

Laser type shape sensor

LWA SERIES CE

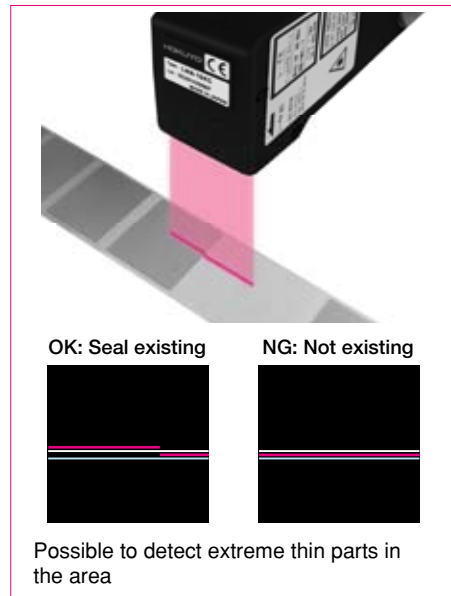


High performance with easy handling!
Possible to detect transparent object!

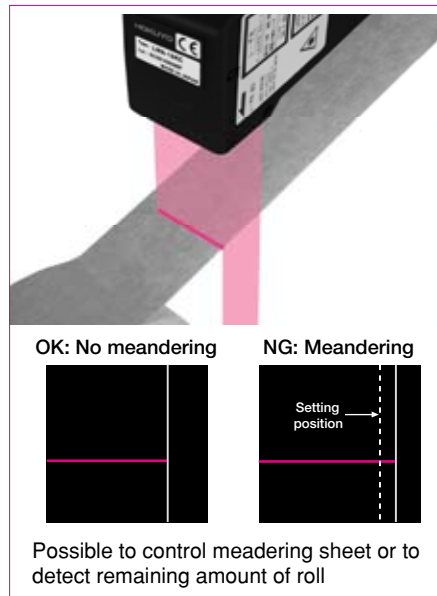
- Wide detecting range with projecting width 32mm, detectable distance 100mm±25mm.
- Possible to make a shape detection with high accuracy.
- Multi-function mode to meet several applications.
- Easy setting with LCD display.

Applications

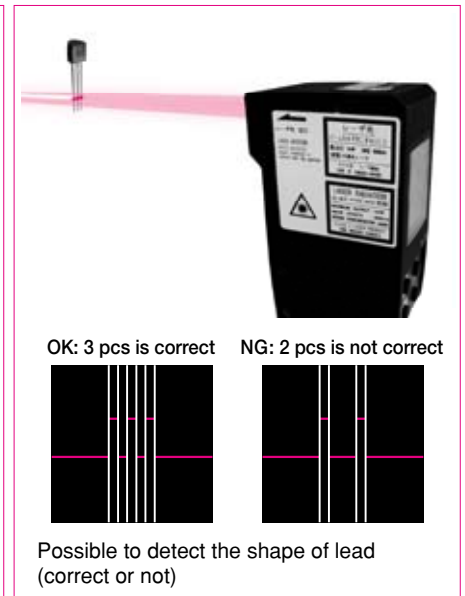
Detecting thin objects on the moving table



Meandering control of seat materials
Remaining amount detection of seat roll



Detecting the lead of electronic parts



Specifications

Model No.	LWA-10KC	LWA-10KA
Power source	DC12 to 24V (-5%, +10%)	
Current consumption	120mA 24V or less, 180mA 12V or less, including analog output current	
Light source	0.3mm×32mm width, Visible red semiconductor laser, JIS/IEC Class 2 (Wavelength 650nm, max.power 1mW)	
Detectable range	100±25mm	
Light-projecting area	0.3mm×32mm width	
Light-receiving area	Width 17mm/distance 75mm to width 27mm/distance 125mm	
Linearity*1	±0.5%FS (Z direction)	
Resolution*2	50 μm (Z direction)	
Sampling cycle	33msec or less	
Output	NPN open-collector output	PNP open-collector output
Control output	100mA 30VDC or less (Residual voltage 1.8V or less) 3 output	
Analog output	4 to 20mA, 24mA for out of measuring range (Load impedance 300 Ω or less)	
Load dependence	±0.05%	
Temperature drift	±0.05%FS/°C	
Circuit stable time	5min or less	
Laser life	Approx. 50,000 hours (at 40°C)	

