

Reliable detection for Silicon Carbide, Sapphire, Silicon and other translucent wafers.



Applicable to 6, 8 and 12-inch wafers

Can discriminate between 8-inch Si and SiC wafers

Equipped with detection mode for translucent wafers.



Bulk detection of Reducing takt time helps

POINT 01

Two detection modes available, supporting the latest high transmittance wafers

8-inch model

Normal mode: Wafers of 70% or less transmissivity

Latch mode: Wafers of 70% or less transmissivity^{(*)1}

- Si wafers and SiC wafers can be discriminated by switching the transmittance in latch mode.

(*)1: Some types of SiC wafers may not be identifiable. Please check the wafer transmittance before use.

12-inch model

Normal mode: Wafers of 30% or less transmissivity

Latch mode: Wafers of 70% or less transmissivity^{(*)2}

(*)2: Latch mode is for detecting an edge of a wafer. Perform detection test in advance.

The sensor may not detect the edge depending on the thickness or shape of the wafer.

POINT 02

Each comb (sensor unit) can be replaced in a single operation. Easy maintenance

Easy
maintenance

Cost
saving



POINT 03

Electrostatic malfunction free

The comb unit contains only optical structures with no electrical parts.

● Output inhibit function

Enables to inhibit all outputs regardless of the sensor operation.

Two sensors connected in parallel can be controlled by a single input.

● Remote teaching and light emission inhibit function

The output operation can be checked by the light emission inhibit function. Teaching is restarted when the function is reset and the sensor gains the best sensitivity.

● Trouble output and self diagnosis function

Generates an alarm during the teaching process. Output turns on and off consecutively when a trouble occurs such like low receiving light intensity, comb breakage or ambient light disturbance.

● Discriminates 8-inch Si and SiC wafers

By changing the setting of transmittance to detect in latch mode, discrimination between Si and SiC wafers is possible.

● CE compliant

8 and 12 inch models are CE compliant.

● Robot cable and discrete output

All models are equipped with discrete output for each channel. Highly flexible robot cable is employed for 6 and 8 inch models.

wafers in cassettes

boosting productivity



SPECIFICATIONS

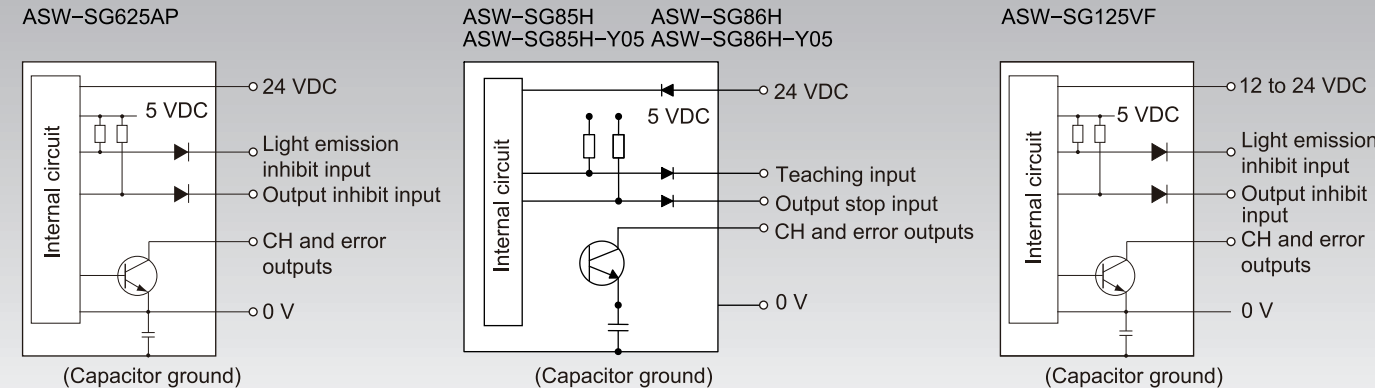
Model	ASW-SG625AP	ASW-SG85H	ASW-SG85H-Y05	ASW-SG86H	ASW-SG86H-Y05	ASW-SG125VF
Applicable Wafer	6-inch transmittance of 30% or less	8-inch Normal output mode: transmittance of 70% or less * Latch output mode: transmittance of 70% or less (Teaching input: transmittance of 15% or less)			12-inch Normal output mode: transmittance of 30% or less Latch output mode: transmittance of 70% or less	
Number of channels	25 ch			26 ch		25 ch
Wafer pitch	4.76 mm	6.35 mm			10.0 mm	
Detection method	Through beam					
C o m b	Detachable type					
Power supply	24 VDC ±10%, ripple 10% or less					12 to 24 VDC ±10%, ripple 10% or less
Current consumption	250 mA or less	1.8 W or less				1.9 W or less
Operation mode	Dark ON ON at error output	Dark ON Normal output mode / Latch output mode selectable (with switch) ON at error output				Dark ON Normal output mode / Latch output mode selectable (with switch) ON at error output
Output mode	NPN open collector output Rating: sink current 30 VDC or less, 30 mA or less	NPN open collector output Rating: sink current 30 VDC or less,20 mA or less				NPN open collector output Rating: sink current 30 VDC or less, 30 mA or less
Response time	10 ms or less	12 ms or less				35 ms or less
Light source	Infrared LED					
Light emission inhibit input / re-teaching (self diagnosis function)	Open collector input or contact input Light emissin inhibit ON: 1.5 V or less OFF: 4 V or more	Open collector or contact input Teaching input ON: 1.5 V or less OFF: 4 V or more				Open collector input or contact input Light emissin inhibit ON: 1.5 V or less OFF: 4 V or more
	Light emission inhibit at ON Re-teaching at OFF.	Output normal mode: ON Transmission stop ON to OFF: Re-teaching Output Latch mode: OFF to ON Output latch release ON to OFF: Re-teaching				Output normal mode: Light emission inhibit at ON Re-teaching at OFF. Output Latch mode: Latch output reset, Light emission inhibit at ON. Re-teaching at OFF
Output inhibit input	Open collector or contact input Output inhibit ON: 1.5 V or less; OFF: 4 V or more					
Connection	Attached cable with connector (OTAX N364J040AU)					Connector type OMRON MIL connector XG4A-3031
	Cable length: 3 m	Cable length: 0.5 m	Cable length: 3 m	Cable length: 0.5 m		
Material	Sensor unit : Polycarbonate(PC) Housing : Aluminum					
Weight	Approx.330 g	Approx.390 g	Approx.250 g	Approx.400 g	Approx.260 g	Approx.270 g(non including cable)
Accessories	Opelation manual					

* The following wafers are used: RE70NEAR (transmittance spec: 70%),
and RE70NEAR, RE20NEAR (transmittance spec: 14%), all manufactured by 3M Corporation

OPERATING ENVIRONMENT

Ambient illumination	1500 lx or less
Ambient temperature	-10 to +55°C (non-freezing)
Ambient humidity	35 to 85%RH (non-condensation)
Protective structure	IP40
Vibration	10 to 55 Hz, double amplitude 0.5 mm X, Y, Z directions, 2 hours each
Shock	300 m/s; 3 times each in X, Y and Z directions

INPUT/OUTPUT CIRCUIT



(For a noise prevention, a capacitor is installed between the 0 V power supply and the sensor's aluminum case.
Do not conduct withstand voltage test between any input / output and the sensor case.)

