

Round type photo sensor PRA series

Wide viewing angle LED

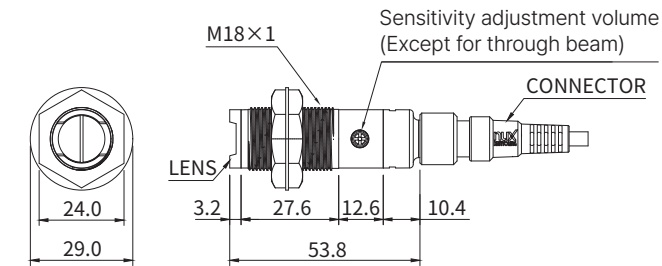
Wiring outlet/connector

Metal/Plastic Case

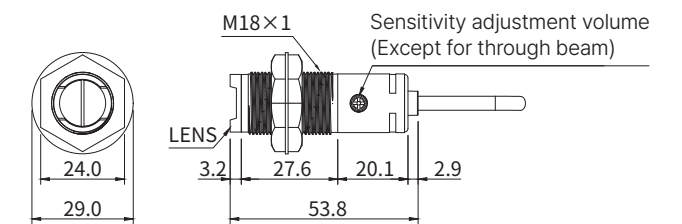
Dimension

•Connector type (C)

[unit : mm]

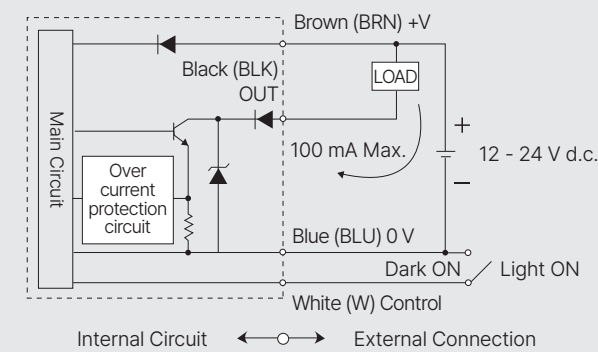


•Cable Type (W)

