Small high precision digital laser displacement sensor **PDE-CR100** series



Features

- ◆ Ultra-small size, metal housing, solid and durable
- ◆ Convenient operation panel with visualized OLED display to complete all function settings fastly
- ◆ Tiny 0.12mm diameter beam for precise measurement of very small objects
- ◆ The repetition accuracy can reach 70μm to achieve high-precision segment difference detec
- ◆ Powerful function setting and flexible output way
- ◆ Complete shielded desgin, stronger anti-interference perfomance
- ◆ IP65 protection degree, able to work in water or dusty environment

Part number

RS-485	PDE-CR100TGR	4...20mA + 0-5V	PDE-CR100TGIU

Technical specifications

Center distance	100mm	Indicator	Laser working indicator:green light on;
Measuring range	±35mm		Switch output indicator:yellow light
Full scale(F.S.)	65-135mm	Protection circuit④	Short circuit protection,reverse polarity protection,
Supply voltage	12...24VDC		overload protection
Consumption power	≤960mW	Built-in function⑤	Slave address & Baud rate settings;Zero setting;
Load current	≤100mA		Parameter query;Product self-inspection;Output
Voltage drop	<2V		setting;Ingle-point teaching/two-point
Light source	Red laser(650nm);Laser level:Class 2		teaching/three-point teaching;Window teaching;
Beam diameter⑦	About Φ120μm(at 100mm)		Factory data reset
Resolution	10μm	Service environment	Operation temperature:-10...+45℃;
Linear accuracy①②	±0.1%F.S.		Storage temperature:-20...+60℃;
Repeat accuracy①②③	70μm		Ambient temperature:35...85%RH(No condensation)
Output 1(Model selection)	Digital value:RS-485(Support Modbus protocol) ;	Anti ambient light	Incandescent light: < 3,000lux;
	Switch value:NPN/PNP and NO/NC settable		Sunlight interference:≤10,000lux
Output 2(Model selection)	Analog:4...20mA(Load resistance < 300Ω)/0-5V;	Protection degre	IP65
	Switch value:NPN/PNP and NO/NC settable	Material	Housing:Zinc alloy;Lens:PMMA;Diaplay:Glass
Distance setting	RS-485:Keypress/RS-485 setting;	Vibration resist	10...55Hz Double amplitude1mm,2H each in X,Y,Z
	Analog:Keypress setting		directions
Response time	<10ms	Impulse resista	500m/s²(About 50G)3 times each in X,Y,Z directions
Dimension	45mm*27mm*21mm	Connection	2m Composite cable(0.2mm²)
Display	OLED display(Size:18*10mm)	Accessory	M3 screw(length:30mm)x2,nut x2,gasket x2,mounting
Temperature drift	< 0.03%F.S./℃		bracket,operation manual

Remark:①Test conditions:Standard data at 23±5℃;Supply voltage 24VDC;30 minutes' warmup before test;Sampling period 0.6ms;Average sampling times 100;Standard sensing object 90% white card

②The statistical data follows the 3σ criteria

③Repeat accuracy:23±5℃ environment,90% reflectivity white card,100 test data results

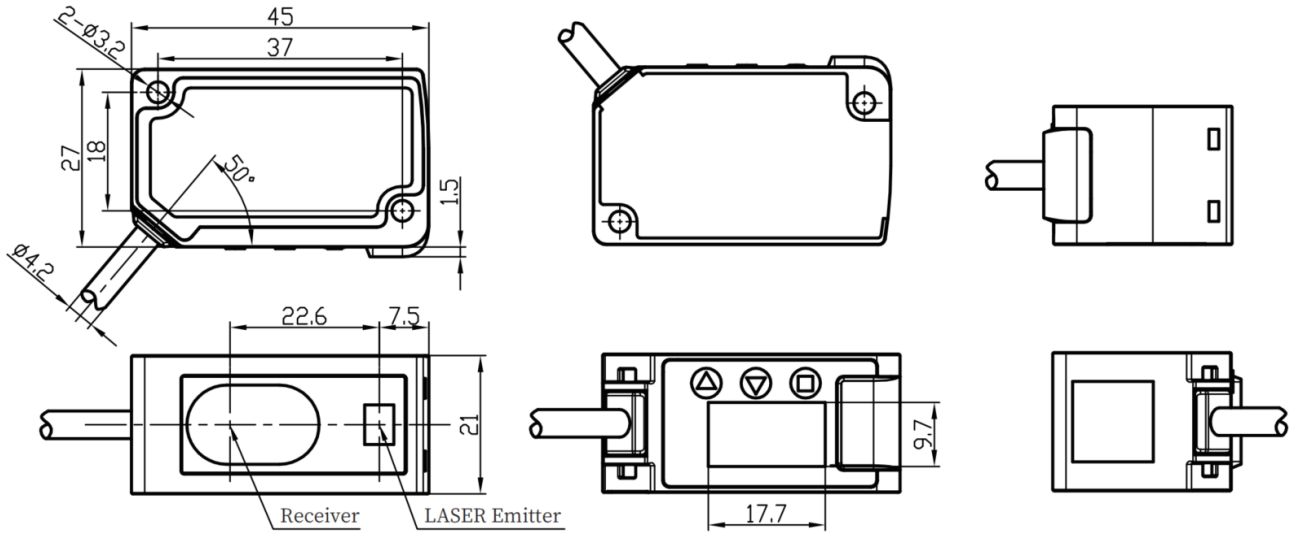
④Slave address,baud rate setting only for RS-485 series

⑤Protecion circuit only for switch output

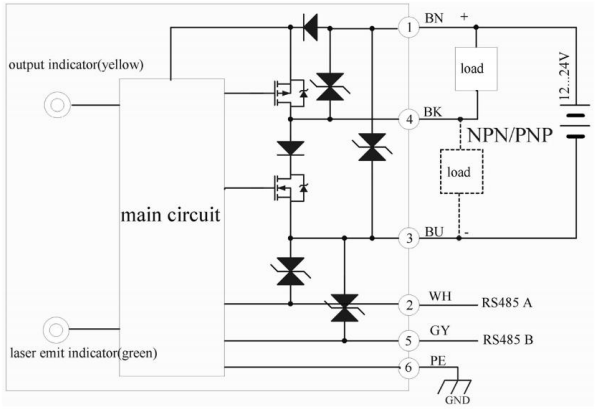
⑥Product operation steps and precautions in "Operation manual"

⑦Thisdataisavaluethatmeasuresthedistancefromthecenter

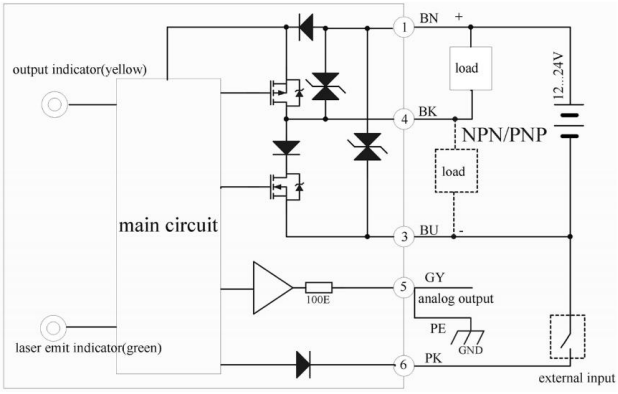
Dimensions



Wiring diagram



Serial communication RS-485



Analog output

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