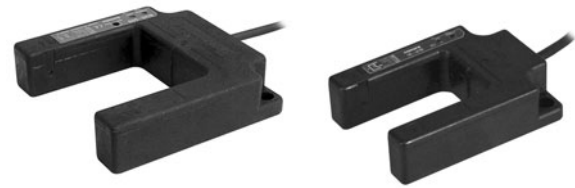


Reinforced plastic case U-Shaped type photoelectric sensor

■ Features

- Improved noise resistance to disturbance light
- High speed response type
- Reverse power polarity and short-circuit (Overcurrent) protection circuit
- Light ON / Dark ON Selectable by control wire
- Protection structure IP66 (IEC standard)
: BUP-30, BUP-50



⚠ Please read "Caution for your safety" in operation manual before using.



■ Specifications

Model	NPN open collector	BUP-30	BUP-30S	BUP-50	BUP-50S
	PNP open collector	BUP-30-P	BUP-30S-P	BUP-50-P	BUP-50S-P
Sensing type	Through-beam				
Sensing target	Opaque materials of min. ϕ 4mm	Opaque materials of min. ϕ 1.5mm	Opaque materials of min. ϕ 4mm	Opaque materials of min. ϕ 1.5mm	
Operation mode	Light ON / Dark ON selectable by control wire (White)				
Sensing distance	30mm		50mm		
Response time	Max. 1ms				
Power supply	12-24VDC \pm 10% (Ripple P-P : Max. 10%)				
Current consumption	Max. 30mA				
Light source	Infrared LED (940nm)				
Sensitivity adjustment	Fixed	Built-in VR	Fixed	Built-in VR	
Control output	NPN or PNP open collector output • Load voltage : Max. 30VDC • Load current : Max. 200mA • Residual voltage \Rightarrow NPN : Max. 1V, PNP : Min. (Power voltage - 2.5V)				
Protection circuit	Reverse power polarity, Short-circuit protection				
Indication	Power indicator : Green LED, Operation indicator : Red LED				
Connection	Outgoing cable				
Insulation resistance	Min. 20M Ω (at 500VDC megger)				
Noise strength	\pm 240V the square wave noise (pulse width : 1 μ s) by the noise simulator				
Dielectric strength	1,000VAC 50/60Hz for 1 minute				
Vibration	1.5mm amplitude at frequency of 10 to 55Hz in each of X, Y, Z directions for 2 hours				
Shock	1,000m/s ² (50G) in X, Y, Z directions for 3 times				
Ambient illumination	Sunlight : Max. 11,000lx Incandescent lamp : Max. 3,000lx				
Ambient temperature	Operation : -25 to 65 $^{\circ}$ C [BUP-30S(-P) & BUP-50S(-P) : -10 to 60 $^{\circ}$ C], Storage : -25 to 70 $^{\circ}$ C (non-freezing condition)				
Ambient humidity	35 to 85%RH, Storage : 35 to 85%RH				
Protection	IP66 (IEC standard)	IP50 (IEC standard)	IP66 (IEC standard)	IP50 (IEC standard)	
Material	Case : PA				
Cable	ϕ 4, 4P, Length : 2m, AWG22, Insulation diameter : ϕ 1.2				
Accessory	—————	Adjustment driver	—————	Adjustment driver	
Approval	CE				
Unit weight	Approx. 90g		Approx. 140g		

(A) Photo electric sensor

(B) Fiber optic sensor

(C) Door/Area sensor

(D) Proximity sensor

(E) Pressure sensor

(F) Rotary encoder

(G) Connector/Socket

(H) Temp. controller

(I) SSR/Power controller

(J) Counter

(K) Timer

(L) Panel meter

(M) Tacho/Speed/Pulse meter

(N) Display unit

(O) Sensor controller

(P) Switching power supply

(Q) Stepping motor & Driver & Controller

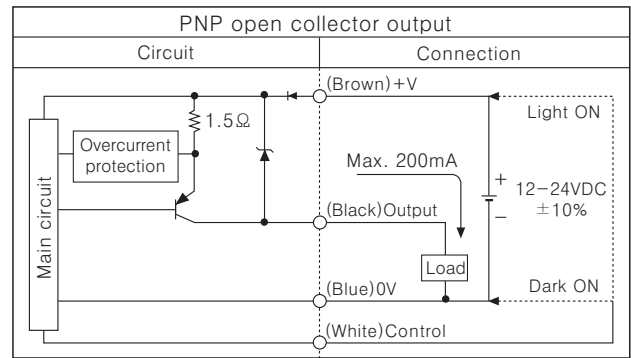
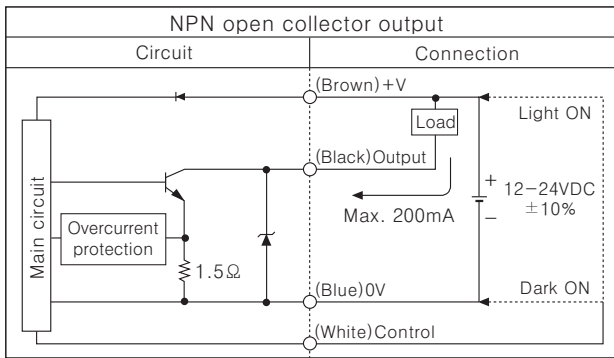
(R) Graphic/Logic panel

