

# 1-channel U-shaped Photoelectric Sensors



## BUP Series CATALOG

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

### Features

- Various sensing distance's lineup: 30 mm, 50 mm models
- High speed response type : Max. 1 ms
- Offers the sensitivity adjustable model
- Light ON / Dark ON operation mode selectable by control wire

### Ordering Information

This is only for reference, the actual product does not support all combinations. For selecting the specified model, follow the Autonics website.

**BUP** - ① ② - ③ - ④

#### ① Sensing distance

Number: Sensing distance (unit: mm)

#### ② Function

No mark: Fixed sensitivity  
S: Sensitivity adjustable

#### ③ Connection

No mark: Cable type  
E: Cable connector type

#### ④ Control output

No mark: NPN open collector output  
P: PNP open collector output

### Product Components

- Product
- Adjustment screwdriver (sensitivity adjustable model)
- Instruction manual

### Specifications

Model	BUP-□-□		BUP-□-E		BUP-□S-□	
<b>Sensing type</b>	Through-beam					
<b>Sensing distance</b>	30 mm	50 mm	30 mm	50 mm	30 mm	50 mm
<b>Sensing target</b>	Opaque materials					
<b>Min. sensing target</b>	≥ Ø 4 mm				≥ Ø 1.5 mm	
<b>Response time</b>	≤ 1 ms					
<b>Light source</b>	Infrared					
<b>Peak emission wavelength</b>	940 nm					
<b>Sensitivity adjustment</b>	Fixed				YES (Adjuster)	
<b>Operation mode</b>	Light ON mode - Dark ON mode selectable (Control wire)					
<b>Indicator</b>	Operation indicator (red), power indicator (green)					
<b>Approval</b>	CE EAC		CE		CE EAC	
<b>Unit weight (packaged)</b>	≈ 85 g (≈ 120 g)	≈ 115 g (≈ 160 g)	≈ 60 g (≈ 95 g)	≈ 90 g (≈ 125 g)	≈ 85 g (≈ 120 g)	≈ 115 g (≈ 160 g)

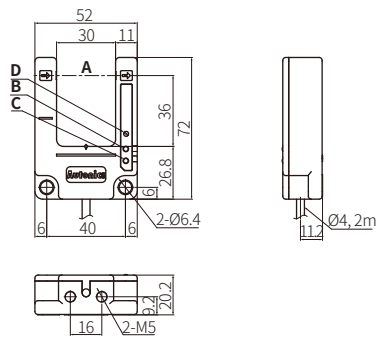
<b>Power supply</b>	12-24 VDC≐ ±10% (ripple P-P: ≤ 10%)
<b>Current consumption</b>	≤ 30 mA
<b>Control output</b>	NPN open collector output / PNP open collector output model
<b>Load voltage</b>	≤ 30 VDC≐
<b>Load current</b>	≤ 200 mA
<b>Residual voltage</b>	NPN: ≤ 1 VDC≐, PNP: ≤ 2.5 VDC≐
<b>Protection circuit</b>	Reverse power protection circuit, output short overcurrent protection circuit
<b>Insulation resistance</b>	≥ 20 MΩ (500 VDC≐ megger)
<b>Noise immunity</b>	± 240 VDC≐ the square wave noise (pulse width: 1 μs) by the noise simulator
<b>Dielectric strength</b>	1,000 VAC ~ 50/60 Hz for 1 min
<b>Vibration</b>	1.5 mm double amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours
<b>Shock</b>	500 m/s <sup>2</sup> (≈ 50 G) in each X, Y, Z direction for 3 times
<b>Ambient illuminance (receiver)</b>	Sunlight: ≤ 11,000 lx, incandescent lamp: ≤ 3,000 lx
<b>Ambient temperature</b>	Fixed sensitivity model: -25 to 65 °C, storage: -25 to 70 °C (no freezing or condensation) Sensitivity adjustable model: -10 to 60 °C, storage: -25 to 70 °C (no freezing or condensation)
<b>Ambient humidity</b>	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)
<b>Protection rating</b>	Fixed sensitivity model: IP66 (IEC standard) Sensitivity adjustable model: IP50 (IEC standard)
<b>Connection</b>	Cable type, cable connector type
<b>Cable spec.</b>	Cable type: Ø 4 mm, 4-wire, 2 m Cable connector type: Ø 4 mm, 4-wire, 0.5 m
<b>Wire spec.</b>	AWG22 (0.08 mm, 60-core), insulator outer diameter: Ø 1.25 mm
<b>Connector</b>	5-pin socket type
<b>Material</b>	Case: ABS, CAP: PC

## Dimensions

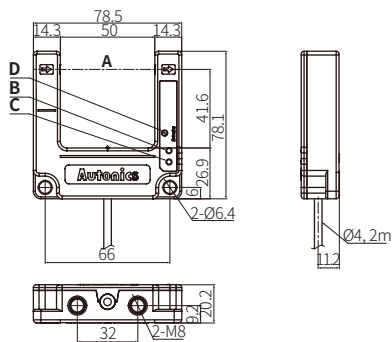
- Unit: mm, For the detailed drawings, follow the Autonics website.
- The sensors have the same size depending on the sensing distance.

<b>A</b>	Optical axis	<b>C</b>	Power indicator (green)
<b>B</b>	Operation indicator (red)	<b>D</b>	Sensitivity adjuster (sensitivity adjustable model)

### ■ Sensing distance 30 mm model



### ■ Sensing distance 50 mm model



### ■ Connector

