Reinforced plastic case U-Shaped type photoelectric sensor

▣Features

- ●High speed response type
- ●Reverse power polarity and short-circuit (Overcurrent) protection circuit
- ●Selectable Light ON / Dark ON mode by control wire
- ●IP66 rated waterproof structure(IEC standard) : BUP-30, BUP-50

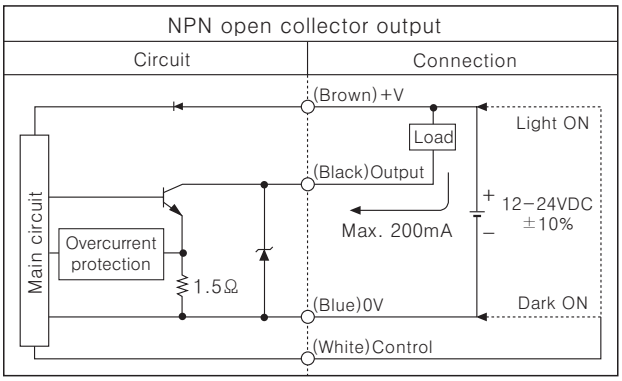
⚠ **Please read "Caution for your safety" in operation manual before using.**

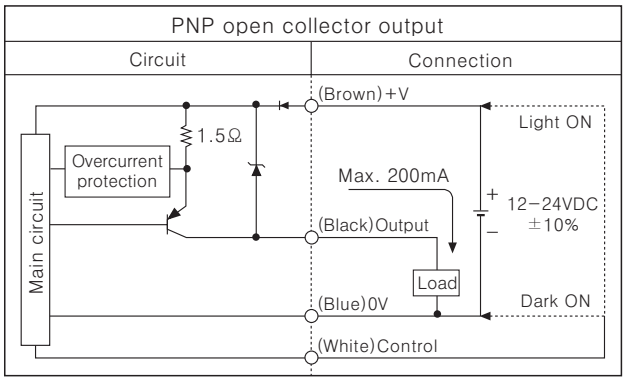
CE

▣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		Transmitted beam			
Sensing target		Opaque materials of min. ϕ4mm	Opaque materials of min. ϕ1.5mm	Opaque materials of min. ϕ4mm	Opaque materials of min. ϕ1.5mm
Operation mode		Light ON / Dark ON selectable by control wire			
Sensing distance		30mm		50mm	
Response time		Max. 1ms			
Power supply		12-24VDC ±10%(Ripple P-P : Max. 10%)			
Current consumption		Max. 30mA			
Light source		Infrared LED(modulated)			
Sensitivity adjustment		Fixed	Adjustable	Fixed	Adjustable
Control output		NPN open collector output ☞ Load voltage : Max. 30VDC, Load current : Max. 200mA, Residual voltage : Max. 1V PNP open collector output ☞ Output voltage : (Min. Power supply-2.5V), Load current : Max. 200mA			
Protection circuit		Reverse power polarity, Short-circuit protection			
Indication		Power indicator : Green LED, Operation indicator : Red LED			
Connection		Outgoing cable			
Insulation resistance		Min. 20MΩ (at 500VDC mega)			
Noise strength		±240V the square wave noise(pulse width:1μs) by the noise simulator			
Dielectric strength		1,000VAC 50/60Hz for 1 minute			
Vibration		1.5mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 2 hours			
Shock		1,000m/s² (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℃[BUP-30S(-P) & BUP-50S(-P) : -10 to +60℃], Storage : -25 to +70℃ (non-freezing condition)			
Ambient humidity		35 ~ 85%RH, Storage : 35 ~ 85%RH			
Protection		IP66(IEC standard)	IP50(IEC standard)	IP66(IEC standard)	IP50(IEC standard)
Material		Case : ABS12, Cover : PC			
Cable		4P, ϕ4mm, Length : 2m			
Accessory		————	Adjustment driver	————	Adjustment driver
Approval		CE			
Unit weight		Approx. 90g		Approx. 140g	

