DC U-Shaped Type

Reinforced plastic case U-Shaped type photoelectric sensor

▣Features

- High speed response type
- Includes overcurrent protection, Reverse power polarity protection
- Selectable Light / Dark ON mode by control wire
- Waterproof structure by IP66(IEC standard) : BUP-30, BUP-50

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

CE

▣Specifications

※BUP series will be available from February, 2007

Model	BUP-30	BUP-30S	BUP-50	BUP-50S
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	Selectable Light ON / Dark ON mode 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 VR	Fixed	Adjustable VR
Control output	NPN open collector output ☞ Load voltage : Max. 30VDC, Load current : Max. 200mA, Residual voltage : Max. 1V			
Protection circuit	Reverse polarity protection, Short-circuit protection			
Indication	Power indicator : Green LED, Operation indicator : Red LED			
Connection	Outgoing cable			
Insulation resistance	Min. 20MΩ (at 500VDC)			
Noise strength	±240V the square wave noise(pulse width:1μs) by the noise simulator			
Dielectric strength	500VAC 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	500m/s² (50G) in X, Y, Z directions for 3 times			
Ambient illumination	Sunlight : Max. 11,000lx Incandescent lamp : Max. 3.000lx			
Ambient temperature	-25 ~ +65℃ ‹BUP-30S and BUP-50S : -10 ~ +60℃› (at non-freezing stauts), Storage : -35 ~ +70℃ (at non-freezing stauts)			
Ambient humidity	35 ~ 85%RH, Storage : 35 ~ 85%RH			
Protection	IP65(IEC standard)	IP50(IEC standard)	IP66(IEC standard)	IP50(IEC standard)
Material	Case : ALDC12, Cover : PC			
Cable	4P, ϕ4mm, Length : 2m			
Accessory	———	Adjustment driver	———	Adjustment driver
Approval	CE			
Unit weight	Approx. 140g			

(A) Counter
(B) Timer
(C) Temp. controller
(D) Power controller
(E) Panel meter
(F) Tacho/ Speed/ Pulse meter
(G) Display unit
(H) Sensor controller
(I) Switching power supply
(J) Proximity sensor
(K) Photo electric sensor
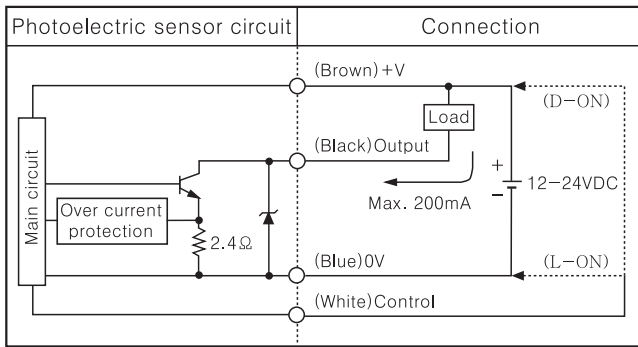(L) Pressure sensor
(M) Rotary encoder
(N) Stepping motor & Driver & Controller
(O) Graphic panel
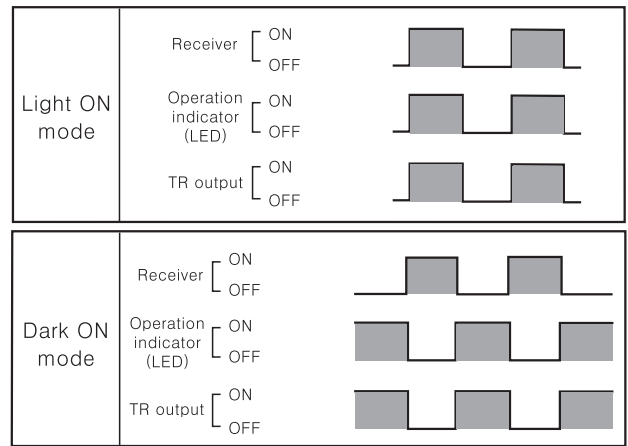(P) Production stoppage models & replacement
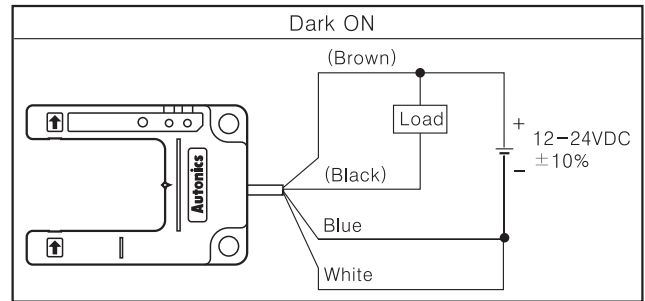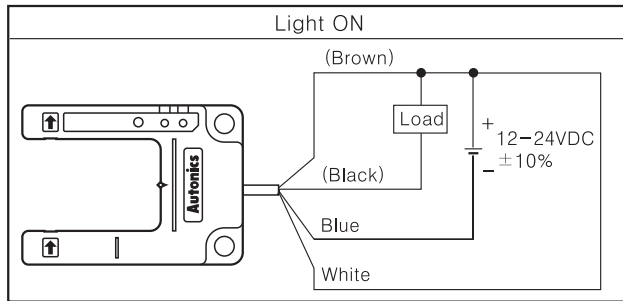
BUP Series

