

Small high precision digital laser displacement sensor **PDE-CR50** series



Features

- ◆ Ultra-small size, metal housing, solid and durable
- ◆ Convenient operation panel with visualized OLED display to complete all function settings fastly
- ◆ The repetition accuracy can reach 30μm to achieve high-precision segment difference detec
- ◆ Powerful function setting and flexible output way
- ◆ Complete shielded desgin, stronger anti-interference performance
- ◆ IP65 protection degree, able to work in water or dusty environment



Part number

RS-485	PDE-CR50TGR	4...20mA + 0-5V	PDE-CR50TGIU
--------	-------------	-----------------	--------------

Technical specifications

Center distance	50mm	Indicator	Laser working indicator:green light on;
Measuring range	±15mm		Switch output indicator:yellow light
Full scale(F.S.)	35-65mm	Protection circuit ^④	Short circuit protection,reverse polarity protection, overload protection
Supply voltage	12...24VDC	Built-in function ^⑤	Slave address & Baud rate settings;Zero setting; Parameter query;Product self-inspection;Output setting;Ingle-point teaching/two-point teaching/three-point teaching;Window teaching; Factory data reset
Consumption power	≤960mW	Service environment	Operation temperature:-10...+45°C; Storage temperature:-20...+60°C; Ambient temperature:35...85%RH(No condensation)
Load current	≤100mA	Anti ambient light	Incandescent light: <3,000lux; Sunlight interference:≤10,000lux
Voltage drop	<2V	Protection degre	IP65
Light source	Red laser(650nm);Laser level:Class 2	Material	Housing:Zinc alloy;Lens:PMMA;Diaplay:Glass
Beam diameter ^②	About Φ70μm(at 50mm)	Vibration resist	10...55Hz Double amplitude1mm,2H each in X,Y,Z directions
Resolution	10μm	Impulse resista	500m/s ² (About 50G)3 times each in X,Y,Z directions
Linear accuracy ^{①②}	±0.1%F.S.	Connection	2m Composite cable(0.2mm ²)
Repeat accuracy ^{①②③}	30μm	Accessory	M4 screw(length:35mm)x2,nut x2,gasket x2,mounting bracket,operation manual
Output 1(Model selection)	Digital value:RS-485(Support Modbus protocol); Switch value:NPN/PNP and NO/NC settable		
Output 2(Model selection)	Analog:4...20mA(Load resistance <300Ω)/0-5V; Switch value:NPN/PNP and NO/NC settable		
Distance setting	RS-485:Keypress/RS-485 setting; Analog:Keypress setting		
Response time	<10ms		
Dimension	45mm*27mm*21mm		
Display	OLED display(Size:18*10mm)		
Temperature drift	<0.03%F.S./°C		

Remark:①Test conditions:Standard data at 23±5°C;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