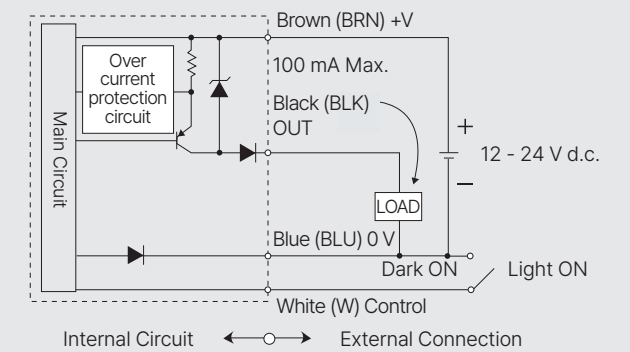


Output Circuit

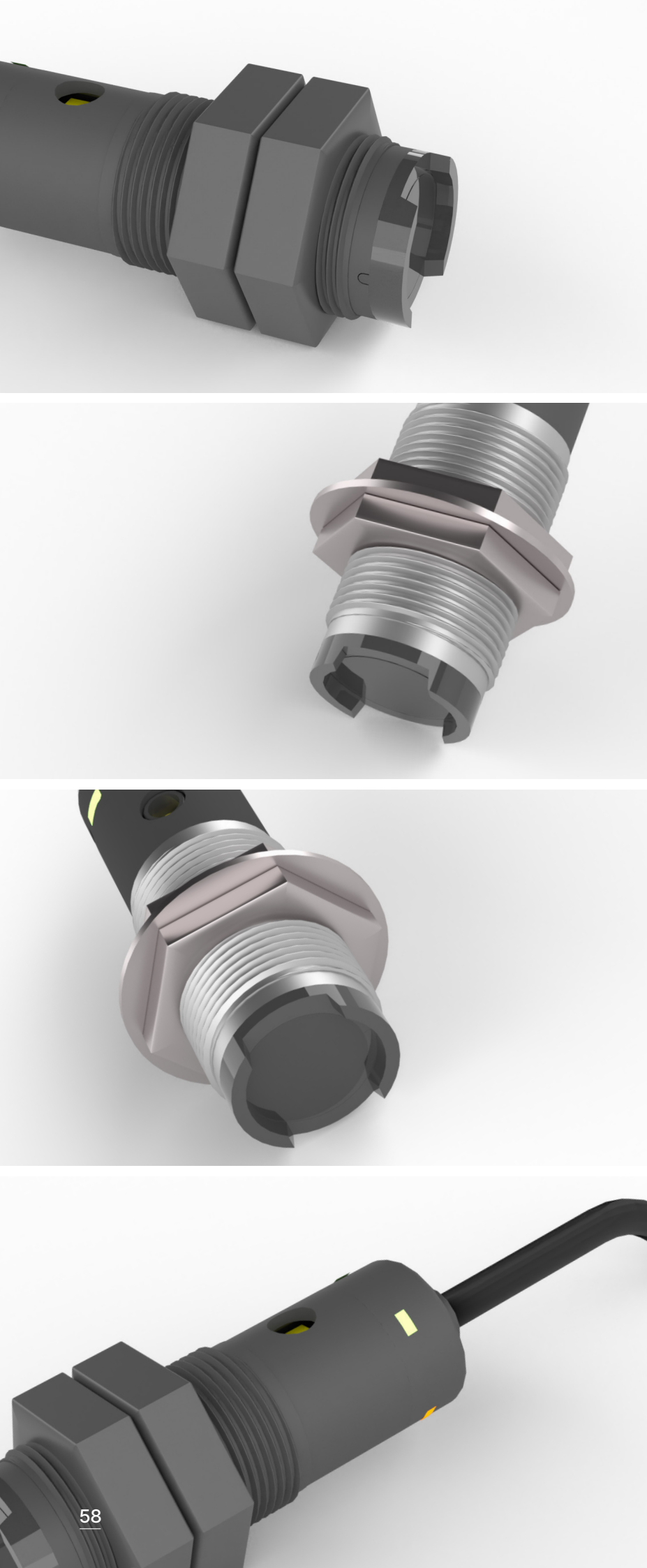
•NPN TYPE



•PNP TYPE



* Limited to mirror reflection type and diffuse reflection type of through beam type (however, through beam type only has power input (12 - 24 V d.c.).



PRA series
HANYOUNG NUX

Metal & Plastic
Case Selectable
Installation
Space Saved

- Improved visibility with wide viewing angle LED
- Through beam, Retroreflective, Diffuse reflective Type
- Wiring-out type, connector type connection
- Metal & Plastic Case Selectable

Suffix code

Model	Code					Content
PRA-	☐	☐	☐	☐	☐	Round type photo sensor
Sensing mode	T					Through-beam
	M					Diffuse-reflective
	R					Retroreflective
Sensing distance		20				20 m (Through-beam)
		4				4 m (Retroreflective (M.S.R.))
		1				1 m (Diffuse-reflective)
Control output			N			NPN Open collector output
			P			PNP Open collector output
Connection method				W		Cable Type
				C		Connector Type
Case texture					M	Metal : Chrome plating
					P	Plastic

Specification

Division		Through-beam	Retroreflective (M.S.R.)	Diffuse-reflective
Control output	NPN	PRA-T20N	PRA-M4N	PRA-R1N
	PNP	PRA-T20P	PRA-M4P	PRA-R1P
Sensing distance		20 m	0.3 ~ 4 m	1 m
Hysteresis distance		-		Less than 20% of the sensing range
Detecting object		Ø10mm more (Opaque)	Ø10mm more (Opaque)	Ø10mm more (Opaque)
light source (emission wavelength)		IR LED (855 nm)		
Power voltage		12 - 24 V d.c. Class 2 ± 10% Ripple (p-p) max. 10 %		
Current consumption		Emitter : 15 mA, Receiver : 20 mA	Max. 30 mA	
Control output		•NPN or PNP open collector output •Load current - max. 100 mA (26.4 V d.c. standard) •Residual voltage - NPN : max. 1.5 V, PNP : max. 1.5 V		
Operation mode		Light ON / Dark ON (By white cable) * In terms of through-beam type, receiver only		
Indicator light		Control output light : Orange LED, Stability light : Green LED (Diffuse-reflective of Through-beam green LED is power indicator)		
Sensitivity adjustment		V/R adjustment		
Protective circuit	Common	Power reverse connection protection, Output short-circuit over-current protection, Output reverse connection protection, Output short-circuit alarm		
	Individual	-	Mutual interference prevention function	
Response time		1 ms or less		
Insulation Resistance		More than 20 MΩ (500 V d.c. mega)		
Withstand Voltage		1,000 V a.c. (50/60 Hz for 1 minute)		
Noise immunity		Square Wave Noise (Pulse Width 1 μs) ±240V D.C. induced by Noise Simulator		
Vibration resistance		10 ~ 55 Hz, sweep : 1.5 mm, X-Y-Z 2 in each direction for 2 hours		
Shock resistance		500 m/s ² , X-Y-Z each direction 3 times		
Ambient illumination		Sunlight : max. 11,000 Lux, Incandescent: max 3,000 Lux		
Ambient temperature range		Operating temperature : -20 ~ +55 °C During storage : -40 ~ +70°C (Without condensation or icing)		
Ambient humidity		35 ~ 85 % RH (Without condensation or icing)		
Protection		IP67 (IEC standard)		
Texture	Case	•Metal : Brass chrome plated •Plastic : Plastic		
	Display, Lens	PC		
Accessory	Common	• Metal : 2Fixing nut, 1 washer, V / R adjustment screwdriver • Plastic : 2Fixing nut, V / R adjustment screwdriver		
	Individual	-	Mirror (HY-M5)	-
Weight	Cable Type	• Metal : Approx 165 g (195 g) • Plastic : Approx 120 g (175 g)	• Metal : Approx 85 g (195 g) • Plastic : Approx 65 g (175 g)	• Metal : Approx85g(115g) • Plastic : Approx65g(95g)
	Connector Type	• Metal : Approx80 g (110 g) • Plastic : Approx35 g (65 g)	• Metal : Approx45 g (155 g) • Plastic : Approx20 g (130 g)	• Metal : Approx45 g (75 g) • Plastic : Approx20 g (50 g)
Connection method	Cable Type	Number of wires - 4P, Outer diameter - Ø 4 mmlength - 2 mm (through-beam type is 2P)		
	Connector Type	M12 connector wiring (M12 Repeater cable sold separately)		

• Please note that the sensing distance may vary depending on the size of the object to be detected, its surface condition, and whether or not it is glossy