

Displacement Sensors

CDX series

Ultra High-Accuracy Laser Displacement Sensor **Amplifier built-in**

CDX series

FASTUS

FASTUS is a product brand of Optex FA



FEATURES

The LS series uses a highly focused and concentrated laser beam and a coaxial optical lens system to enable it to detect extremely small objects a long distance away. Choose from ultracompact sensor heads as a reflective light barrier with a polarisation filter or as a reflective sensor with a light spot or light band.




A jog switch and mode key allow you to conveniently program all controller functions; programming is easy with a dual, two-color, 4-digit LCD display and several LED displays. The LS series' M.G.S. function, which allows the receiving sensitivity's dynamic range to be adjusted to prevent oversaturation of the reflected light intensity (transparent objects in the case of reflective light barriers or shiny objects in the case of reflective sensors, for example).

- **High accuracy & easy to use** : No.1 Linearity $\pm 0.015\%$ F.S. with ATMOS image sensors, accuracy has been increased by 2.7 times from previous model.
- **Class 1 Laser** : Stable measurements of black workpieces is possible while ensuring the safety of worker's eyes.
- **High-speed measurement** : Max. sampling period of 12.5 μs reduced from pervious model.
- **Direct Ethernet connection** : CDX series have Ethernet serial interface built in sensor head without using a controller.
- **Web server** : The CDX series can setting parameters on web browser without need a software.

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SPECIFICATIONS





Type		Measurement range	Spot size	Resolution	Linearity		Model					
					Diffuse mode	Specular mode						
Middle range	Spot	85 +/-20 mm  Diffuse installation	ø70 μm	0.3 μm	Meas. range 65 to 85 mm: ±0.018% of F.S.(±7.2 μm)	±0.03% of F.S. (±6.0 μm)	CDX-85A					
	Wide	81.5 +/-10 mm  Specular installation	70 × 2000 μm		Meas. range 85 to 105 mm: ±0.03% of F.S.(±12.0 μm)		CDX-W85A					
Long range	Spot		ø120 μm		Meas. range 110 to 150 mm: ±0.03% of F.S.(±24 μm)	-----	CDX-150A					
	Wide		120 × 4000 μm		Meas. range 150 to 190 mm: ±0.04% of F.S.(±32 μm)		CDX-W150A					
Specular reflection	Spot	Coming soon					CDX-L15A					
	Wide						CDX-LW15A					
Short range	Spot											CDX-30A
	Wide											CDX-W30A

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OPTIONS/ACCESSORIES




• Connectors/ Connector cables

Type	Appearances	Description	Cable length	Model
Sensor head extension cable		Dedicated cable for extension between the sensor head and branch connector. Extension up to 20 m is possible. Robot cable specifications. • Sensor side: M12, 8-pin socket • Branch connector side: M12, 8-pin plug	2 m	DSC-1208-G02MA
			5 m	DSC-1208-G05MA
			10 m	DSC-1208-G10MA
Ethernet cable		Dedicated cable for connecting from the branch connectors to the Ethernet port. Robot cable specifications. • Branch connector side: M12, 4-pin socket • Host side: RJ45 plug	2 m	SSL-2J04-G02ME-R
			5 m	SSL-2J04-G05ME-R
			10 m	SSL-2J04-G10ME-R
Power supply/ external input cable		Power supply/external input cable for connecting to branch connector. • Branch connector side: M12, 4-pin socket • Power supply/external device side: discrete wire	2 m	DOL-1204-G02M
			5 m	DOL-1204-G05M
Branch connector		Branch connector for connecting sensor heads and various cables. Included with sensor head.	--	SYL-1208-G0M

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- Amplifier unit, connector cables for amplifier unit

Type	Appearances	Specifications	Cable length	Model
Amplifier unit		An amplifier unit to which up to two sensor heads can be connected. Control can be performed using either analog or control outputs, while thickness and height difference measurements can be performed using two sensor heads.	2 m	CDA-M
Sensor/amplifier connection cable		Connector cable for connecting branch connectors and amplifier units. Robot cable specifications. • Branch connector side: M12, 5-pin socket • Amplifier unit side: M8, 4-pin plug	2 m	DSL-1204-G02M
Sensor-to-amplifier extension cable		Extension cable for connection to DSL-1204-G02M. Robot cable specifications. • Sensor/amplifier connection cable side: M8, 4-pin socket • Amplifier unit side: M8, 4-pin plug	2 m	DSL-0804-G02M
			5 m	DSL-0804-G05M

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APPLICATIONS

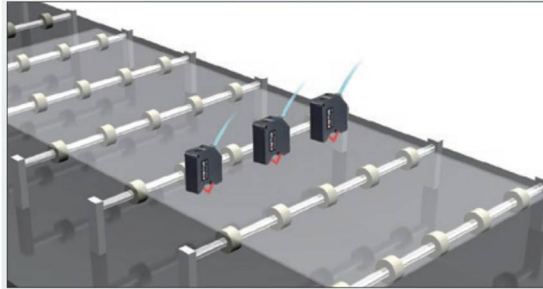
Deflection measurement of large diameter drills



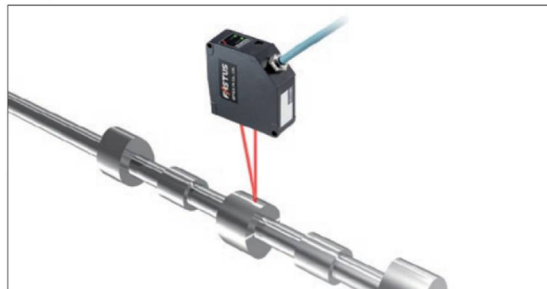
Flatness measurement of transmission parts



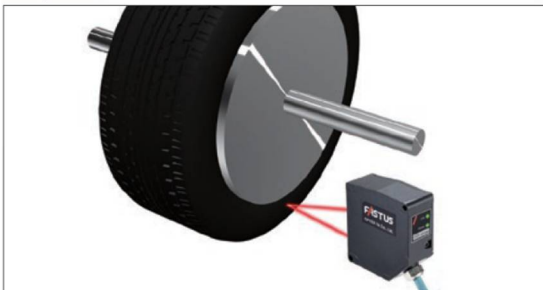
Warpage measurement of glass substrates (specular reflection type)



Shape measurement of cam shafts



Shape measurement of tires



Height inspection of smartphone frames (specular reflection type)

