

Inductive Proximity Sensor

■ Type(DC)

Shape	Rated sensing range(mm)	Output model		Model Number
Cylindrical type	4 f	DC 4wire	NPN/PNP NO	IBT30-S04NY-D4Y2/N

Annotation: Shielded: f, Non-shielded: nf.

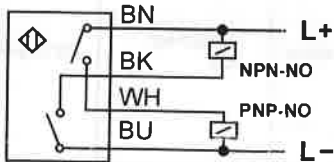
■ Performance(DC)

Model Number	IBT30-S04NY-D4Y2/N
Item	
Sensing range	4mm ± 10%
Sensing object	Steel 12 × 12 × 1mm
Supply voltage	DC10-30V
Voltage drop	≤ 1.8V
Load current	≤ 200mA
Consumption	≤ 15mA
Repeat accuracy	≤ 2%
Switching frequency	1000Hz
Leakage current	≤ 0.01mA
Protection	Reverse polarity protection, Short-circuit protection
Ambient temperature	-25to+70°C, Storage -30to+80°C
Ambient humidity	45to85%RH(with no dew nor ice condensation), storage: 45to85%RH
Temperature variation	Max. ± 20% of an operation range at +23°C in -25to+70°C temperature range
Insulation resistance	Min. 50MΩ between the live parts and enclosure at 500 DC
Dielectric resistance	1000V AC 50/60Hz applied between the live parts and enclosure for 1min
Vibration resistance	1.5mm amplitude at the frequency of 10to 55Hz in each of X, Y and Z direction for two hours each in the power state
Shock resistance	500m/S(approx50G) impulse in each of X, Y and Z direction for 10 times in the power OFF state
Protection class	IP67(IEC)
House material	CuZnNi
Sensing face material	PC

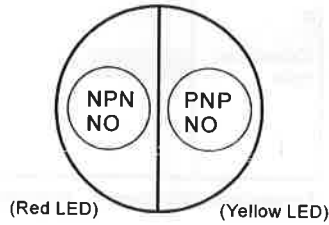
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Wiring diagram

NPN N.O. + PNP N.O.

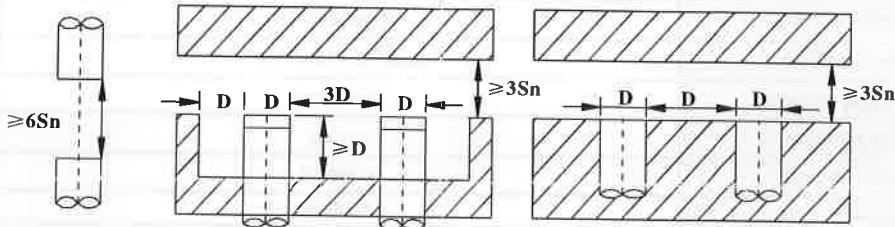


Sensing face



Installation methods

When installing 2 sensors of the same model face-to-face in parallel, separate by the distance specified in the following table to prevent interference.



Minimum distance

Non flush minimum distance

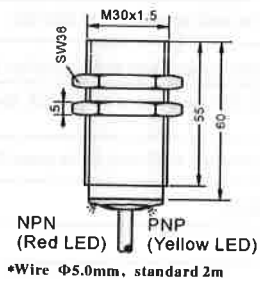
Flush minimum distance

NOTE: D: sensor diameter, Sn: sensing distance

The detecting distance varies according to target material. The charts show the percentage of detecting distance for common materials when iron is 100%. However, as the rate varies depending on the sensor model, refer to the characteristics chart "detecting distance vs. size and material of target" for each model. Note that metal-plated targets will affect the detecting distance.

Dimensions

(flush)



Material	Sensing distance
Iron	100%
Stainless steel	60%
Brass	40%
Aluminum	30%
Copper	28%