

PEA series

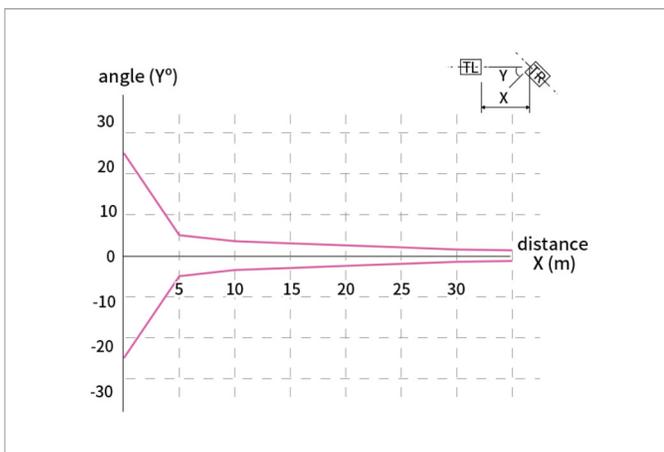
Built-in power supply / Amplifier built-in photo sensor

- Convenient sensitivity setting with auto tuning
- Easy setting using buttons
- mutual interference protection
- Resistant to noise by adopting digital signal processing
- IP69K (IEC) Protective structure with excellent water resistance
- M.S.R. function that only receives light reflected from the mirror
- High-performance lenses enable long-distance detection

