

Functional resolution



Four lines are equal to three lines

Black signal

Blue-

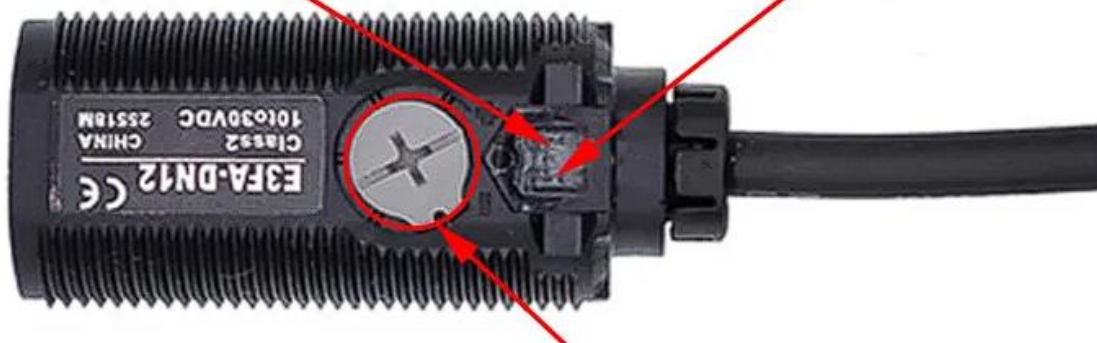
Brown+

Pink NO/NC Conversion Line

Yellow output signal indicator light

Green power and signal stability indicator light

Detection distance adjustment knob Clockwise increase/counterclockwise decrease



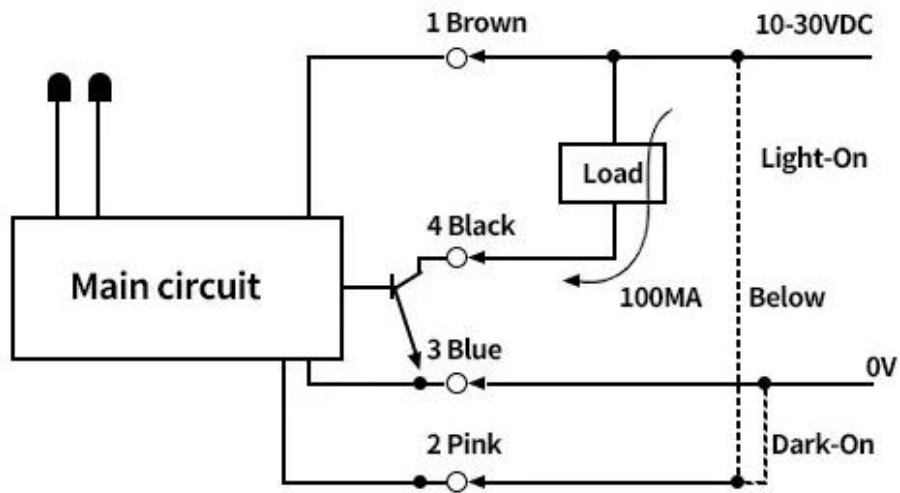
Direct-view

	Detection mode	Diffuse reflexivity					
Model Project	NPN Output Cable type	E3FA-DN11	E3FA-DN12	E3FA-DN13	E3FA-DN14	E3FA-DN15	E3FA-DN16
Detection distance		100mm (White paper 300mm×300mm)	300mm (White paper 300mm×300mm)	1m (White paper 300mm×300mm)	**100mm (White paper 300mm×300mm)	**300mm (White paper 300mm×300mm)	**1m (White paper 300mm×300mm)
Projection spot diameter (typical example)		40×45mm Detection distance 100mm	40×50mm Detection distance 300mm	120×150mm Detection distance 1m	40×45mm Detection distance 100mm	40×50mm Detection distance 300mm	120×150mm Detection distance 1m
Light source (wavelength)	Red LED (624nm)				Infrared light-emitting diode (850nm)		
	The light source is a red LED, and the model indicated by ** is an infrared LED						
Supply voltage	DC10~30V (including voltage fluctuations below 10% (p-p))						
Consumption current	Below 25mA						
Control output	NPN(open collector) Load current: below 100mA (residual voltage: below 3V), load power voltage: below DC30V						
Working mode	Light-ON/Mark-ON (optional according to wiring)						
