

PBL Series laser Cylindrical Photoelectric Sensor

Milbbo



- Features
- Easy for connection, installation and application
- Stable & reliable detection. Operation indicator
- Small light spot: 2~3mm
- Visible light of small spot realized
- Position confirmed by naked eye
- Flexible cable
- Degree of protection: IP67

PBL	12	-	B	200	NL
Series	Size		Sensing Method	Sensing Distance	Output Mode
PBL Series	03:M3 04:M4 05:M5 06:M6 08:M8 12:M12 18:M18		B: Diffuse Reflective T: Through beam D: Retro-reflective	030: 30mm 050: 50mm 300: 300mm M01: 1M M05: 5M	NL: NPN LO ND: NPN DO PL: PNP LO PD: PNP DO N: NPN LO+DO P: PNP LO+DO

Model				
NPN NO	PBL12-B200NL	—	PBL18-B300NL	—
NPN NC	—	PBL12-TM50ND	—	PBL18-TM50ND
PNP NO	PBL12-B200PL	—	PBL18-B300PL	—
PNP NC	—	PBL12-TM50PD	—	PBL18-TM50ND
NPN LO+DO	PBL12-B200N	PBL12-TM50N	PBL18-B300N	PBL18-TM50N
PNP LO+DO	PBL12-B200P	PBL12-TM50P	PBL18-B300P	PBL18-TM50P

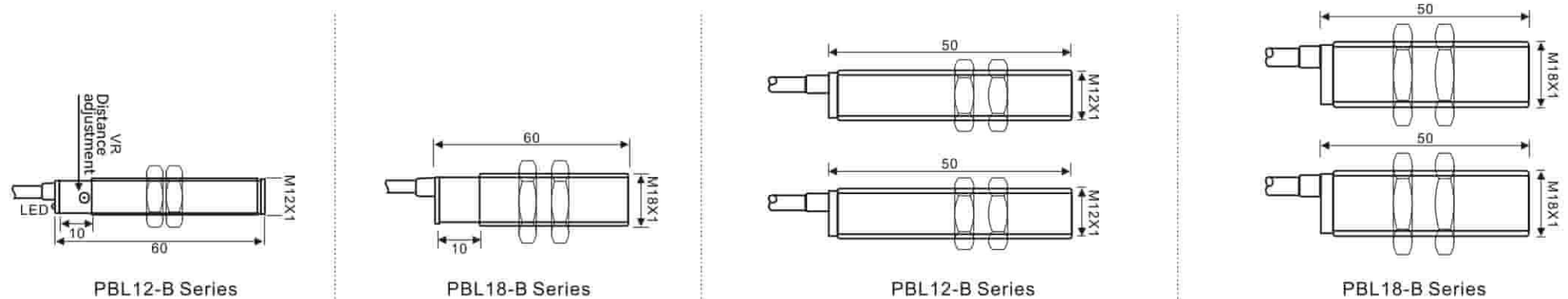
Specification				
Sensing Method	Diffuse reflective	Through-beam	Diffuse reflective	Through-beam
Sensing Distance ①	200mm	50M	300mm	50M
Standard Sensing Object	100×100 White paper	Opaque object: 8mm Max.	100×100 White paper	Opaque object: 8mm Max.
Spot diameter	2~3mm	2~3mm	2~3mm	2~3mm
Sensitivity Adjustment	Yes	No	Yes	No
Response Frequency ②	100Hz	100Hz	100Hz	100Hz
Response Time	5ms	5ms	5ms	5ms
Differential Travel	15% Max. of sensing distance			
Light Source/Wavelength	Visible LED (wavelength 660nm)			
Power Supply Voltage (Operating Voltage Range)	12-24VDC, Ripple (p-p) 10% Max. (10-30VDC)			
Current consumption	10mA Max. @24VDC, Through-beam, receiving end: max 11mA.			
Load Current	150mA Max			
Residual Voltage	1.5V 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.			
Ambient Temperature Range	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			
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/Shock Resistance	IEC 60947-5-2, Part 7.4.1 / IEC 60947-5-2, Part 7.4.2			
EMC	RFI>3V/M / EFT>1KV / ESD>4KV(contact)			
Degree of Protection	IEC standards EN60529:IP66			
Connection Method	Pre-wired 2M			
Weight (Packed state)	~65g	~130g	~80g	~160g
Materials of Case	Nickel-plated Brass			
Materials of Sensing Surface	Filter Glass			
Accessories	Clamping nuts.			

① Sensing distance, range ±10%.

② Response frequency is an average value. Measure condition is as follow: standard sensing object, a setting distance of half the sensing distance.

Dimension Diagram

Unit: mm



Wiring Diagram