▣Control output diagram

Photoelectric sensor circuit	Connection
Main circuit — Over current protection — 2.4Ω	(Brown)+V ○ —— Load —— (D−ON) (Black)Output ○ —— + 12−24VDC Max. 200mA (Blue)0V ○ —— (L−ON) (White)Control ○

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

▣Operation mode

Light ON mode	Receiver	ON / OFF	
	Operation indicator (LED)	ON / OFF	
	TR output	ON / OFF	
Dark ON mode	Receiver	ON / OFF	
	Operation indicator (LED)	ON / OFF	
	TR output	ON / OFF	

▣Connections

Light ON	Dark ON
(Brown) — Load — + 12−24VDC ±10% (Black) Blue White	(Brown) — Load — + 12−24VDC ±10% (Black) Blue White

▣Dimensions

●BUP−30, BUP−30S   ●BUP−50, BUP−50S   (Unit:mm)

BUP−30, BUP−30S
52, 30, 11
Optical axis
Adjusting VR
Operation indicator
Power indicator
Autonics
72, 62.8, 26.8, 6
2−φ6.4
40
φ4, 2m Cable
11, 20
20, 9, 16
2−M5×15 Bolt
※Tighten screw M5 by torque with max. 50kgf・cm.

BUP−50, BUP−50S
78.5, 14.25, 50
Optical axis
Adjusting VR
Operation indicator
Power indicator
Autonics
77.7, 41.6, 26.9, 6
2−φ6.4
φ4, 2m Cable
6.25, 66
11, 20
23.25, 32, 20, 9
2−M8×15 Bolt
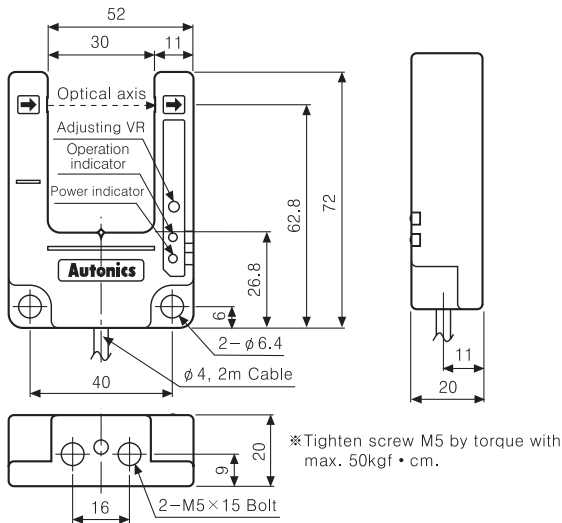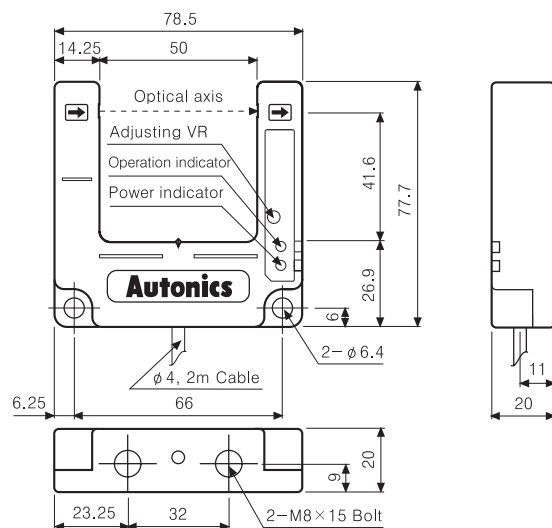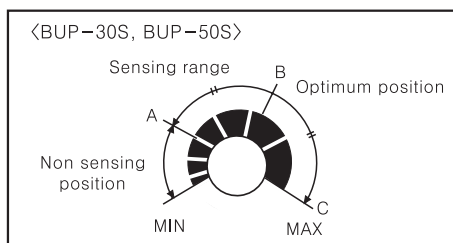
▣Installation and sensitivity adjustment

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;

〈BUP−30S, BUP−50S〉
Sensing range
B Optimum position
A
Non sensing position
C
MIN   MAX

※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.)
Adjust VR at "B", in the middle of two switching A, C.

K−53

Autonics