# Hokuyo PBS-03JN

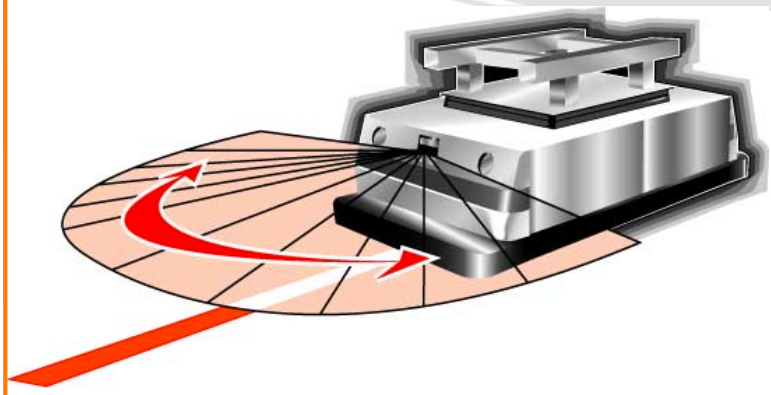

Scanning range finder
(SOKUIKI sensor) -
Obstacle detection sensor

Wide scanning angle! Super-small size!

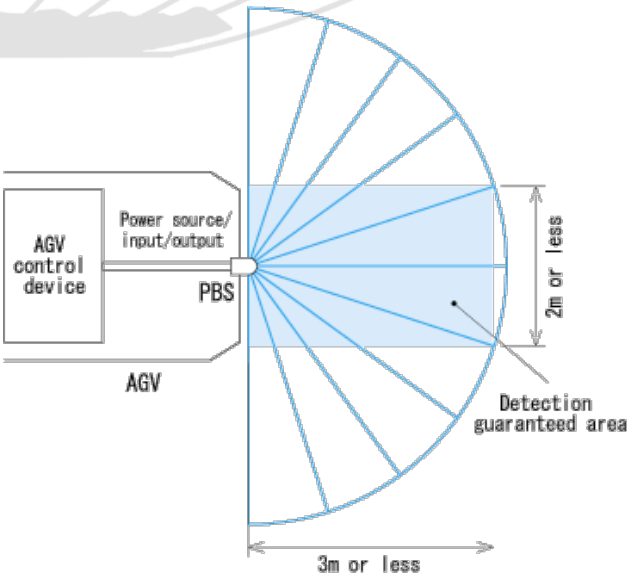
## Features

- This was 60% smaller than PB9 about cubic volume. Scanning angle(Detection area) is increased to 180° and detectable dead zone is getting smaller.
- Operation principle is that semicircular field is scanned by LED(lambda = 880nm) and the coordinates is calculated by measuring distance to object and its step angle and then it detects obstacle in setting area.
- Detection area can be set by PC(RS-232C). Detection distance with 3 steps output for each area can be set.
- Changeover for Max. 15 kinds of detection area set by PC can be made by outer bit input.