Indicator light	Action indicator light (orange) Stability indicator light (green)						
Protection circuit	Power polarity reverse protection, output short circuit protection, and output polarity reverse protection						
Response time	0.5ms						
Sensitivity adjustment	Single direction knob						
Environmental Illuminance (Illuminated Side)	Incandescent lamp: below 3000lx/sunlight: below 10000lx						
Environmental temperature range	During operation: -25~55℃/during storage: -40~70℃ (without freezing or condensation)						
Environmental humidity range	During operation: 35-85%/during storage: 35-95% (without condensation)						
Insulation resistance	Above 20M Ω (DC500V)						
Withstand voltage	Test for 1 minute between the current carrying component and the housing at AC 1000V at 50/60Hz						
Vibration resistance	Durability: 10~55Hz, 1.5mm dual amplitude, 2 hours in X, Y, and Z directions respectively						
Impact resistance	Durability: 500m/s ² , 3 times in the X, Y, and Z directions respectively						
Protection level	IEC: IP67, DIN 40050-9: IP69K*						
Quality (after packaging / sensor only)	Cable type (2M)	approximately 60g/approximately 50g					
	Connector	approximately 20g/approximately 10g					
Material quality	Shell	ABS					
	Lens section and display section	PMMA					
	Knob	POM					
	Nut	POM					

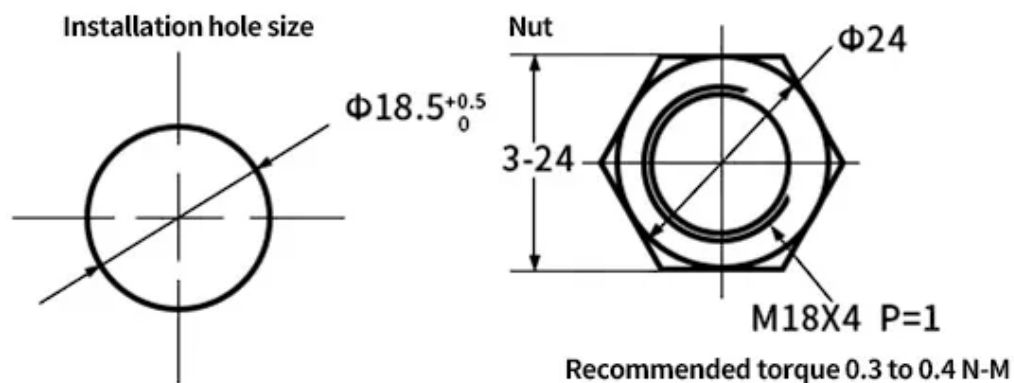
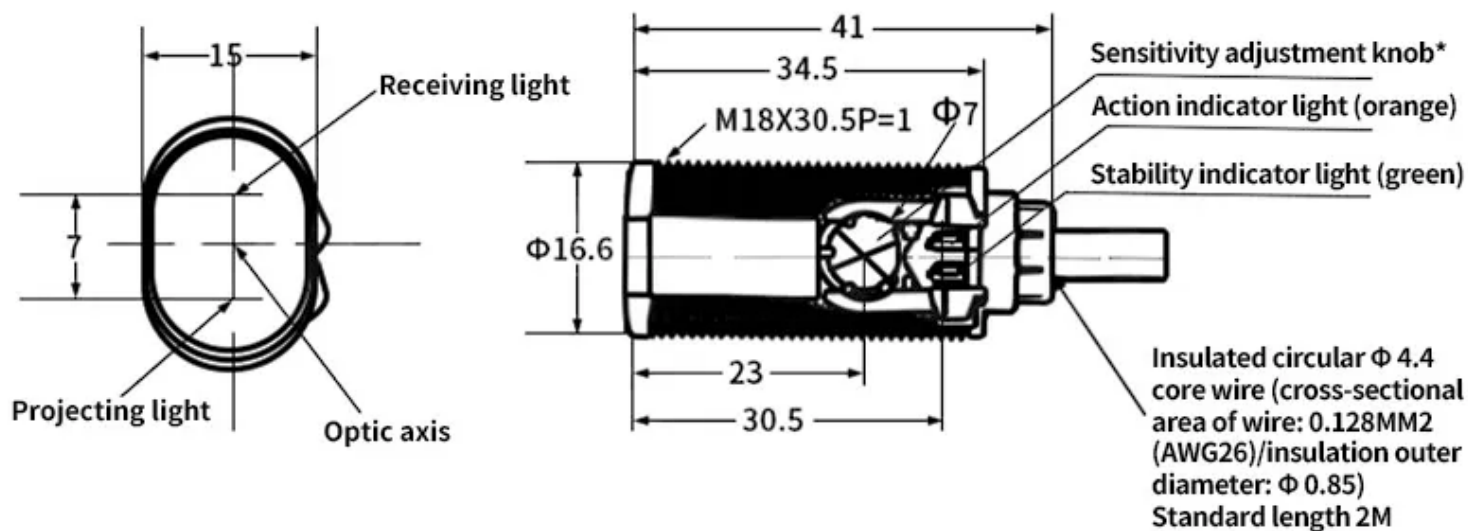
NPN

