

# **C-mount Tilt Sensor**



Precision measurement is not just about removing variability, it is also opening up new possibilities.

### Development Background

Is it possible to easily adjust the optical axis and inspect products with lens barrels and Cmounts used for machine vision cameras, etc.? We developed this product in response to such customer requests.

We have developed a product with an integrated C-mount surface. By mounting a reference plane, stable measurement results can be obtained, reliability is increased, and work can be sped up.

## Features

- Industry's first C-mount integrated tilt sensor
- Measurement laser emits perpendicularly from the center position to the flange surface of the C-mount
- Compact, high-precision measurement





## Application sample

Vertical alignment of optical tube and table surface

C-mount

tilt sensor

#### Case 1.

Mounted in place of a CMOS camera, it enables axis alignment and alignment adjustment of equipment optics, fixtures, etc. based on the camera.

#### Case 2.

Mounted on a measuring lens. alignment between the lens optical axis and the measurement surface can be checked.

Case 3.

Capable of adjusting the optical axis of inspection and measurement devices equipped with a camera, as well as parallelism with the surface on which the object to be measured is installed.

#### Case 4

(Machine vision camera optical axis adjustment)

The table on which the object to be measured is placed can be aligned with the flange reference plane of the microscope objective lens.



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### **Specification**

% The specifications are subject to change as the product is still under development.

Title		Specification
Measurement Sample		Optical plane (reflectance0.5% more)
Measurement type / Measurement method		Tilt ( $\Theta$ X, $\Theta$ Y) / Atocollimator
Measurement area	Tilt ( $\Theta$ X, $\Theta$ Y)	±70min (Circular range)
Repeatability*1		1sec
Souce	Wave length	$650\pm10$ nm
	Beam class	JIS C6802 2014
	Beam diameter	Ф1mm*2
Digital In&out	• HIROSE : HR10A-7R-6S	Data output (60times/sec) *4 Command output
	•D-Sub 9pin male*3	
	Mini USB(Type-B)	Image output*5
	Omron:XG4A-2304	IN : TARGET, LD ON / OFF, APC, SOFT RESET OUT : READY, REL, OK, NG, ND, ER, LD ON, GOOD
Power input		DC+24V±10%
Power consumption		Max 15W
Size (Without protrusions)		C-mount tilt sensor: W45×D60×H36mm Image processing unit: W50×D55×H100mm
Weight		C-mount tilt sensor: 0.2kg Image processing unit: 0.3kg

\*1 WD\_50mm setting,  $6\sigma_{\circ}$  camera (PK) 180

\*2 Sensor Immediately after radiation diameter。 (1/e<sup>2</sup>)

\*3 In use USB port,  $\rightarrow$  SANWA supply (USB-CVRS9HN) recommendation.

\*4 When it to do continuous OUTPUT, (communication command; \$START) Not to use a 2port same time, Inse of output continuous data.

\*5 If it use a "GP-2000 Paramset" of configuration of software, a able to see a camera image vision.



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## Drawing



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• The appearance and specifications of the product are subject to change without notice for improvement purposes.