

Versatile BGS/FGS sensor with an Infrared LED light source



■ For specific applications

where an invisible light spot is preferable, such as automatic faucets or gaming machines.

■ For specific materials

that absorb visible red light.

■ BGS/FGS selectable

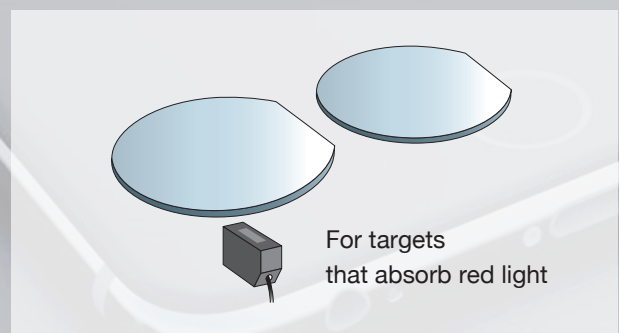
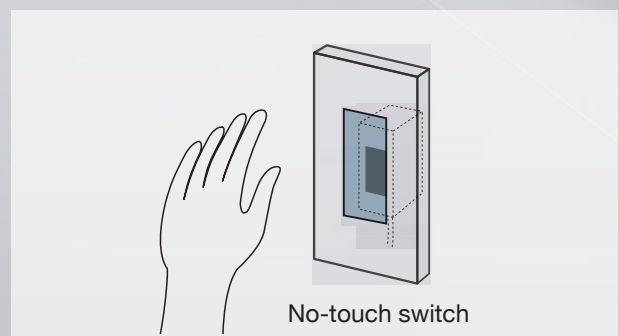
BGS: Background suppression

FGS: Background recognition (BGR)

■ NPN/PNP dual output

for more efficient inventory management.

■ Application



■ SPECIFICATION

Model	DLN-S4V	DLN-S20MV
Detection method	BGS (Background suppression) / FGS (Background recognition)	
Detecting distance (※1)	10 to 100mm	10 to 200mm (setting from 90 to 200mm) 20 to 300mm (setting from 201 to 300mm)
Setting distance (※2)	24 to 100mm	90 to 300mm
Set distance at factory	40mm	200mm
Power supply	12 to 24VDC, class 2 / Ripple 10% or less	
Current consumption	16mA or less	18mA or less
Operation mode	Light ON / Dark ON selectable (by switch)	
Output mode	NPN / PNP open collector 2 outputs (※3) NPN open collector output / Load current 100mA(30VDC, class 2) or less / Residual voltage: 1V or less PNP open collector output / Load current 100mA(30VDC, class 2) or less / Residual voltage: 2V or less	
Light source (wavelength)	Infrared LED (850nm)	
Response time	0.5 ms or less	
Hysteresis	5% or less	
Indicator	Operation indicator: orange LED Stability indicator: green LED	
Volume	Distance setting volume (5-turn endless potentiometer)	
Switch	BGS / FGS selector, Light ON / Dark ON selector	
Circuit protection	Output short circuit / Reverse connection / Surge protection	
Anti interference	Automatic mutual interference prevention function (※4)	
Material	Case	PBT
	Lens	Polycarbonate
Connection	Attached cable (outer diameter ϕ 3.0mm) 0.15mm ² × 4 cores 2m black	Attached cable (outer diameter ϕ 4.0mm) 0.2mm ² × 4 cores 2m black
Weight	32g	60g
Accessory	Instruction manual, screw driver (Mounting bracket: separately available)	

Note: Using a white paper, the products have been adjusted at the factory to have the optimum sensitivity at a detection distance of 40 mm and 200 mm respectively.

※1 When a white paper of 50 mm x 50 mm is used for DLN-S4V and 100 mm x 100 mm for DLN-S20MV.

※2 The detection distance becomes longer than the specification when the distance setting volume is turned clockwise from the factory set position.

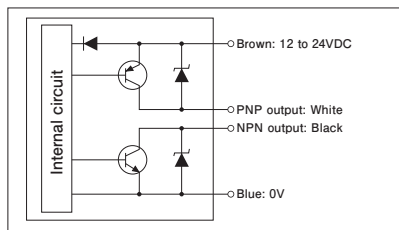
※3 Do not use the NPN and the PNP outputs simultaneously.

※4 Check the operation when two sensors are installed adjacently. The mutual interference prevention function may not work properly depending on conditions of installation or detecting objects.

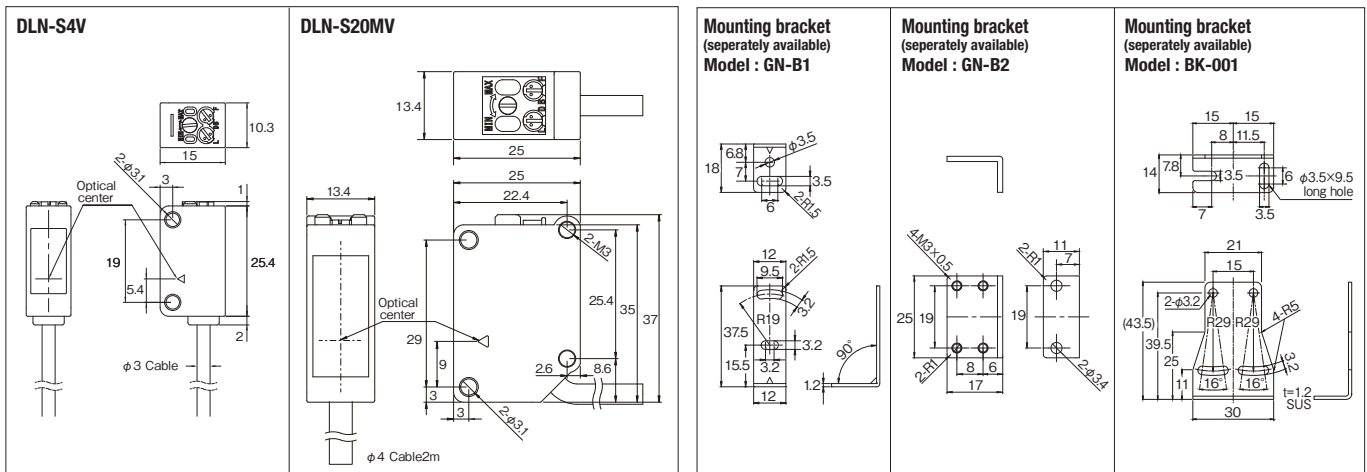
■ ENVIRONMENTAL SPECIFICATION

Ambient light	5,000 lx or less
Ambient temperature	-25 to +55°C
Storage temperature	-40 to +70°C (non-freezing/non-condensing)
Ambient humidity	35 to 85%RH (non-condensing)
Protective structure	IP 67
Vibration	10 to 55Hz double amplitude/1.5mm 2 hours each in 3 directions
Shock	500 m/s ² 3 times each in 3 directions
Dielectric withstanding	1,000 VAC 1 minute
Insulation resistance	500 VDC megger, 20M Ω or more

■ CONNECTION



■ DIMENTION (in mm)



CAUTION

- This product is designed for industrial applications to detect a various kinds of objects. It has no function to prevent disasters, accidents, death or injuries.
- TAKEX will not held responsible for any damage or loss incurred due to accidents, faulty installation, abuse, misuse, improper maintenance or acts of God including lightning surge.
- This product cannot be used as safety equipment.
- This product is designed and manufactured for industrial use. It cannot be used where there is a requirement for a high degree of reliability or considerable care or attention to safety.
- Read instruction manual carefully and use the product properly according to it.
- The specifications and dimensions may be subject to change without notice.



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