7R



CAD file E3C_16

Accessories (Order Separately)