



Basic Features	Working Principle	Optical detection principle							
	Sensing method	Diffuse(BGS)							
	Type	Rectangular							
	Sensing distance	5~100mm	5~150mm		5~300mm				
	Setting distance	25~100mm	25~150mm		25~300mm				
	Spot size	65x6/100mm	Ø3mm/150mm	Ø3mm/150mm	Ø16mm/300mm	Ø8mm/300mm		-	Ø16mm/300mm
	Minimum sensing object diameter	Ø5mm							
	Light source	Red LED(660nm)			Red LED(623nm)	Red LED(660nm)		Infrared LED (940nm)	Blue LED(465nm)
	Indicator	Running: green; Output: red							
	Sensitivity adjustment	6-turn potentiometer							
Electrical Data	Operation model	Light.on/Dark.on switching							
	Output model	NPN/PNP available by model							
	Response time	≤1ms							
	Response frequency	≤500Hz							
	Repeatability	≤5%							
	Hysteresis	≤5%							
	Operating Voltage	10~30V ±10%							
	No load current	≤25mA							
	Voltage drop	< 1.5V							
	Load current	≤100mA							
	Insulation resistance	≥20MΩ/500V DC							
	Dielectric strength	1000V AC at 50/60Hz for 1 min							
	Protection Circuit	Reverse Polarity Protection/Short-circuit Protection/Surge protection							
Environmental Conditions	Operating Temperature	-25℃~-+55℃ (No Freezing)							
	Storage Temperature	-30℃~-+70℃ (No Freezing)							
	Operating Humidity	35%~85% RH (No Condensation)							
	Storage Humidity	35%~95% RH (No Condensation)							
	Ambient illumination	Incandescent lamps≤3,000lux; Sunlight≤10,000lux							
	Vibration resistance	10~55Hz, 1.5mm double amplitude for 2hours each in X/Y/Z directions							
	Enclosure rating	IP67							
Mechanical Data	Tightening torque, max.	0.5N.m							
	Connection	2m/4-wire Cable		2m/3-wire Cable	2m/4-wire Cable		2m/3-wire Cable	2m/4-wire Cable	
	Dimensions (WxHxD)	31.0x20.0x11.0mm							
	Material	Housing: PC+ABS, Lens: PMMA							
	Weight	45g							
	Accessories	Nuts, Bracket, Screwdriver							
Model	NPN	ESB-BL10N	ESB-BS15N	ESB-BS15AN	ESB-B30N	ESB-BS30N	ESB-BS30AN	ESB-BV30N	ESB-BY30N
	PNP	ESB-BL10P	ESB-BS15P	ESB-BS15AP	ESB-B30P	ESB-BS30P	ESB-BS30AP	ESB-BV30P	ESB-BY30P

Fiber Optic

Fork

Photoelectric

Inductive

Capacitive

Magnetic

Contact

Ultrasonic

Curtains

Selection Guide

Cylindrical

Rectangular

Ultra-slim

BGS

Time-of-Flight

IP69K

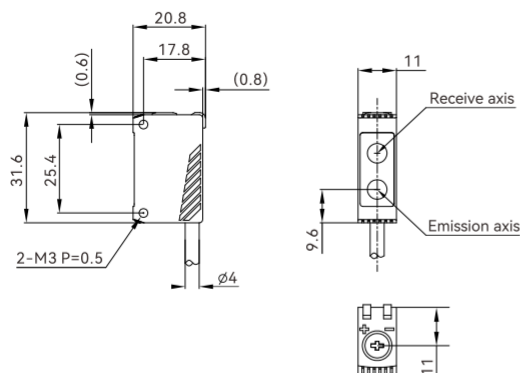
Reflector

BGS Photoelectric Sensor

Dimensions

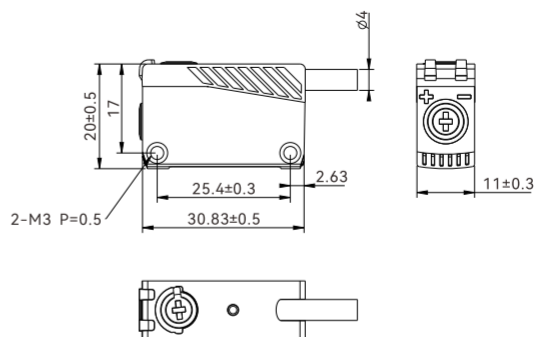
Unit: mm

ESB-B30/BL10/BS15/BS30/BV30/BY30N(P)



ESB-BS15AN/AP

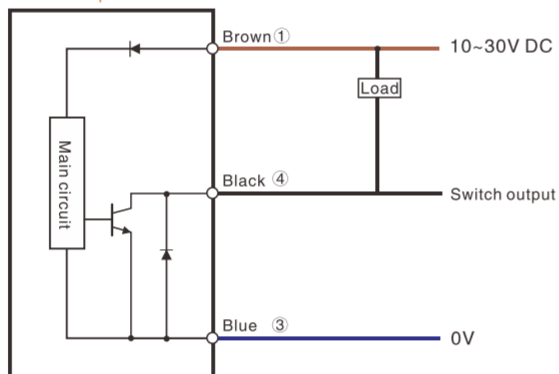
ESB-BS30AN/AP



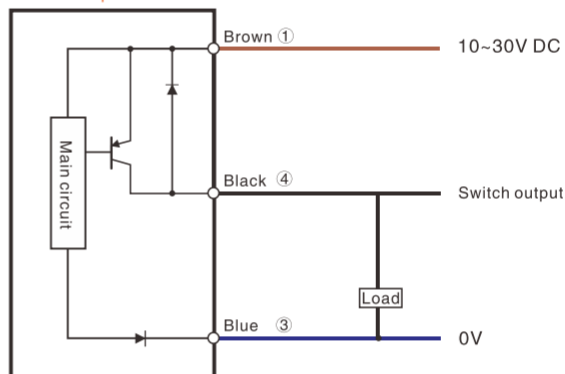
Circuit diagram

ESB-BS15AN/AP ESB-BS30AN/AP

NPN Output

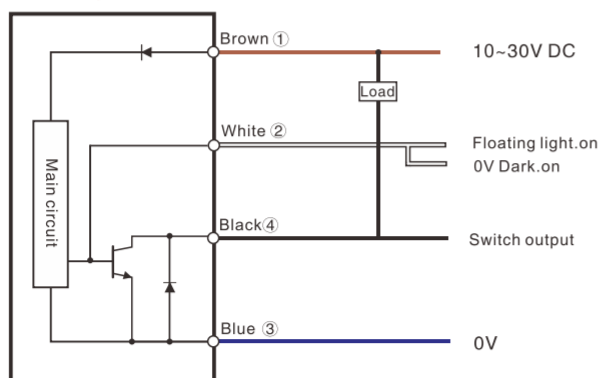


PNP Output



ESB-B30/BL10/BS15/BS30/BV30/BY30N(P)

NPN Output



PNP Output

