

PBN Series Infrared Cylindrical Photoelectric Sensor

Milbbo



- Features
- Easy for connection, installation and application
- Stable & reliable detection. Operation indicator
- Protections: Overload/ Short circuit
- Flexible cable
- Degree of protection: IP65
- Ambient temperature: 0~+55°C

PBN	12	-	B	300	NL
Series PBN Series	Connector Size 03:M3 04:M4 05:M5 06:M6 08:M8 12:M12 18:M18		Sensing Method B: Diffuse Reflective T: Through beam D: Retro-reflective	Sensing Distance 030: 30mm 050: 50mm 300: 300mm M01: 1M M05: 5M	Output Mode NL: NPN LO ND: NPN DO PL: PNP LO PD: PNP DO N: NPN LO+DO P: PNP LO+DO

Model								
NPN NO	PBN03-B030NL	PBN04-B050NL	PBN05-B100NL	PBN06-B150NL	PBN08-B150NL	PBN12-B100NL	PBN12-B300NL	—
NPN NC	PBN03-B030ND	PBN04-B050ND	PBN05-B100ND	PBN06-B150ND	PBN08-B150ND	—	—	PBN12-TM05ND
PNP NO	PBN03-B030PL	PBN04-B050PL	PBN05-B100PL	PBN06-B150PL	PBN08-B150PL	PBN12-B100PL	PBN12-B300PL	—
PNP NC	PBN03-B030PD	PBN04-B050PD	PBN05-B100PD	PBN06-B150PD	PBN08-B150PD	—	—	PBN12-TM05PD
NPN LO+DO	—	—	—	—	—	PBN12-B100N	PBN12-B300N	PBN12-TM05N
PNP LO+DO	—	—	—	—	—	PBN12-B100P	PBN12-B300P	PBN12-TM05P

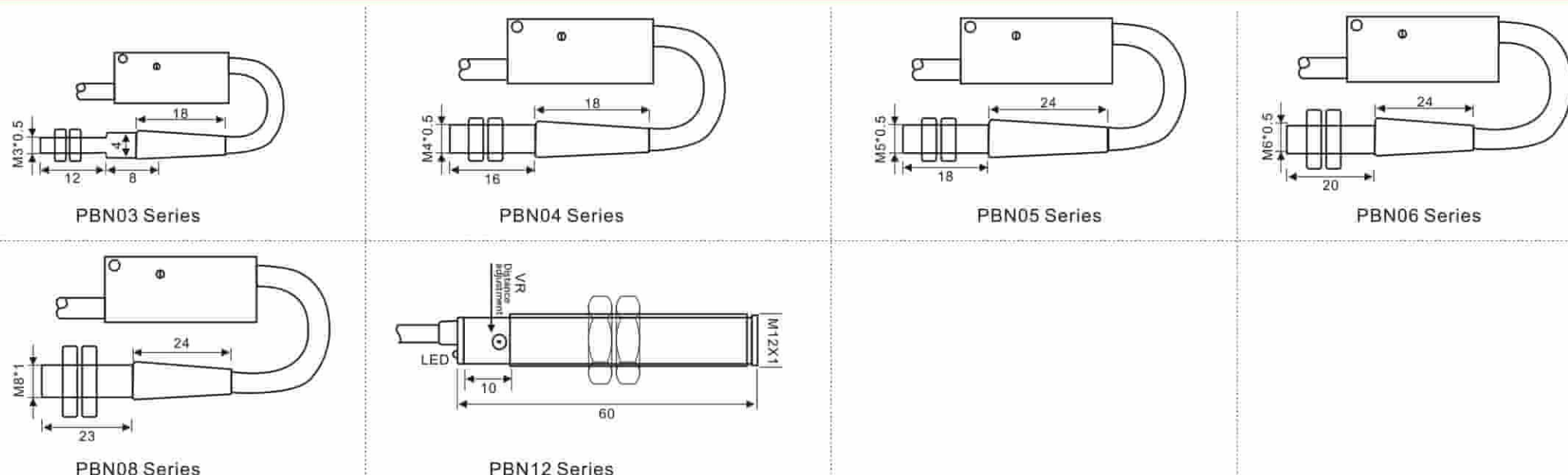
Specification								
Sensing Method	Diffuse reflective							Through-beam
Sensing Distance ①	30mm	50mm	100mm	150mm	150mm	100mm	300mm	5M
Standard Sensing Object	100×100 White paper							Opaque object: 8mm Max.
Sensitivity Adjustment	Yes							—
Response Frequency ②	100Hz	100Hz	100Hz	100Hz	100Hz	—	—	—
Response Time	5ms	5ms	5ms	5ms	5ms	5ms	5ms	5ms
Differential Travel	15% Max. of sensing distance							—
Light Source/Wavelength	Infrared LED (wavelength 880nm)							—
Power Supply Voltage (Operating Voltage Range)	12-24VDC, Ripple (p-p) 10% Max. (10-30VDC)							—
Current consumption	10mA Max. @24VDC					30mA Max. @24VDC		
Load Current	150mA Max					200mA Max		
Residual Voltage	1.5V Max. (@150mA load, 2M cable)					2.5V Max. (@150mA load, 2M cable)		
Leakage Current	0.01mA Max. @24VDC							—
Indicators	Red							—
Operation Mode	N-(NPN LO+DO)/NL-(NPN LO)/ND-(NPN DO)/P-(PNP LO+DO)/PL-(PNP LO)/PD-(PNP DO)							—
Short Circuit Protection	≥180A							—
Protection Circuit	Overload/Short circuit protection.					Power on/Short circuit protection.		
Ambient Temperature Range	Operating / storage: 0~+50°C (with no icing or condensation)					Operating / storage: 0~+55°C (with no icing or condensation)		
Ambient Humidity Range	Operating / storage: 35-85% (with no condensation)							—
Temperature Influence	±10% Max. of sensing distance @+25°C in the temperature range							—
Ambient Illumination	Incandescent lamp 5000lx Max./ Sunlight 10,000lx Max.							—
Insulation Resistance	50MΩ Min. (at 500VDC) between current carrying parts and case							—
Dielectric Strength	1000VAC 50/60Hz for 1 minute between current carrying parts and case							—
Vibration Resistance	IEC 60947-5-2, Part7.4.1 / IEC 60947-55-2, Part7.4.2					10~55Hz 1.5mm Up and down amplitude for 2 hours each in X, Y, Z direction		
Shock Resistance	500 m/s ² 10 times each in X, Y and Z directions							—
Degree of Protection	IEC standards EN60529:IP65							—
Connection Method	Pre-wired 2M							—
Weight (Packed state)	~12g	~13g	~16g	~20g	~25g	~60g	~60g	~120g
Materials of Case	Stainless Steel							—
Materials of Sensing Surface	Filter Glass							—
Accessories	Clamping nuts. Mounting bracket available(optional)							—

① The data or sensing distance is based on the standard object. Other object please refer to "Relative dielectric constant"

② Response frequency is an average of value. The measure condition is as follow: standard object and the setting distance of half sensing distance.

Dimension Diagram

Unit: mm



Wiring Diagram

