

Features

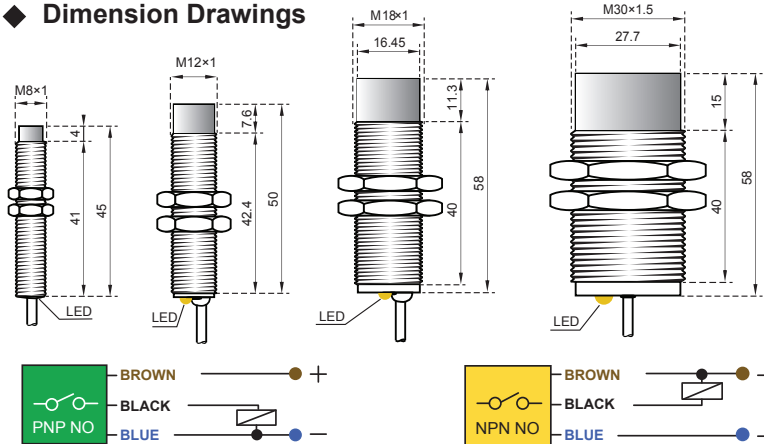
- ◆ Long range detection to secure distance
- ◆ Outstanding temperature stability
- ◆ High switching frequency
- ◆ Suitable for limited space



■ **Specifications (DC 3wire type)**

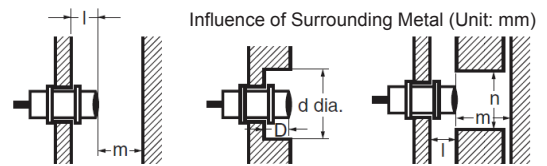
Model	BIR8-PN6NL	BIR8-NN6NL	BIR12-PN10NL	BIR12-NN10NL	BIR18-PN20NL	BIR18-NN20NL	BIR30-PN40NL	BIR30-NN40NL
Function	PNP NO	NPN NO	PNP NO	NPN NO	PNP NO	NPN NO	PNP NO	NPN NO
Size	M8		M12		M18		M30	
Detecting distance	6mm		10mm		20mm		40mm	
Standard sensing object	Iron, 8 × 8 × 1 mm		Iron, 12 × 12 × 1 mm		Iron, 18 × 18 × 1 mm		Iron, 30 × 30 × 1 mm	
Detectable object	Ferrous metal 100%, The sensing distance decreases with non-ferrous metal i.e. stainless steel 60%, brass 50%, aluminum 40%, copper 30%							
Response frequency	1kHz				500Hz			
Power supply (operating voltage)	12 to 24 VDC (10 to 30 VDC), ripple (p-p): 10% max.							
Load current	150mA							
No load	<10mA							
Leakage current	<0.01mA							
Residual voltage	<1.5V							
Indicator	Operating LED indicator							
Protection circuits	Surge protection circuit, over current, reverse polarity protection							
Operating temperature	-25°C ~ 70°C							
Insulation resistance	50MΩ min (at 500VDC) between current-carrying parts and case							
Dielectric strength	1000VAC, 50/60 Hz for 1 minute between current-carrying parts and case							
Degree of protection	IP67							
Connection method	Pre-wired models - standard cable length 2mtr.							
Material	Sensing surface - PBT, Case & Clamping Nuts - Nickel plated brass							
Weight	Approx. 40g		Approx. 70g		Approx. 120g		Approx. 200g	

◆ **Dimension Drawings**



◆ **Precaution for correct use**

When mounting the sensor within a metal panel, ensure that the clearances given in the following table are maintained. Failure to maintain these distances may cause deterioration in the performance of the sensor.



Item	M8	M12	M18	M30
l	0	2.4	3.6	6
d	8	18	27	45
D	0	2.4	3.6	6
m	4.5	12	24	45
n	12	18	27	45

All dimension are in mm

The specifications are subject to change without prior notice

BTH BIR8-PN6NL Version 1.0 BTH BIR12-PN10NL Version 1.0 BTH BIR18-PN20NL Version 1.0 BTH BIR30-PN40NL Version 1.0
 BTH BIR8-NN6NL Version 1.0 BTH BIR12-NN10NL Version 1.0 BTH BIR18-NN20NL Version 1.0 BTH BIR30-NN40NL Version 1.0