ASG-S20R/ASG-Z15R

Glass Board Sensor

This product is a low profile sensor that is designed to be incorporated in a robot arm for the purpose of detecting glass boards for Liquid crystal or semiconductor wafer.
The optical system is adjected to detect angled glass reliably.
Light-On open collector output can be obtained only with connected to 12V to 24V DC as an amplifier is built in.
Stability detection in warp and inclination of the glass
Two LED is used for the transmitter

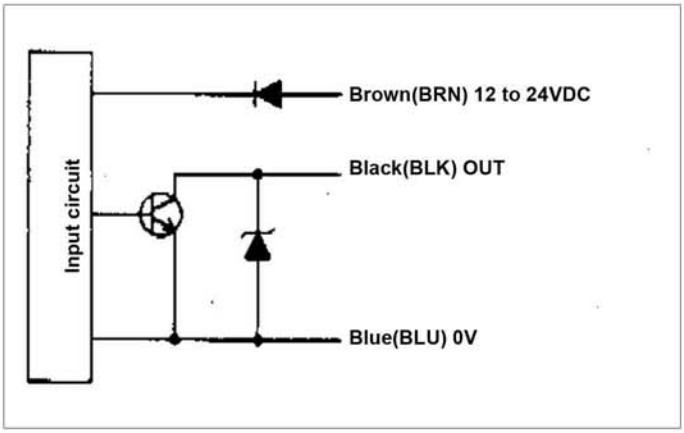
SPECIFICATION

Model	ASG-S20R	ASG-Z15R
Detection	Diffuse reflection for exclusive use of glass detection	Zone type convergent reflection for exclusive use of glass detection
Detecting object range	Transparent glass 20mm or less to 25mm Max.	Transparent glass 3mm to 15mm 18mm Max.
Light source	2pcs of red LED	
Light receiving element	Photo IC	
Power supply	12 to 24V DC ± 10% Ripple 10%	
Current	25mA Max.	
Output mode	Light-on	
Rating	NPN open collector 30V DC 50mA Max.	
Output short protection	Equipped	
Indicator	Operation indicator 1 piece of orange LED	
Sensitivity volume	Unequipped	
Response time	0.5mms Max.	
Cable	Flying lead 0.15mm^2 x 3 wicks 2m	
Weight	Approx. 30g	

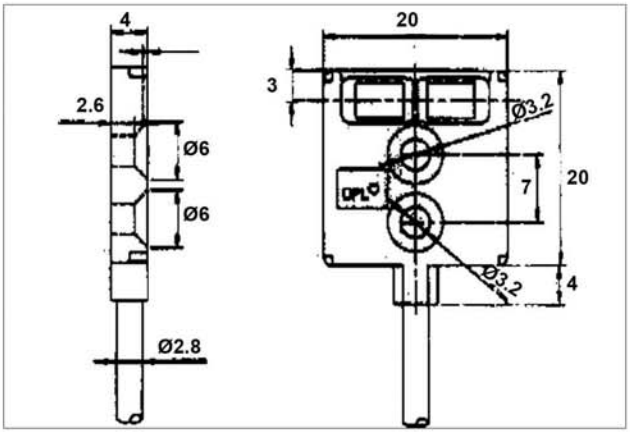
ENVIRONMENTAL PERFORMANCES

Ambient light	5000 lx. Max.
Operating temperature	-10 to 50C (Without condensation)
Humidity	35% to 85% RH
Vibration resistance	10 to 55Hz, 1.5mm double amplitude 2hr. in X, Y and Z directions
Enclosure protection	IP40

WIRING AND OUTPUT CIRCUIT

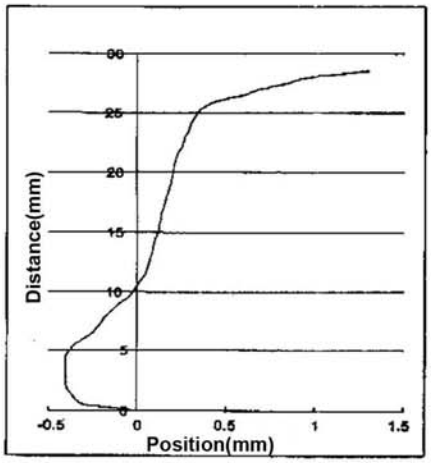


EXTERNAL DIMENSIONS

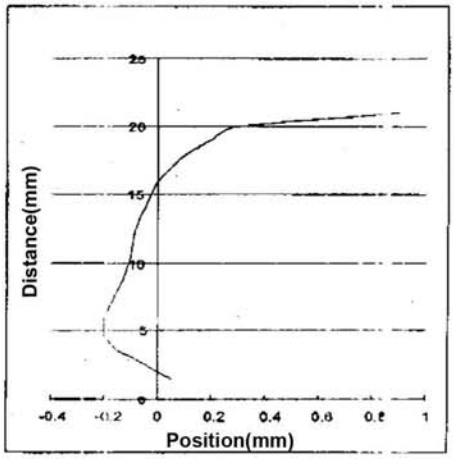


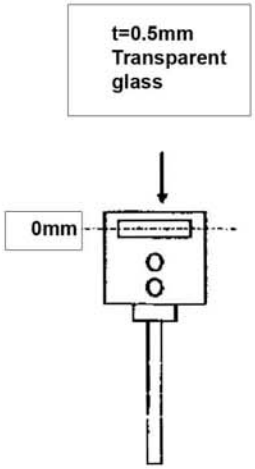
OPERATING POSITION CHARACTERISTICS

Model: ASG-S20R



Model: ASG-Z15R





DIFFERENCE BETWEEN ASG-S20R AND ASG-Z15R

S20R is a diffuse reflection type sensor that has wide operation range. Use this sensor on condition that there is no reflective object (transparent glass or the other object) 40mm or more ahead of sensor front.
This sensor can detect transparent glass even if it closely contacts the sensor.

Z15R is a zone type convergent reflection sensor that has wide operation range. This sensor is designed not to detect even when there is some transparent glass 40mm or more ahead of sensor front.
This sensor cannot operate when transparent glass contacts the sensor.

INSTALLATION AND PRECAUTION

- Use a M3 flat screw for mounting and tighten it lightly (0.15Nm Max.). An enclosure is likely to be broken when the screw is secured tightly.
- When this sensor is used, check if there is no obstacle around the sensor as sensitivity volume is not equipped with this sensor.
- This sensor can be also used as a low-profile general-purpose reflection sensor though it was developed for the purpose of detecting transparent glass, semiconductor wafer, etc.
- External dimension of cable is Ø2.8mm and 0.15mm2 X 3 wicks. When soldeness terminal is used, be careful to pressurize it because work cable is very thin.
- Avoid installation so that the sensor is directly face towards inverter type fluorescent lamp.

NOTE

- The product is warranted for 12 months after delivery.
- During the warranty period, we will only repair any defective parts or replace any defective products provided that the defectives are caused by our own responsibility.
- Please note that we shall not be responsible for any disaster or accident occurred when equipment with this product is built-in is used.