



- Highly resistant to inverter noise as well as disturbing light including inverter fluorescent lamps or other light emitters
- Reasonably priced

Photo sensor ideal for use in places subject to:

- Lighting including fluorescent and mercury lamps
- Light emission of other photo sensors
- Various types of intense light such as the installation on carriages and vehicles

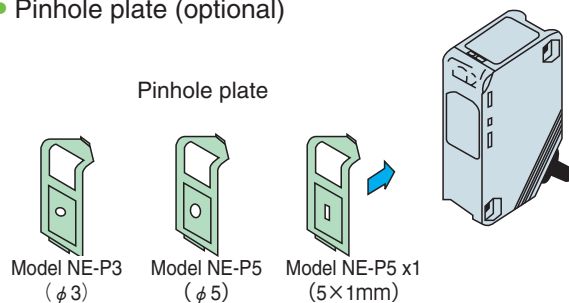
Type

Detection method	Detecting distance	Model	Operation mode	Output mode
Through-beam type	10m	NEF-T10RD	Dark-ON	NPN/PNP open collector (2 output)
Polarization reflector type	0.03-5m	NEF-M5RD		
Diffuse-reflective type	1m	NEF-R50	Light-ON	

Even more ensured stable detection

Stable detection of small objects

- Pinhole plate (optional)

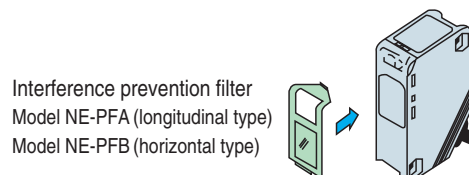


Detecting distance with plate attached (to both transmitter and receiver)

Model	NE-P3	NE-P5	NE-P5×1
Hole diameter	φ 3	φ 5	5×1
Detecting distance	1m	3m	0.7m

Adjacent mounting of through-beam type sensors

- Interference prevention filter (optional)



- Type

Product name	Model	Description
Pinhole plate	NE-P3	Hole diameter 3mm
	NE-P5	Hole diameter 5mm
	NE-P5×1	Hole diameter 5 x 1mm
Interference prevention filter	NE-PFA	Longitudinal polarization filter
	NE-PFB	Horizontal polarization filter

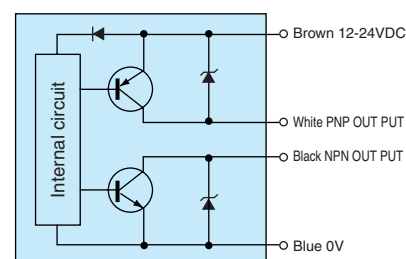
Rating/Performance/Specification

Model	NEF-T10RD	NEF-M5RD	NEF-R50
Detection method	Through-beam type	Polarization reflector type	Diffuse-reflective type
Detecting distance	10 max.	0.03~5m max. *	1m max.
Detection object	φ 20mm (Min.) Opaque	Mirror-like objects /opaque objects	Opaque objects/translucent objects
Power supply	12-24V DC ±10% / Ripple 10%		
Current consumption	Transmitter: 30mA max. Receiver: 25mA max.	40mA max.	
Output mode	NPN/ PNP open collector (2 outputs)		
Control output	NPN: sink current 100 mA (30 VDC) max. PNP: source current 100 mA (30 VDC) max.		
Operation mode	Dark-ON		Light-ON
Response time	5ms max		
Hysteresis			10 % max.
Operating angle	3° (at receiver)	30° (at reflector)	
Light source (Light wavelength)	Red LED (700 nm)		Infrared LED (880 nm)
Indicator	Transmitter: power indicator (red LED) Receiver: operation indicator (orange LED) Stability indicator (green LED)	Operation indicator (orange LED) Stability indicator (green LED)	
Volume (VR)	SENS: sensitivity adjustment (on receiver for through-beam type)		
Short circuit protection	Provided		
Material	Heat-resistant ABS		
	Acrylic		
Connection	Permanently attached cord (outer dimension: dia. 6) Transmitter of through-beam type: 0.3 sq. 2 core 2 m length (gray) Receiver of through-beam type: 0.2 sq. 4 core 2 m length (black)		
Mass	Transmitter: About 130 g Receiver: About 150 g	About 150 g	
Accessory	K-7 reflector		
Note	Screwdriver for adjustment, mounting bracket, operation manual *With K-7 reflector (accessory)		

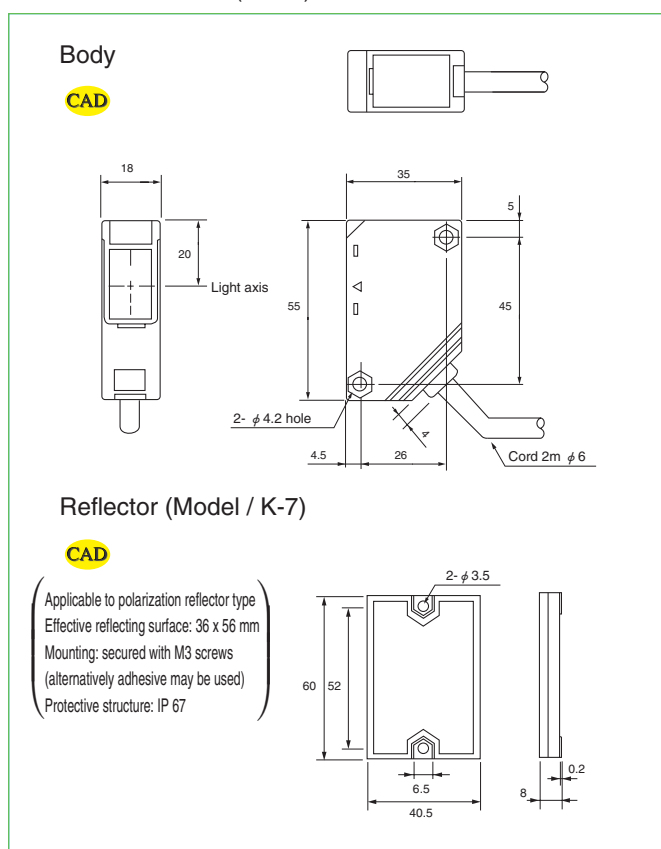
Environmental Specification

Ambient light	10,000 max.
Ambient temperature	-25 - +55°C (non-freezing)
Ambient humidity	35-85%RH (non-condensing)
Protective structure	IP 66
Vibration	10-55 Hz / 1.5 mm amplitude / 2 hours each in 3 direction
Shock	100 m/s ² / 3 times each in 3 directions
Dielectric withstanding	1000 VAC for 1 minute
Insulation resistance	500 VDC, 20 MΩ or higher

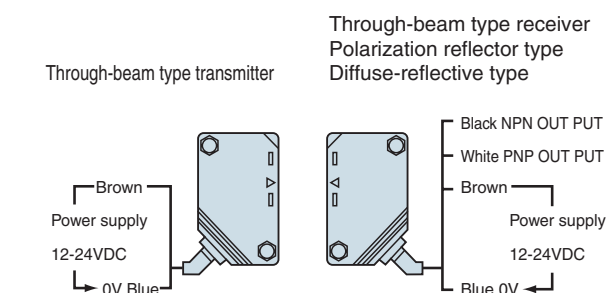
Input/Output Circuit and Connection



Dimensions (in mm)



Connection



With mounting bracket
provided attached

