

NEW PRODUCTS

HOKUYO

OBSTACLE DETECTION SENSOR

PBS series

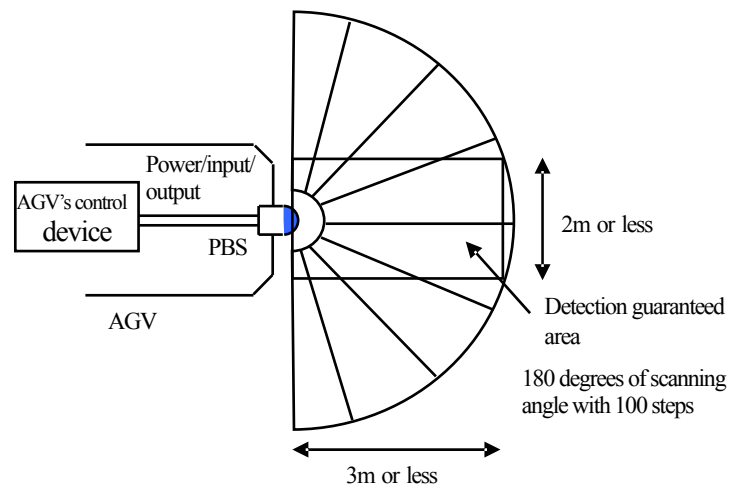
WIDE SCANNING ANGLE ! SUPER-SMALL SIZE !



General/Feature

- * This was 60% smaller than PB9 about cubic volume. Scanning angle(Detection area) is increased to 180 degrees and detectable dead zone is getting smaller.
- * Operation principle is that semicircular field is scanned by LED($\lambda = 880\text{nm}$) 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.

Structure(Light scanning image)



Connection

Colors	Signals	Colors	Signals
Black	Output 1	Purple	Input 3
White	Output 2	White(Yellow)	Input 4
White(Blue)	Output 3	Brown	+ VIN
Orange	Trouble output	Blue	- VIN
Gray	Output common minus	Yellow(Red)	Serial input (RXD)
Red	Input common plus	Yellow(Green)	Serial output(TXD)
Green	Input 1	Yellow(Black)	Serial GND
Yellow	Input		2

Specifications

Model No.	PBS series
Power source	24VDC(Allowable range 18 to 30VDC including ripple)
Current consumption	250mA or less(100mA or less when emission stops)
Detectable object and detection area *1	White kent paper with 300 by 300mm(Placed in parallel with sensor projection surface), 0.2 to 3m by 2m and width 2m(Origin point is scanning center position)
Hysteresis	10% or less of detection distance
Output *2(Output 1 to 3, trouble output)	Photo-coupler/NPN open-collector output(30VDC 50mA or less)
Input(Input 1 to 4)	Photo-coupler input(Anode common, each input current 4mA or more), This changes setting detection area.
Output response time	180msec or less(Scanning speed 1 rev./100msec) 280msec or less when using interference misjudge avoidance mode(Except for 100msec, area changeover time)
Lamps	Power lamp(Green) : Flickered when trouble Output 1, 2 and 3 lamp(Orange) : Lit when detected in area
Connection method	Lead wire 1m long
Ambient temperature/humidity	-10 to +50 degrees C, 85%RH or less(Not dew-drop and frozen)
Protective structure	IP64

*1 Within 180 degrees, scanning angle *2 Output logic and output 3 function are depending on types *3 Output 3 lamp is depending on types

External dimension

