



## PMMA Lens Photoelectric Sensors for Storage Humidity 35-95%RH Performance and Efficiency

### Basic Information

- Place of Origin: Guangdong, China
- Brand Name: KRONZ
- Certification: CE
- Model Number: KD50-120N
- Minimum Order Quantity: 1
- Price: Negotiable
- Packaging Details: Polybag packing
- Delivery Time: 5-8 working days
- Payment Terms: T/T, Western Union, MoneyGram
- Supply Ability: 10000 pieces per month



### Product Specification

- Linearity Accuracy:  $\pm 0.1\%$  F.S.
- Connection Type: Cable
- Spot Size (max.) Far Range: 0.5x0.8mm
- Factory Setting: 500 $\mu$ s 250mm 750 $\mu$ s
- Light Source: Red Laser Diode
- Operating Temperature: -10~45°C
- Shock Resistance: 50G 500m/s<sup>2</sup>
- Spot Size (max.) Near Range: 1.2x1.8mm
- Highlight: **PMMA Lens Photoelectric Sensors, Efficiency PMMA Lens Photoelectric Sensor**



The photoelectric sensor product is a versatile and reliable short-range optical sensor designed for a variety of industrial applications. The sensor's housing features a rugged construction made of PBT material, which ensures durability and long-term performance. In addition, the lens is made of PMMA, which provides optical clarity and sensing accuracy.

**Laser Emission:** The sensor emits a laser beam onto the surface of the target object.

**Displacement Calculation:** The position of the reflected light spot on the CMOS sensor changes depending on the target's distance.





Cable type	2 channels	KD50-120N series
Output signal		Switching Output: NPN (-N)
Detection range		120±60 mm
Full Scale (F.S.)		120 mm
light source		Red laser diode
Sampling period		Class 2 (Class II)
Sampling period		500 (250 mm: 750)
repeatability	High-speed mode	45 microns
	Other modes	30 microns
Storage temperature/humidity		-20~60°C/35~95%RH (no condensation, freezing)
Impact resistance		50G (500 m/s²)
Spot size (max)	Close up	1.2x1.8 mm
Housing material		Housing: PBT Lens: PMMA
Vibration resistance		10~55Hz, double amplitude 1.5mm, X, Y, Z direction, 2 hours each

# KD50 Series

## CMOS Laser Displacement Sensor

- Built-in analog output and 2 digital outputs, operable without a controller connection.
- High-precision photosensitivity calibration auto-optimizes received light intensity.
- Digital subpixel processing technology delivers over twice the linear accuracy of conventional displacement sensors.
- Remote input (MF line) enables functions including: laser emission off, external teach-in, output hold, and single-pulse input.