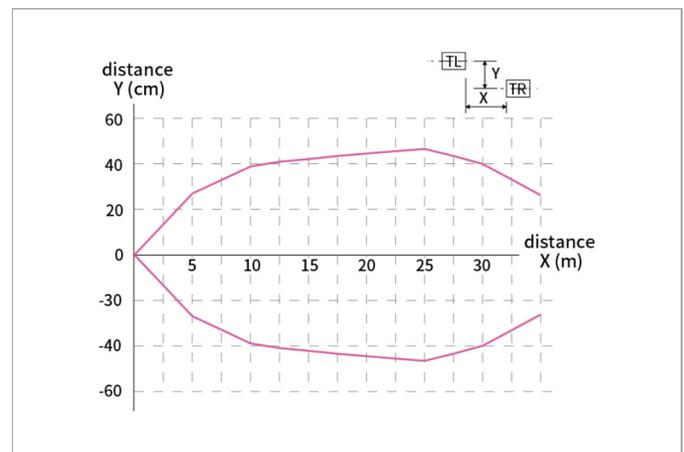
Characteristic data

+ Through beam

- Detection Angle Characteristics

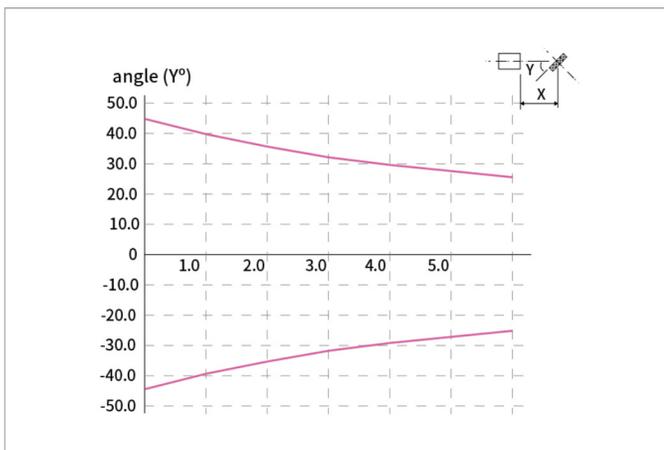


- Parallel Movement Characteristics

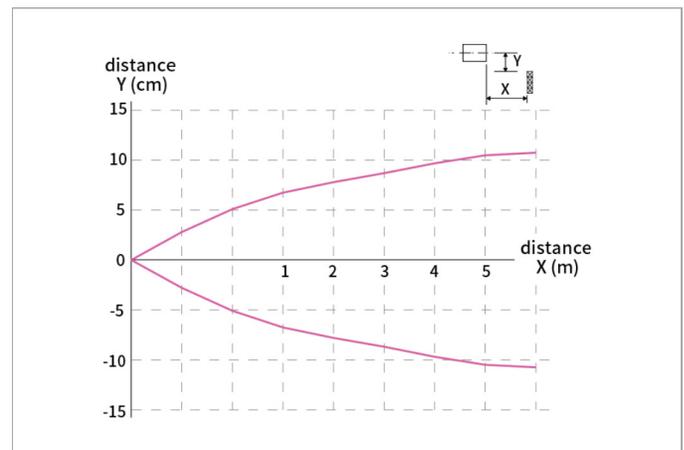


+ Retroreflective (M.S.R.)

- Detection Angle Characteristics



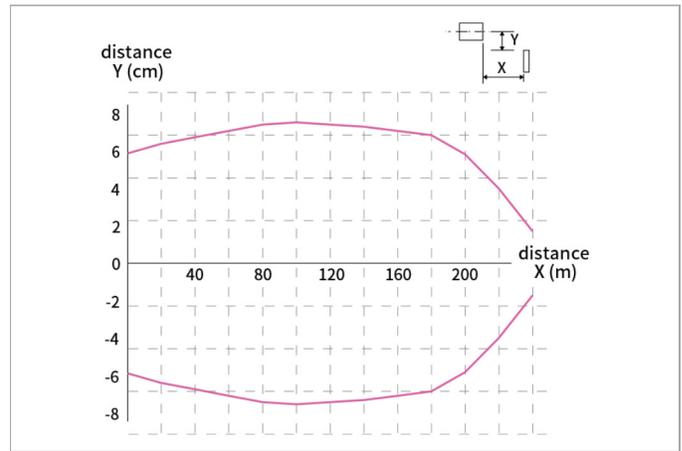
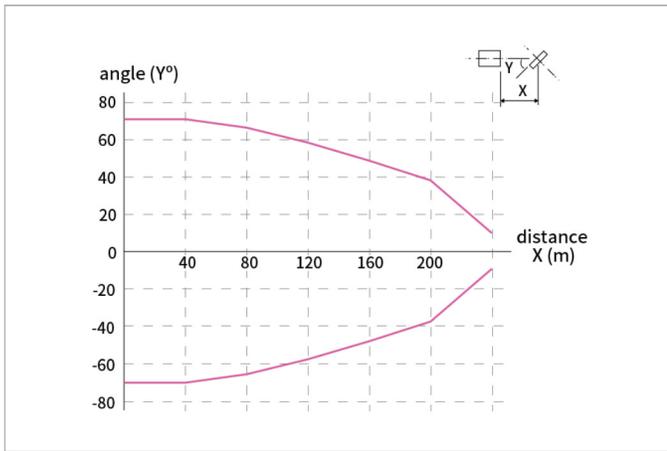
- Parallel Movement Characteristics