Indication lamps	Output lamp: Orange LED, Laser radiating lamp: Green LED
Ambient illuminance	Sun light: 10,000lux or less, incandescent lamp: 3,000lux or less
Ambient temperature/humidity	-10 to +40°C (-20 to +60°C when stored), 35 to 85%RH (35 to 95%RH when stored) Not icing, not condensing
Bank	8 (8 kinds of measuring condition can be registered and changed)
Window size	Possible to set (128×472 to 416×472 4 steps)
Vibration resistance	Double amplitude 1.5mm, 10 to 55Hz, each 2 hour in X, Y and Z directions
Impact resistance	490m/s ² , each 3 time in X, Y and Z directions
Protective structure	IP66 (IEC standard)
Case materials	Body: zinc diecasting/polycarbonate, projector/receiver window: glass
Weight	Approx.250g (excluding attached cable)
Accessory	Cable (2m long), screw

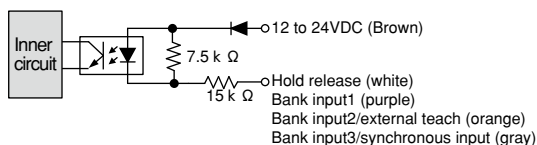
*1. Measuring object: white ceramic, [IMG GAIN]: 0.

*2. Measuring object: white ceramic at center measuring distance, [IMG GAIN]: 0.

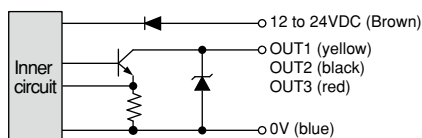
Input/output circuit

NPN output

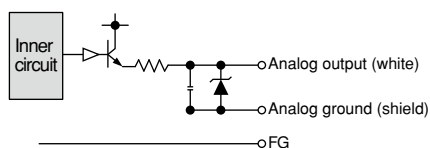
● Input circuit (bank input, hold release)



● Output circuit

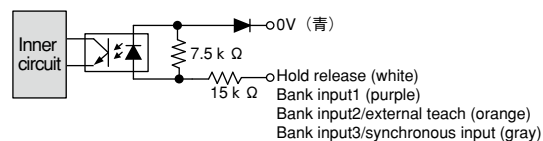


● Analog output circuit

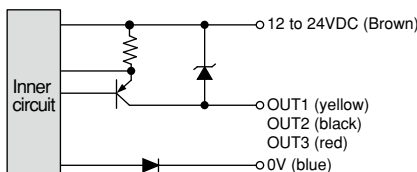


PNP output

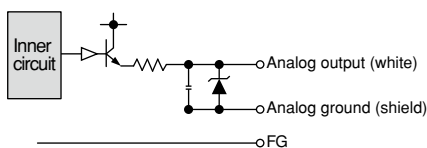
● Input circuit (bank input, hold release)



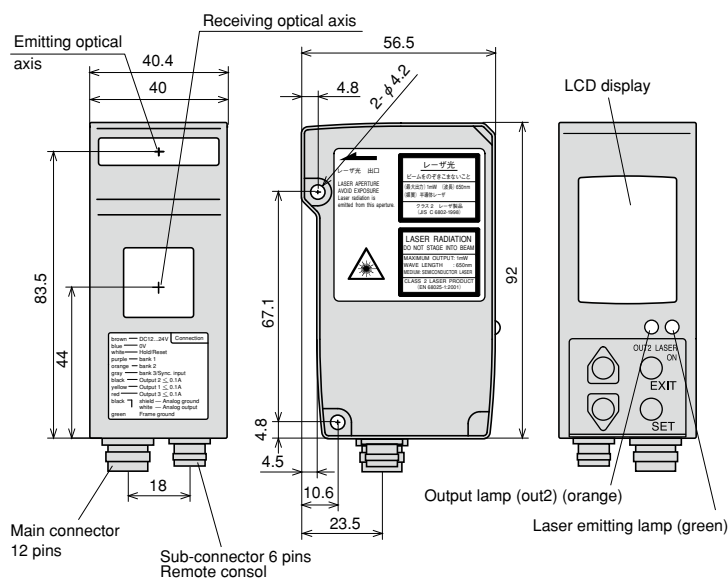
● Output circuit



● Analog output circuit



External dimension



Cautions for Laser Product

This product is radiating the infrared laser beam and is classified as Class 2 by JIS C6802:2005/IEC 60825-1 Laser Safety Standard. Refer to Page 159.



Warning

Don't view the laser beam directly or expose it to human eyes. It may injure human eyes or damage health.