▣Control output diagram





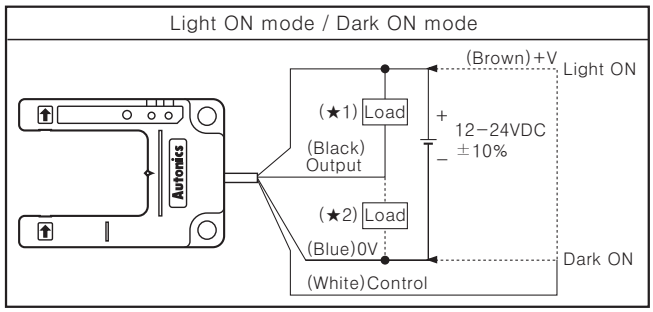
※Selectable Light ON / Dark ON mode by control wire.

▣Operation mode

Operation mode	Light ON mode	Dark ON mode
Receiver operation	Received light / Interrupted light	
Operation indicator(LED)	ON / OFF	
Output TR	ON / OFF	

Note)If the control output terminal is short-circuited or flow beyond rating current, the control signal will not be output normally due protection circuit.

▣Connections

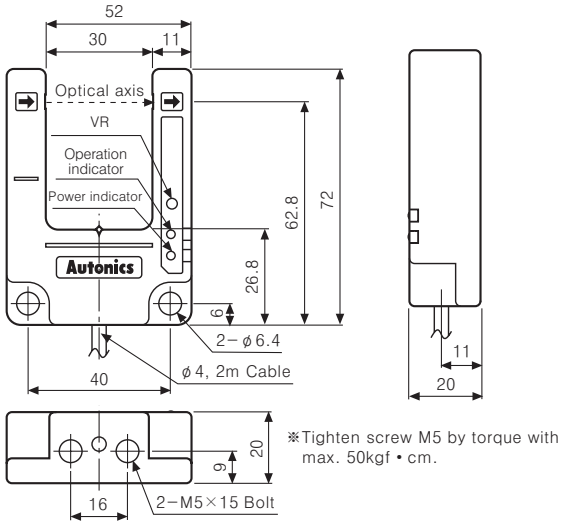


※(★1)-Load connection for NPN open collector output
(★2)-Load connection for PNP open collector output

▣Dimensions

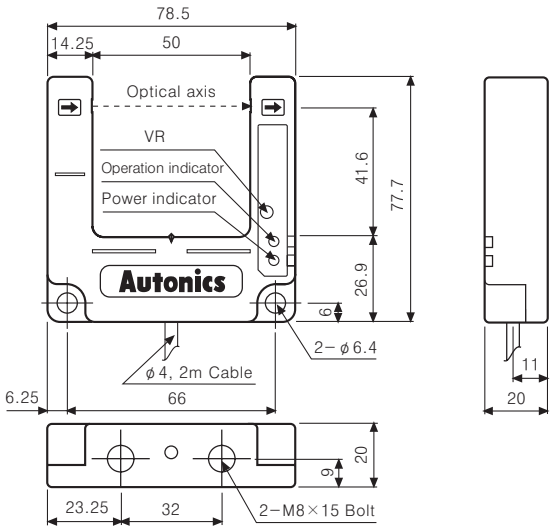
(Unit:mm)

●BUP-30, BUP-30-P, BUP-30S, BUP-30S-P



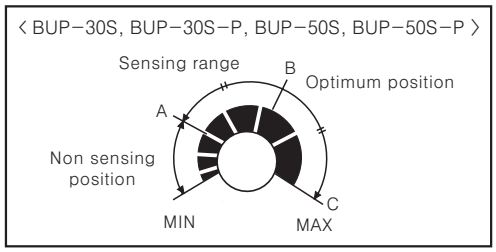
※Tighten screw M5 by torque with max. 50kgf • cm.

●BUP-50, BUP-50-P, BUP-50S, BUP-50S-P



▣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.