

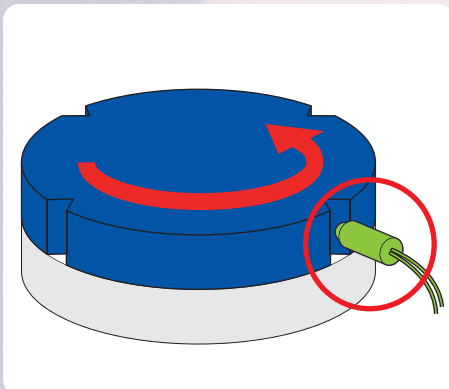
# φ4

# The World's Smallest!!

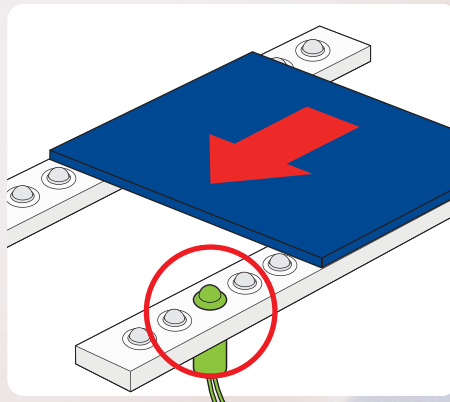
**Ball Plunger  
with a Built-in Switch  
NOW ON SALE!!**



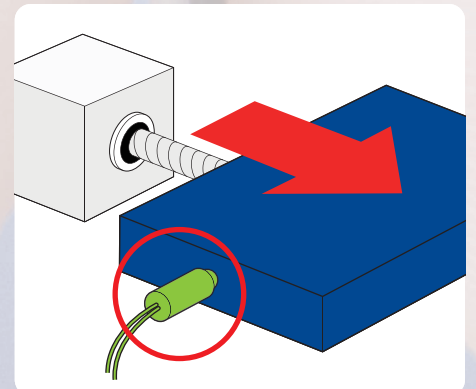
## 《Applications》



▲Index output for the rotary table



▲Positioning of the glass substrate on a conveyor



▲Detecting the starting point of the stepper motor

## Specifications

unit:mm

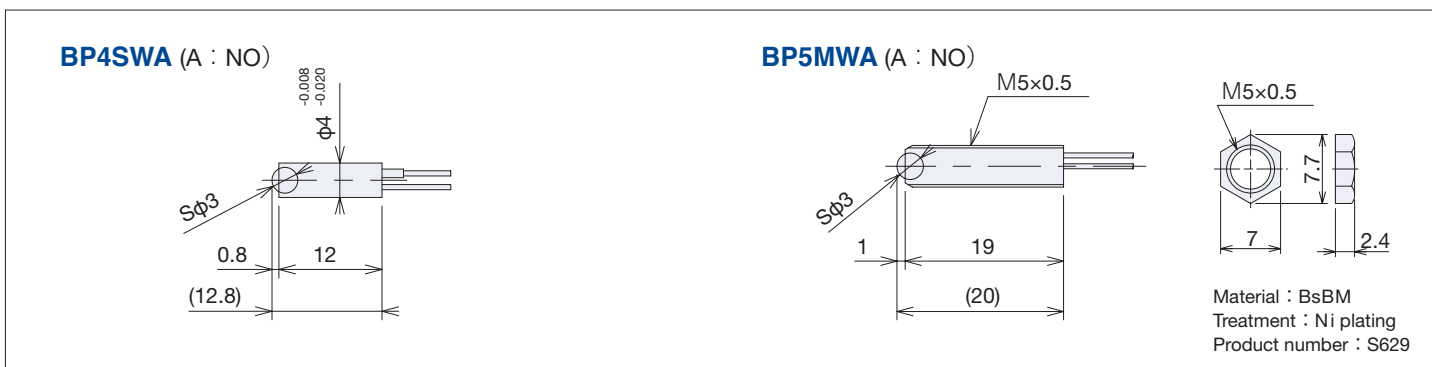
Product name	Size	Stroke	Contact force	Protective structure
BP4SWA	φ4	0.8	1N	IP40
BP5MWA	M5×0.5	1		

Switch structure	Dry contact
Output mode	A : Normally Open
Signal point	0.3
Repeatability	Both ON→OFF, OFF→ON ±0.01 (At operating speed 50~200mm/min) *
Movement differential	0
Contact life time	BP4SWA : 1 million BP5MWA : 3 million

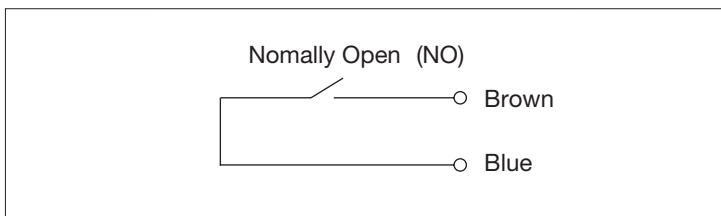
\*Operating speed slower than 10mm/min is not recommended.

Case material	SUS 303
Contact material	Tungsten carbide
Cable	Core-wire cable 0.5m×2 Oil resistant Φ0.66 Tensile strength 15N
Operating temperature range	0°C~80°C (Ice-free)
Temperature drift	0
Oscillation	10~55Hz total amplitude 1.5 for X, Y, Z, each direction
Impact	300m/s <sup>2</sup> for X, Y, Z, each direction
Contact rating	DC5V~DC24V Steady current: 10mA or less (rush current: 20mA or less)
Standard accessory	BP5MWA : Two fixing nuts

## Outer dimension

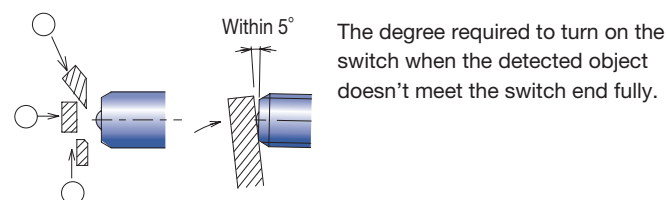


## Circuit diagram



## Usage Instructions

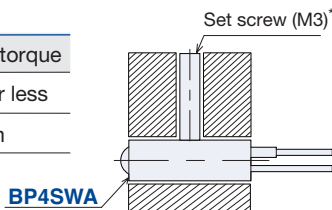
Suitable for angled touch



## Tightening torque

Product name	Screw / Nut	Tightening torque
BP4SWA	Set screw*	0.1N·m or less
BP5MWA	M5×0.5	1N·m

\* No set screws are provided with BP4SWA/BP5MWA.



- When using for rotation indexing, adjust the position in consideration of eccentricity and core blurring accuracy of rotating objects.
- According to the operating circumstance, the signal point varies due to wear of the contacting part.
- Carefully calculate the angle and roughness of chamfer so that the contacting part is not easily worn off.
- Try not to bend the threaded part during installation. It will cause malfunction.

## Help Desk

We accept inquiry regarding sensor selection, exclusive specification, and technical matter through e-mail, Fax, and Tel.

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