### Technical Parameters

#### Diffuse Reflection

Cable Type	2CH	KD50-30N(P)	KD50-50N(P)	KD50-85N(P)	KD50-120N(P)	KD50-250N(P)
	2CH+Analog Current	KD50-30N(P)I	KD50-50N(P)I	KD50-85N(P)I	KD50-120N(P)I	KD50-250N(P)I
Plug-in Type	2CH+Analog Voltage	KD50-30N(P)U	KD50-50N(P)U	KD50-85N(P)U	KD50-120N(P)U	KD50-250N(P)U
	1CH+RS422	KD50-30N(P)/R2	KD50-50N(P)/R2	KD50-85N(P)/R2	KD50-120N(P)/R2	KD50-250N(P)/R2
Plug-in Type	2CH	KD50-30N(P)-A8	KD50-50N(P)-A8	KD50-85N(P)-A8	KD50-120N(P)-A8	KD50-250N(P)-A8
	2CH+Analog Current	KD50-30N(P)I-A8	KD50-50N(P)I-A8	KD50-85N(P)I-A8	KD50-120N(P)I-A8	KD50-250N(P)I-A8
Plug-in Type	2CH+Analog Voltage	KD50-30N(P)U-A8	KD50-50N(P)U-A8	KD50-85N(P)U-A8	KD50-120N(P)U-A8	KD50-250N(P)U-A8
	1CH+RS422	KD50-30N(P)/R2-A8	KD50-50N(P)/R2-A8	KD50-85N(P)/R2-A8	KD50-120N(P)/R2-A8	KD50-250N(P)/R2-A8
Output Signal		Switching output: NPN (-N), PNP (-P); Analog output: current 4-20mA, voltage 0-10V; Communication output: RS-422				
Detection Range		30±4mm	50±10mm	85±20mm	120±60mm	250±150mm
Full Scale (F.S.)		8mm	20mm	40mm	120mm	300mm
Light Source		Red Laser diode (wavelength 655nm)				
IEC/JIS Rating (FDA Rating)		Class 2(Class II )				
Sampling Period		500 (250mm: 750) /1000/1500/2000μs ,factory setting: 500μs (250mm: 750μs)				
Spot Size (max.)	Near Range	0.15x0.15mm	0.6x1.2mm	0.9x1.5mm	1.2x1.8mm	1.5x2.5mm
	Center Range	0.1x0.1mm	0.5x1.0mm	0.75x1.25mm	1.0x1.5mm	1.75x3.5mm
	Far Range	0.15x0.15mm	0.4x0.9mm	0.6x1.0mm	0.5x0.8mm	2.0x4.5mm
Linearity Accuracy		±0.1%F.S.				
Repeatability	High speed Mode	4μm	8μm	15μm	45μm	100μm
	Other Mode	2μm	5μm	10μm	30μm	75μm
Temperature Drift		±0.08%F.S./°C				
Response Time	High-speed Mode	max.5ms: sampling average x 1 (1ms) + sensitivity switch time (max.4ms)				1.5ms+6ms max. (sampling average: 1)
	Standard Mode	max.12.5ms: sample average x 16 (8.5ms) + sensitivity switch time (max.4ms)				13ms+6ms max. (sampling average: 16)
	High-resolution Mode	max.36.5ms: sampling average x 64 (32.5ms) + sensitivity switch time (max.4ms)				49ms+6ms max. (sampling average: 64)
	Sensitivity Switch Time	4ms max.				
Indicator		Distance indicator: 7 bar LED display; output indicator: ON state: orange Q1/Q2 indicator (orange) light				
IP Rating		IP67				
Operating Temp./Humidity		-10~45° C/35~85%RH(no condensation or icing)				
Storage Temp./Humidity		-20~60° C/35~95%RH(no condensation or icing)				
Ambient Illuminance		Sunlight: ≤ 10000lux, lamp: ≤ 3000lux				
Vibration Resistance		10~55Hz, double amplitude 1.5mm,X、Y、Z directions, 2 hour for each				
Shock Resistance		50G (500m/s²)				
Housing Material		Housing: PBT Lens: PMMA				
Weight		Cable type: 65g; Plug-in type: 70g				

Photoelectric Sensors



用:  
KRONZ 光 感器是多功能 ,由于其可靠的性能和先 的功能,可用于广泛的 用和 景. 些 感器是工 自 化,制造 程,机器人技 等的理想 . . . . .

# KRONZ

## ABOUT US

KRONZ is a manufacturing enterprise located in Zengcheng District, Guangzhou City. We focus on providing customers with high-efficiency industrial automation solutions and related industrial products. After many years of innovation and development, KRONZ has complete product processing equipment and a professional team who are proficient in various automation technologies.

In order to improve the quality of products and production efficiency, we continue to introduce advanced production equipment and technology, strengthen investment in research and development. At present, our main products include Industrial Connectors, Inductive Sensors, Capacitive Sensors, Photoelectric Sensors, Ultrasonic Sensors, Industrial power supplies, Industrial fieldbus, RFID recognition systems, Industrial Ethernet Switches

We not only produce the orders of standard products, but also have ability to make customize production based on customer design drawings or samples.

Adhering to the principle of mutual benefit, we provide our customers with competitive prices , and perfect after-sales service. KRONZ's products have been sold in multiple countries, have won the trust and praise of customers. KRONZ expect to collaborate with you.

## OUR FACTORY





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# Logistics and Payment



1. Samples and small orders can be shipped with fast shipment method, by air and by express. Bulk order will ship by sea, by air, by train, by truck etc.

2. We also can send the goods to your agent warehouse.

3. If you need any more shipping method, please feel free to contact with us.





### Note:

Due to the wide range of our products, we cannot list all product pictures and corresponding product parameters. If you have other needs, please communicate with me. We can provide supplementary information and technical support.  
We Are Happy to Serve You.



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