## Typical Applications



## Structure (Light scanning image)



# Hokuyo PBS-03JN

## Specifications

| | |
|---|---|
| Model No. | PBS-03JN |
| Power Source | 24VDC (Allowable range 18 to 30VDC including ripple) |
| Current Consumption | 250mA or less(100mA or less when emission stops) Except for I/O terminal current and rush current(500mA) |
| Light Source | Infra-red LED |
| Detectable object and detection area | White paper with 300×300mm(Placed in parallel with sensor projection surface), 0.2 to 3m×2m(Origin point is scanning center position) but within scanning angle 180° |
| Area Setting: | |
| Output 1 | It is free to set from 0 to 10m for optical axis direction with 7 points pointer. |
| Output 2,3 | Linear setting to progressive direction, fan-shaped setting to optical axis direction, Percentage(%) setting against output 1 pointer |
| 2 scanning mode | When each detecting area setting, it sets individually for each output. |
| Hysteresis | 10% or less of detection distance(it is not getting 60mm or less) |
| Output | Photo-coupler/NPN open-collector output(30VDC 50mA or less) Output 1,2,3 : output OFF when detecting within area, trouble output : output ON when normal operation* |
| Input (Input 1 to 4) | Photo-coupler input(Anode common, each input current 4mA or more), This can changes setting detection area. |
| Detecting area setting | It set the area No. by Input 1, 2, 3 and 4 It stops the emission by getting all Input 1, 2, 3 and 4 to ON(OFF : H level input, ON : L level input) |
| Output response time | 180msec or less(Scanning speed 1 rev./100msec) 280msec or less when 2 scanning mode(but except for 100msec, area changeover time) |
| Input response time | Input taking-in cycle : 1 scanning time(100msec) |
| Lamps | Power lamp(Green) : Flickered when trouble Output 1, 2 and 3 lamp(Orange) : Lights up when detected in area |
| Connection | Cable 1m long |
| Ambient illuminance (note) | Halogen/mercury lamp : 10,000lx or less, Fluorescent lamp : 6,000lx or less |
| Ambient temperature/ humidity | -10 to +50 degrees C, 85%RH or less(Not condensing, not icing) |
| Vibration resistance | 10 to 55Hz, double amplitude 1.5mm Each 2 hour in X, Y and Z directions |
| Impact resistance | 490m/s2, Each 10 time in X, Y and Z directions |
| Protective structure | IP64(IEC standard) |
| Life | 5 years(motor life) |
| Materials | Front case : Polycarbonate, rear case : ABS |
| Weight | Approx. 500g |

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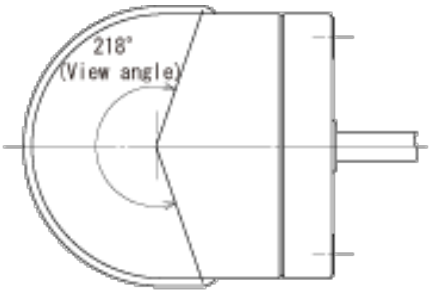
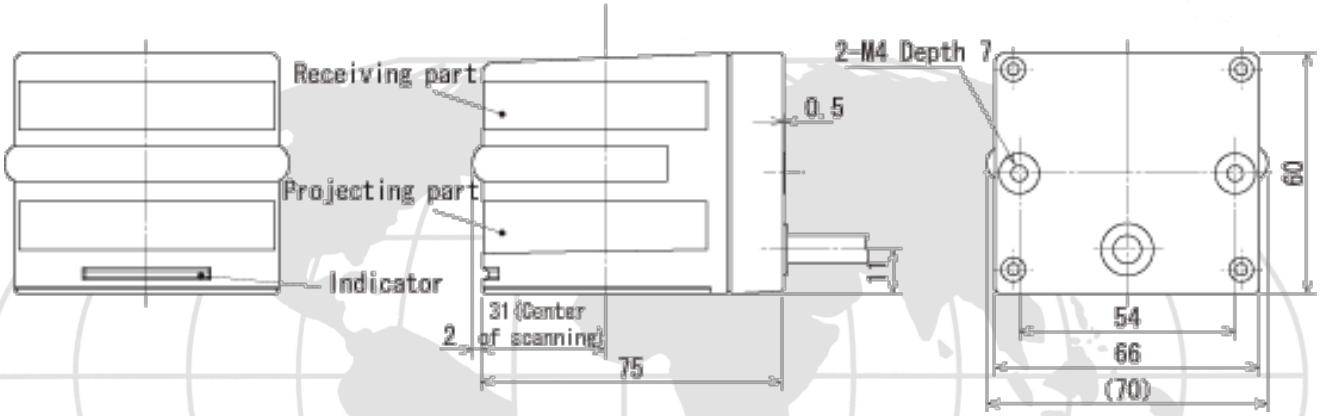
## External Dimension




## Input/Output Circuit