Reinforced Plastic Case U-shaped Type

Features

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- Improvs noise resistance to disturbance light
- Max. 1ms high speed response type
- Built-in reverse polarity protection circuit and output overcurrent (short-circuit) 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



(A) Photoelectric

(B) Fiber Optic Sensors

(C) Door/Area Sensors

(D) Proximity Sensors

(E) Pressure Sensors

(F) Rotary Encoders

(G) Connectors/ Connector Cables/ Sensor Distribution Boxes/ Sockets

<u>(H</u>)

Specifications

manual before using.

	NPN open collector output	BUP-30	BUP-30S	BUP-50	BUP-50S	Controllers
	PNP open collector output	BUP-30-P	BUP-30S-P	BUP-50-P	BUP-50S-P	(I)
Sensing type		Through-beam				Controllers
Sensing target		Opaque materials of min. Ø4mm	Opaque materials of min. Ø1.5mm	Opaque materials of min. Ø4mm	Opaque materials of min. Ø1.5mm	(J) Counters
Operation mode		Selectable Light ON or Dark ON by control wire				
Sensing distance		30mm 50mm				(K) Timoro
Response speed		Max. 1ms				
Power supply		12-24VDC ±10% (ripple P-P: max. 10%)				(L) Papel
Current consumption		Max. 30mA				Meters
Light source		Infrared LED (940nm)			(M) Tacho /	
Sensitivity adjustment		Fixed	Sensitivity adjuster	Fixed	Sensitivity adjuster	Speed / Pulse Meters
Control output		NPN or PNP open collector output •Load voltage: Max. 30VDC •Load current: Max. 200mA •Residual voltage - NPN: Max. 1V, PNP: Max. 2.5V			(N) Display Units	
Protection circuit		Reverse polarity protection circuit, output overcurrent (short-circuit) protection circuit				(O) Sensor Controllers
Indication		Power indicator: green LED, Operation indicator: red LED				
Insulation resistance		Over 20MΩ (at 500VDC megger)				(P)
Noise immunity		$\pm 240V$ the square wave noise (pulse width: 1µs) by the noise simulator				Mode Power Supplies
Dielectric strength		1,000VAC 50/60Hz for 1 minute				(Q)
Vibration		1.5mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 2 hours				& Drivers & Controllers
Shock		500m/s² (approx. 50G) in each X, Y, Z direction for 3 times				(R)
Environment	Ambient illumination	Sunlight: Max. 11,0001x Incandescent lamp: Max. 3,0001x (receiving illumination)				Graphic/ Logic
	ent Ambient temperature	-25 to 65°C[BUP-30S (-P) & BUP-50S (-P): -10 to 60°C], storage: -25 to 70°C				raneis
	Ambient humidity	35 to 85%RH, storage: 35 to 85%RH				Field Network
Protection structure		IP66 (IEC standard)	IP50 (IEC standard)	IP66 (IEC standard)	IP50 (IEC standard)	Devices
Material		Case: Acrylonitrile butadiene styrene, Cap: Polycarbonate				(T) Software
Cable		Ø4mm, 4-wire, 2m (AWG22, core diameter: 0.08mm, number of cores: 60, insulation out diameter: Ø1.25mm)				
Accessory			Adjuster driver		Adjuster driver	
Approval		CE				
Unit weight		Approx. 90g		Approx. 140g		

CE

*The temperature or humidity mentioned in Environment indicates a non freezing or condensation environment.

Control Output Diagram

NPN open collector output



※Select Light ON / Dark ON by control wire. - Light ON: Connect control wire to +V / Dark ON: Connect control wire to 0V

Operation Mode

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Operation mode	Light ON	Dark ON
Bossiver energian	Received light	Received light
	Interrupted light	Interrupted light
Operation indicator	ON	ON
(red LED)	OFF	OFF
Transistor output	ON	ON CON CONCEPTION ON CONCEPTION CONCEPTION CONCEPTION CONCEPTION CONCEPTION CONCEPTION CONCEPTION CONCEPTION CONCEPTION CONCEPTI
	OFF	OFF

Dimensions





Connections



%1: Load connection for NPN open collector output ※2: Load connection for PNP open collector output

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



Mounting And Sensitivity Adjustment

Check the position where the photoelectric sensor will be used and the connection then supply the power and set sensitivity as below.

When placing a target within sensing range of sensor, turn the sensitivity adjuster from the minimum position and check the position 'A' where the operation indicator is turned on (dark on) or turned off (light on). Turn the sensitivity adjuster to



(unit: mm)

'B' in the middle between 'A' and 'C' which is the maximum sensitivity position, this will be the optimal sensitivity position. (the operation indicator can be operated at the lowest sensitivity position.)