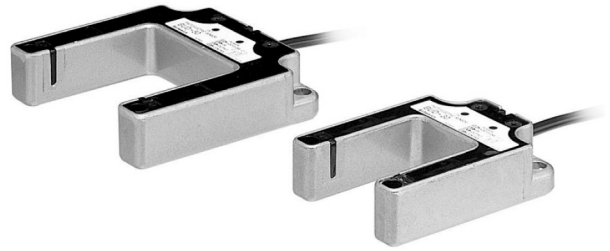


DC U-Housing Type

Aluminum die casting case

■ Features

- High speed response type
- Over current protection built in
- Reverse power polarity protection built in
- Selectable Light / Dark ON mode by control wire
- Water proof structure by IP65 (IEC specification)



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



■ Specifications

Model	BUD-30	BUD-30S	BUD-50	BUD-50S
Type	Through-beam type			
Detecting 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	Selectable Light ON / Dark ON by control wire			
Detecting 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(modulated)			
Sensitivity adjustment	Fixed	Adjustable VR	Fixed	Adjustable VR
Control output	NPN open collector output \Rightarrow 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. 20M Ω (at 500VDC)			
Noise strength	\pm 240V the square wave noise (pulse width:1 μ s) 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/s ² (50G) in X, Y, Z directions for 3 times			
Ambient illumination	Sunlight : Max. 11,000lx Incandescent lamp : Max. 3,000lx			
Ambient temperature	-25 ~ +65 $^{\circ}$ C <BUD-30S and BUD-50S : -10 ~ +60 $^{\circ}$ C> (at non-freezing staufs), Storage : -35 ~ +70 $^{\circ}$ C (at non-freezing staufs)			
Ambient humidity	35 ~ 85%RH, Storage : 35 ~ 85%RH			
Protection	IP65 (IEC specification), <Built-in VR type : IP50 (IEC specification)>			
Material	Case : ALDC12, Cover : PC			
Cable	4P, ϕ 4mm, Length : 2m			
Accessories	—————	Adjustment driver	—————	Adjustment driver
Approval	CE			
Weight	Approx. 110g		Approx. 130g	

(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) Proximity sensor

(J) Photo electric sensor

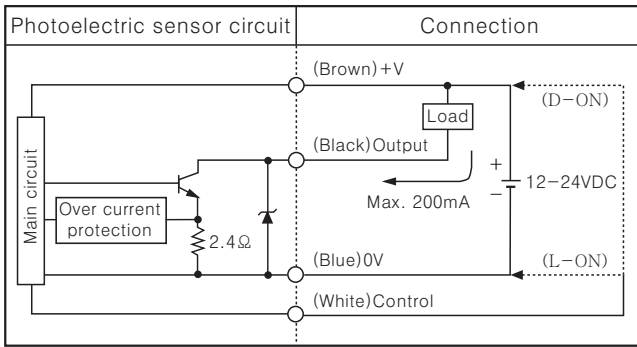
(K) Pressure sensor

(L) Rotary encoder

(M) 5-Phase stepping motor & Driver & Controller

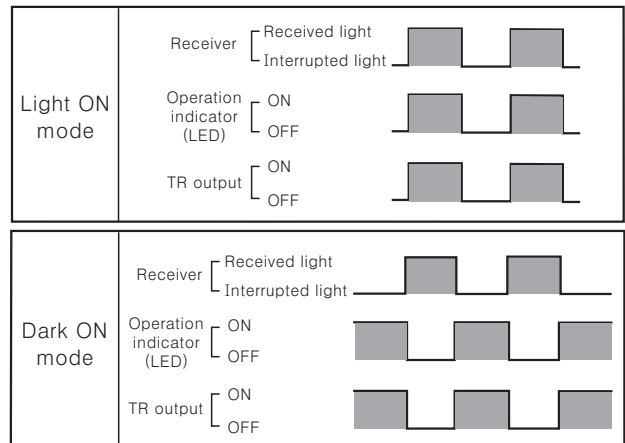
BUD Series

Control output diagram

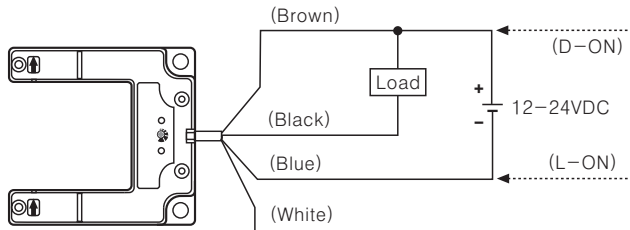


- ※Selectable Light ON / Dark ON mode by control wire.
- ※BUD-50-H : Fixed Dark ON

Operation mode

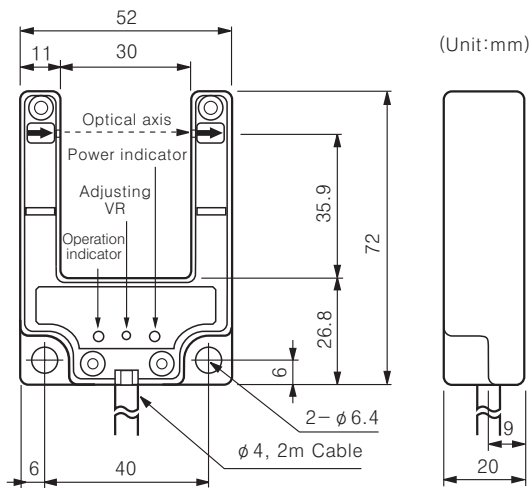


Connections

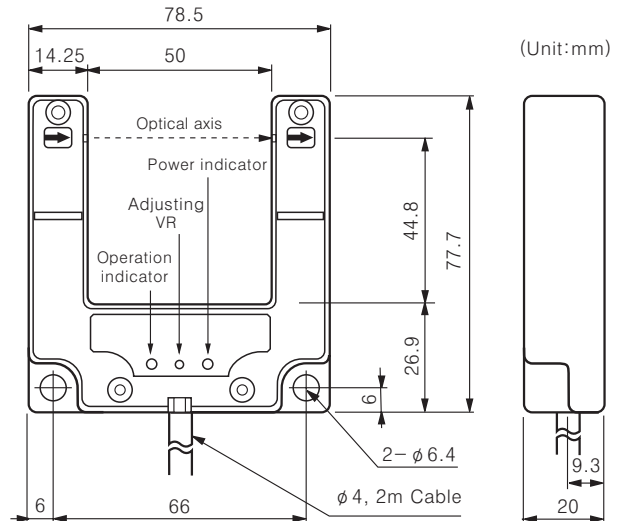


Dimensions

●BUD-30, BUD-30S

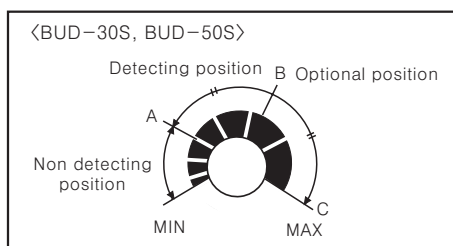


●BUD-50, BUD-50S



Installation and sensitivity adjustment

Please supply the power to the sensor after installing the emitter and the receiver in face to face, and then adjust an optical axis and the sensitivity as follow;



- ※Set the target at a position to be detected by the beam, then turn the adjuster until position A where the indicator turns on. See the adjuster at the center of two switching A, C.
- ※Since the case of BUD series is a metal part, it should be grounded not to occur electric static and noise.