+ Diffuse reflective

- Detection Angle Characteristics

- Parallel Movement Characteristics



Specification

Sensing mode		Through-beam	Retroreflective (M.S.R.)	Diffuse-reflective
Model	Relay output (AC/DC power)	PEA-T30A	PEA-M5A	PEA-R2A
	NPN Open collector output (DC power)	PEA-T30N	PEA-M5N	PEA-R2N
	PNP Open collector output (DC power)	PEA-T30P	PEA-M5P	PEA-R2P
Sensing distance		30 m	0.1 ~ 5 m	2 m
Hysteresis distance		-		20 % or less of detection distance
Detecting object		Ø12 mm more (Opaque)	Ø60 mm more (Opaque)	White paper (100 x 100 mm)
Light source (wavelength)		Infrared light emitting diode (855 nm)	Red light emitting diode (660 nm)	Infrared light emitting diode (855 nm)
Power voltage	Relay output (AC/DC power)	24 - 240 V a.c. ±10 % or 24 - 240 V d.c. ±10 % (Ripple max. 10 %)		
	Open collector output (DC power)	12 - 24 V d.c. Class 2 ± 10 % (Ripple max. 10 %)		
power consumption	Relay output (AC/DC power)	•Transmitter Max. 1 VA, •Receiver Max. 2VA	Max. 3 VA	
	Open collector output (DC power)	•Transmitter Max. 15 mA •Receiver Max. 20 mA	Max. 30 mA	
Control output	Relay output (AC/DC power)	<ul style="list-style-type: none"> •relay contact output (Contact configuration 1a1b) •Electrical life : Min 10 cycles •Contact Capacity : 30 V d.c. 5 A / 250 V a.c. 5 A with resistive load •Mechanical life : Min. 50 million cycles (Opening/closing frequency 180 times/min) 		
	Open collector output (DC power)	<ul style="list-style-type: none"> •NPN or PNP open collector output •Load current - Max. 100 mA (26.4 V d.c. standard) •Residual voltage - Max. 1.5 V 		
Operation mode		Light ON / Dark ON button switch type		
Indicator light		<ul style="list-style-type: none"> •Control output indicator light : Orange LED •Stability indicator light : Green LED (However, the Green LED of the through-type emitter is a power indicator)		
Auto teaching	Through-beam	If the B2 button is pressed for more than 3 seconds in the presence of a detection object, the sensitivity is automatically set.		
	Retroreflective (M.S.R.)			

	Diffuse- reflective	1) In the presence of a detection object (stable light incident) 2) Release the B2 button after pressing it for more than 3 seconds. 3) Check the Green + Orange LED cross blinking (try again if either side is not blinking) 4) Press the B2 button once after removing the detected object (0.5 seconds)		
AGC		When the unstable light enters for 20 sec or more in button locked state, automatically changes to the stable light state.		
Sensitivity adjustment		B1 increases the sensitivity and B2 decreases the sensitivity		
Protection circuit	Common	-	Mutual interference prevention function	
	Open collector output (DC power)	<ul style="list-style-type: none"> •Power reverse connection protection •Output short-circuit over-current protection •Output reverse connection protection •Output short-circuit alarm 		
Response time	Relay output (AC/DC power)	Max. 20 ms		
	Open collector output (DC power)	Max. 1 ms		
Insulation Resistance		More than 20 MΩ (500 V d.c. mega)		
Dielectric strength		1,000 V a.c. (50/60 Hz for 1 minute)		
Vibration resistance		<ul style="list-style-type: none"> •10-55Hz, sweep : 1.5mm •X·Y·Z 2 in each direction for 2 hours 		
Shock resistance		<ul style="list-style-type: none"> •500 m/s² •X·Y·Z each direction 3 times 		
Ambient illumination		<ul style="list-style-type: none"> •Sunlight : max. 11,000 lx •Incandescent : max 3,000 lx 		
Ambient temperature range		<ul style="list-style-type: none"> •operating temperature : -20 ~ +55 °C •During storage : -40 ~ +70°C (Without condensation or icing)		
Ambient humidity		35 ~ 85 % RH (Without condensation or icing)		
Protection		IP69K (IEC standard)		
Weight (Packing)	Relay output (AC/DC power)	265g (440g)	150g (280g)	145g (260g)
	Open collector output(DC power)	255g (430g)	140g (270g)	140g (255g)
Texture	Case	PC		
	Display	PC		
	Lens	PMMA		
Accessory	Common	Instructions manual, bracket, bolt (M3 X 12 mm)		
	Accessory	-	Mirror (HY-M5)	-
Connection method		Cable type		
wiring specification	Relay output (AC/DC power)	Ø 6 mm, Through-beam type transmitter : 2-core, Through-beam type receiver Mirror-reflection type receiver, Diffuse-reflective type receiver : 5-core, 2 m		
	Open collector output (DC power)	Ø 6 mm, Through-beam type transmitter : 2-core, Through-beam type receiver, Mirror-reflection type receiver, Diffuse-reflective type receiver : 5-core, 2 m		
specifications of the small-sized cable		<ul style="list-style-type: none"> •AWG20 (0.18 mm, 21 strands) •Insulation outer diameter : 1.5 mm 		