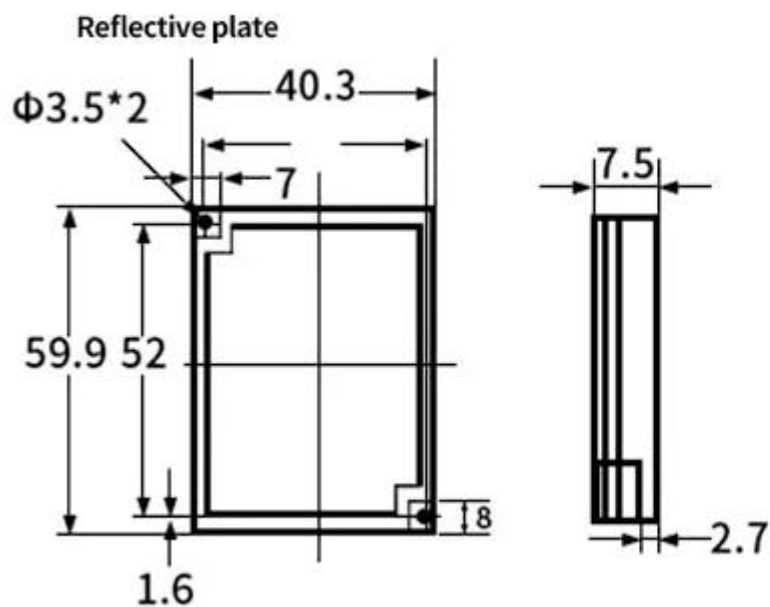
Action
indicator light
(orange)

Stability
indicator light
(green)