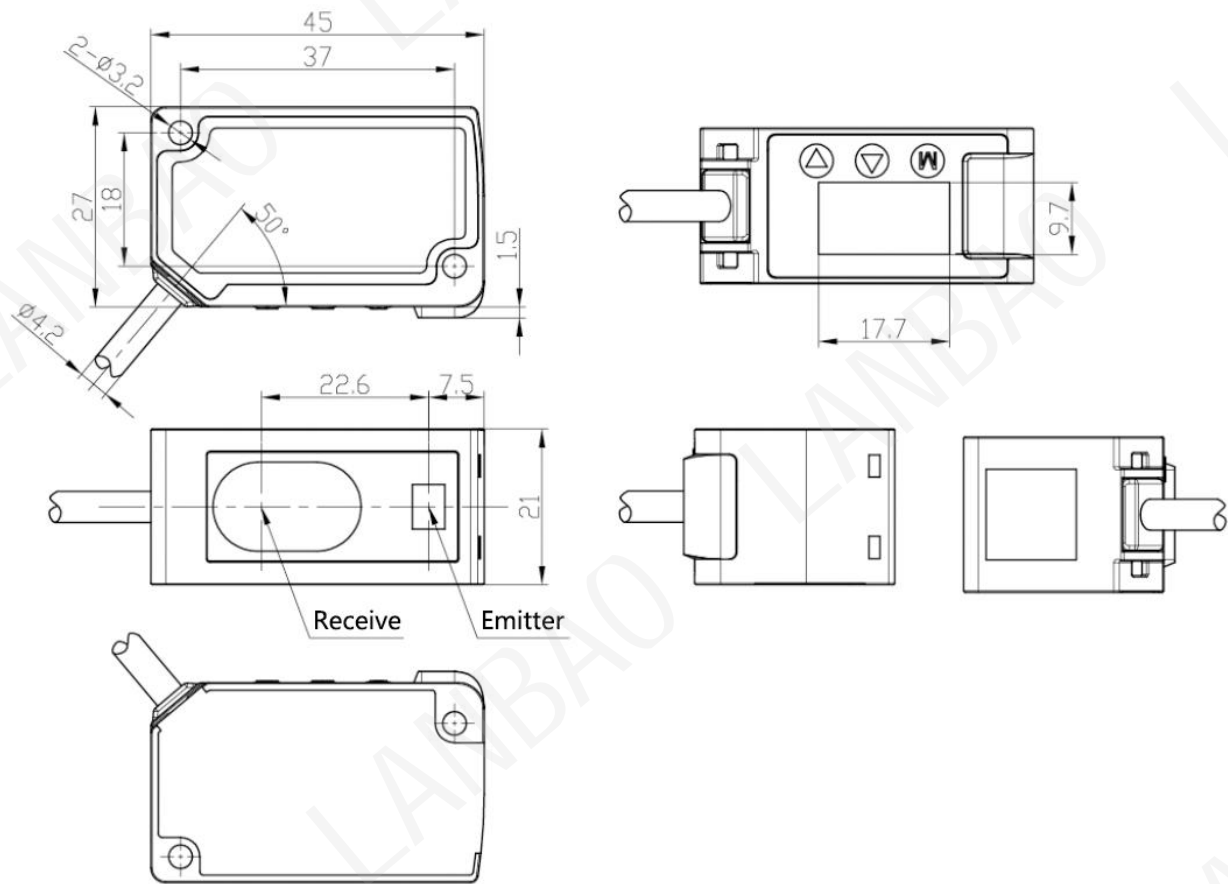
③Repeat accuracy:23±5°C environment,90% reflectivity white card,100 test data results

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

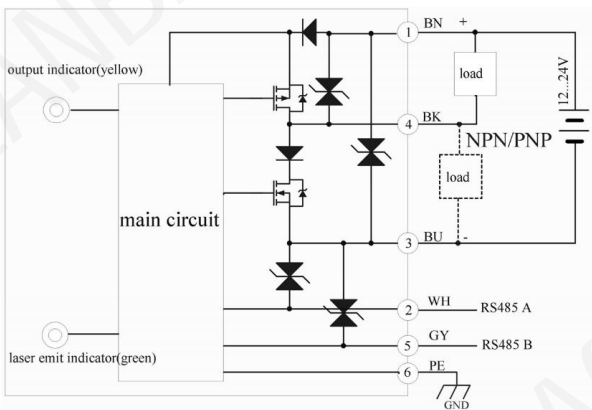
⑤Protecion circuit only for switch output

⑥Product operation steps and precautions in "Operation manual"

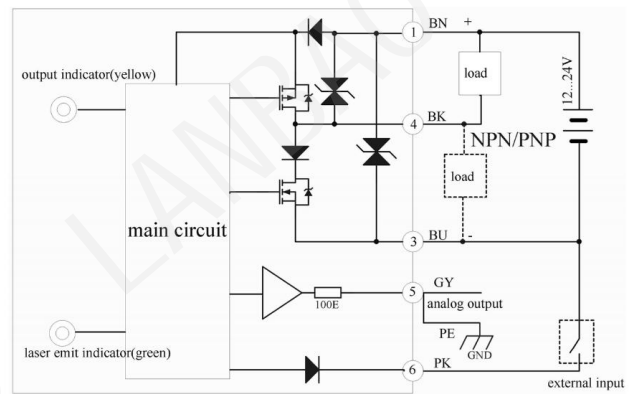
Dimensions



Wiring diagram



Serial communication RS-485



Analog output