(S) Field network device

(T) Production stoppage models & replacement

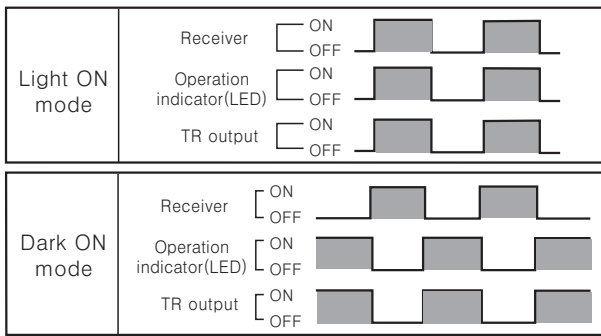
BUP Series

Control output diagram

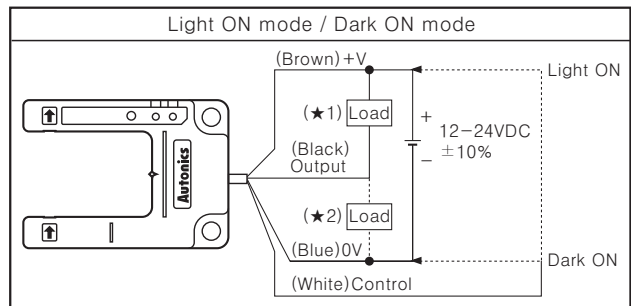


*Select Light ON / Dark ON by control wire. [Light ON : Connect control wire to 0V
Dark ON : Connect control wire to +V

Operation mode



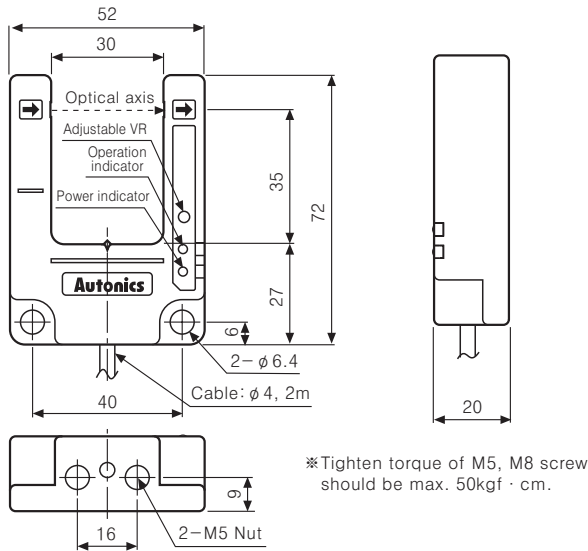
Connections



*(★1) - Load connection for NPN open collector output
*(★2) - Load connection for PNP open collector output

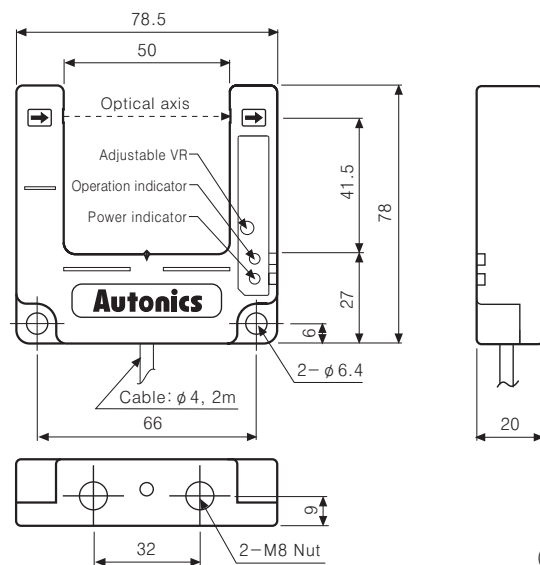
Dimensions

●BUP-30, BUP-30-P, BUP-30S, BUP-30S-P



*Tighten torque of M5, M8 screw should be max. 50kgf · cm.

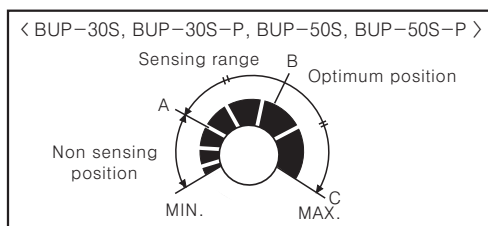
●BUP-50, BUP-50-P, BUP-50S, BUP-50S-P



(Unit:mm)

Mounting and sensitivity adjustment

Please supply the power to the sensor after mount the emitter and the receiver facing each other, and then adjust an optical axis and the sensitivity as follow;



*Sensing target at a position to be detected by the beam, then turn the adjuster until position "A" in the middle of the operation range of indicator (Dark ON mode) or indicator is turned off (Light ON mode) (It is able to operate in min. sensitivity position.)

Place adjuster at "B", in the middle of two switching "A", "C".