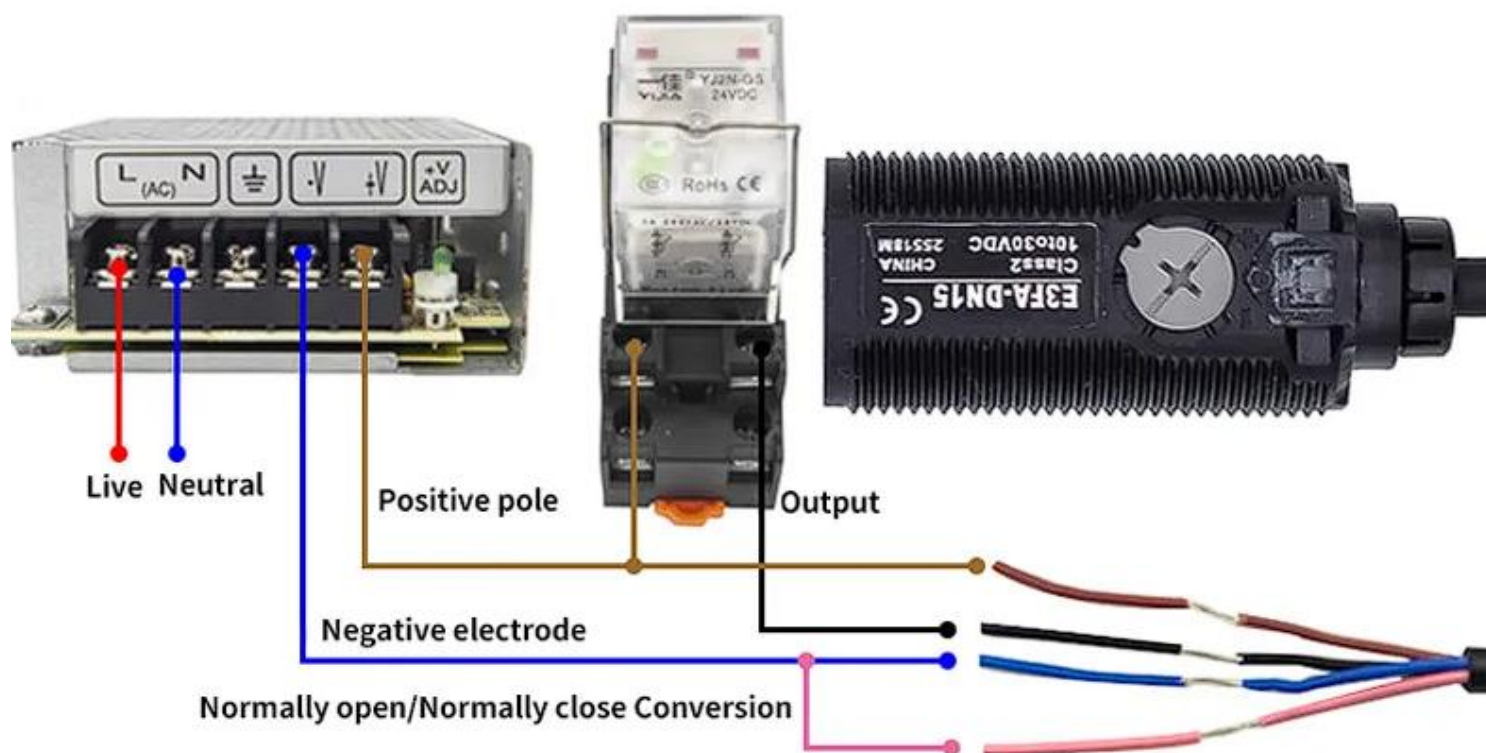


Overall dimensions





NPN type Wiring diagram



NPN output

Model	Work mode	Timing Diagram	Action change switch	Output circuit
E3FA-DN□	Light-ON	Incoming state Shading Action indicator light (Orange) Transistor output Load (Relay...) ON OFF ON OFF Action Reset (Between the blue and black wires)	Connect the pink wire (pin ②) to the brown wire (pin ①) or disconnect the pink wire pin ②)	Opposing light receiver, retroreflective model, diffuse reflective model, limited distance reflective model, and transparent bottle detection model with P-opaquing function.
	Dark-ON	Incoming state Shading Action indicator light (Orange) Transistor output Load (Relay...) ON OFF ON OFF Action Reset (Between the blue and black wires)	Connect the pink wire (pin ②) to the blue wire (pin ③)	
		Opposed projector		