EXCELLENCE IN SENSOR SOLUTIONS

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Available from Cross Company | Automation Group
800.866.4568

The Worlds Smallest Laser Measurement Sensor Series

CD22 Series





The World's Smallest
18mm W x 31mm D x 44mm H



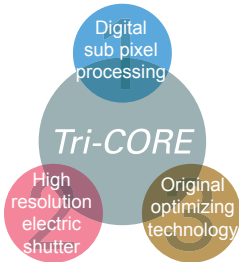
High performance cost effective self contained measurement sensor in an innovative compact housing.

- Dedicated Hybrid Lens
- Original All In One Technology
- High Quality Feedback Circuitry
- Detects Various Materials from Black Rubber to Polished Metals with High Accuracy & Resolution

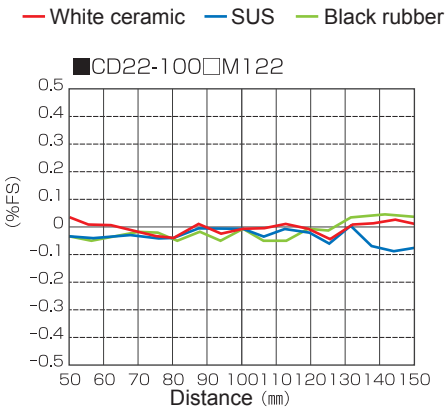
Onboard digital display with user friendly set-up and adjustment



Bright 4 digit display with user interface. Foreground and Background suppression teaching modes.



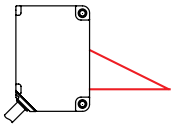
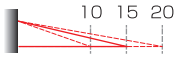
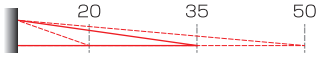
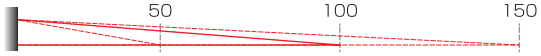
High Accuracy Stable Sensing with Excellent Linearity.



Repeat Accuracy:1μm(CD22-15□M12)	Linearity: ±0.1 F.S.

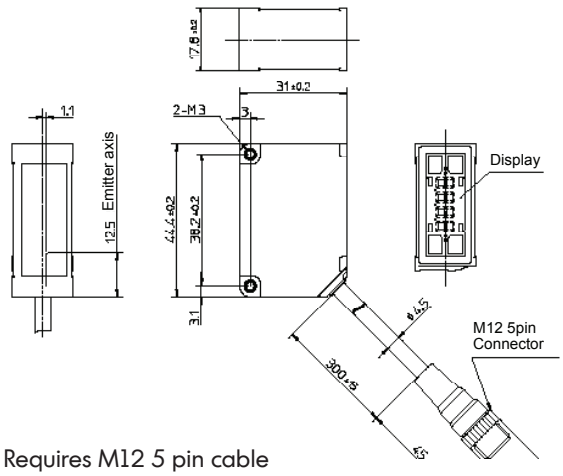
Line Up

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Type	Measurement Range		Repeat Accuracy	Analog output	Line up
 Diffuse		15±5mm	1μm	4-20mA	CD22-15AM12
				0-10V	CD22-15VM12
		35±15mm	6μm	4-20mA	CD22-35AM12
				0-10V	CD22-35VM12
		100±50mm	20μm	4-20mA	CD22-100AM122
				0-10V	CD22-100VM122

Part Number	Aluminum Housing	CD22-15AM12 CD22-15VM12	CD22-35AM12 C22-35VM12	CD22-100AM122 CD22-100VM122
Center of measurement range		15mm	35mm	100mm
Measurement range		±5mm	±15mm	±50mm
Light source		Red laser Diode (wave length 650nm)		
		Max. output: 390 μW		Max output: 1mW
Laser class	IEC/JIS	Suffix nul: Class 1 / 2: Class 2		
	FDA	CLASS II		
Spot size [1]		500 *700μm	450 *800μm	600 *700μm
Linearity		0.1% of F.S.	0.1% of F.S.	0.1% of F.S.
Repeatability [2]		1μm	6μm	20μm
Sampling period		500μs / 1000μs / 2000μs / 4000μs / AUTO		
Temperature drift (typical value)		±0.02% / °C of F.S.	±0.02% / °C of F.S.	±0.05% / °C of F.S.
Indicator		Laser indicator: Green / Zero reset indicator: Red Output indicator: Orange / Mode indicator: Red		
MF (multiple function) Input		Laser OFF, Teaching, Sample & Hold, One shot, Zero rest		
Control Output		NPN/PNP max. 100mA/DC30V (Residual voltage 1.8 V max.)		
Current consumption		70mA max. including Analog output current		
Protection circuit		Reverse connection protection, Over current protection		
Protection category		IP67 including connection part		
Operating Temp./Humid.		-10 - 50°C / 35 - 85% RH without freezing or condensation		
Storage Temp./Humid.		-20 - 60°C / 35 - 85%/RH		
Ambient illuminance		Sun light: 20,000 lx max. / Incandescent lamp: 3,000 lx max.		
Vibration resistence		10 - 55Hz, Double amplitude 1.5mm, X, Y, X for 2 hours		
Shock resistence		500mm/s² (approx. 50G) X, Y, Z 3 times each		
Material		Case aluminum/SUS316, Front lens: PPSU, Display: PET		
Weight		Aluminum case with M 12 connector: Approx. 60g including 300mm cable with connector		

■ M12 type



Requires M12 5 pin cable

Part number:
M12-FS5-PVC-2M-BLK 2 meter cable
M12-FS5-PVC-5M-BLK 5 Meter cable

M8 connector option available
Stainless steel housing option available
Serial output type coming soon

* Fastus is a registered trademark of Optex FA

The specifcations are based on the condition unless otherwise designated: Ambient temperature: 23°C Supply voltage: 24VDC, Sampling period: 500 μs, Averaging: 64, Measuring distance: Center of the range, Testing object: White ceramic.

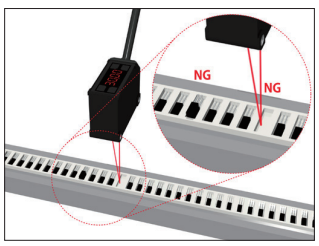
[1] Defined with center strength $1/e^2$ (13.5%) at the center. There may be leak light other than the specifed spot size. The sensor may be affected when there is a highly reflective object close to the detection area.

[2] 512 averaging time

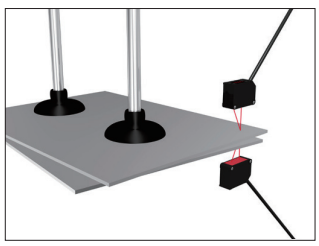
* Specifications per output

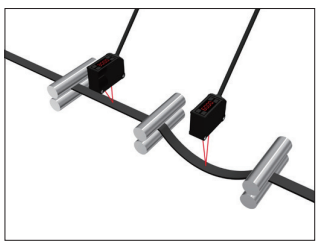
Part number	CD22□-□□V	CD22□-□□A
Type	Voltage output	Current output
Analog output range	0 - 10V	4 - 20 mA
Maximum load impedance	--	300Ω
Output impedance	100Ω	--
Power supply	DC18-24V±10%	DC12-24V±10%

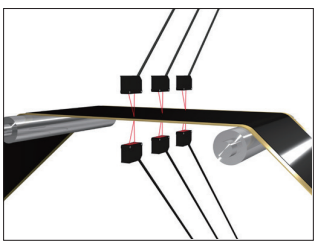
Applications



Detecting Small Parts


Detecting Picking Double Thin Sheets


Detecting Deflection


Measuring Thickness of Thin Film Electrode