Digital display laser displacement sensor PDB series



Feature description

- Exquisite appearance and light plastic housing, easy to mount and dismount
- Convenient operation panel with visualized OLED display to complete all function settings fastly
- 0.5mm diameter light spot to accurately measure very tiny objects.
- Key or remote teach-in to easily set response time for different applications
- Powerful function setting and flexible output way
- Complete shielded desgin, stronger anti-interference perfomance
- IP67 protection degree, able to work in water or dusty environment

CE UK CA

Model specification

RS-485	PDB-CR50DGR	4...20mA	PDB-CR50TGI

Specifications

Center distance	50mm	Display	OLED Display(size:14*10.7mm)
Measuring range	±15mm	Temperature drift	±0.02%F.S./℃
Full scale(F.S.)	30mm	Indicator	Power indicator:Green LED;Action indicator:Yellow LED
Supply voltage	RS-485:10...30VDC;4...20mA:12...24VDC		Alarm indicator:Yellow LED
Consumption power	≤700mW	Protection circuit④	Short circuit,reverse polarity,overload protection
Load current	200mA	Built-in function⑤	Slave address & Baud rate setting;Zero set;Product self-check;Output setting
Voltage drop	<2.5V		Analog map settings;Parameter query;Single point teach
Light source	Red laser(650nm);Laser level:Class 2		Window teach;Restore factory settings
Light spot	Φ0.5mm@50mm	Service environment	Operation temperature:-10…+50℃
Resolution	10um@50mm		Storage temperature:-20…+70℃
Linear accuracy①②	RS-485:±0.3%F.S.;4...20mA:±0.4%F.S.		Ambient temperature:35...85%RH(No condensation)
Repeat accuracy①②③	20um	Anti ambient light	Incandescent light: < 3,000lux
Output1	RS-485(Support Modbus protocol)	Protection degree	IP67
	4...20mA(Load resistance < 390Ω)	Material	Housing:plastic ABS;Lens cover:PMMA;Display panel:PC
Output2	PUSH-PULL/NPN/PNP And NO/NC Settable	Vibration resistance	10...55Hz Double amplitude1mm,2H each in X,Y,Z directions
Distance setting	RS-485:Keypress/RS-485 setting	Impulse resistance	500m/s²(About 50G)3 times each in X,Y,Z directions
	4...20mA:Keypress setting	Connection way	RS-485:2m 5pins PVC cable;4...20mA:2m 4pins PVC cable
Response time	2ms/16ms/40ms Settable	Accessory	Screw(M4×35mm)×2、Nut×2、 Washer×2、Mounting bracket、Operation manual
Dimension	65*51*23mm		

Remark:

①Test conditions:Standard data at 23 ± 5 ℃ ;Supply voltage 24VDC;30 minutes' warmup before test;Sampling period 2ms;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

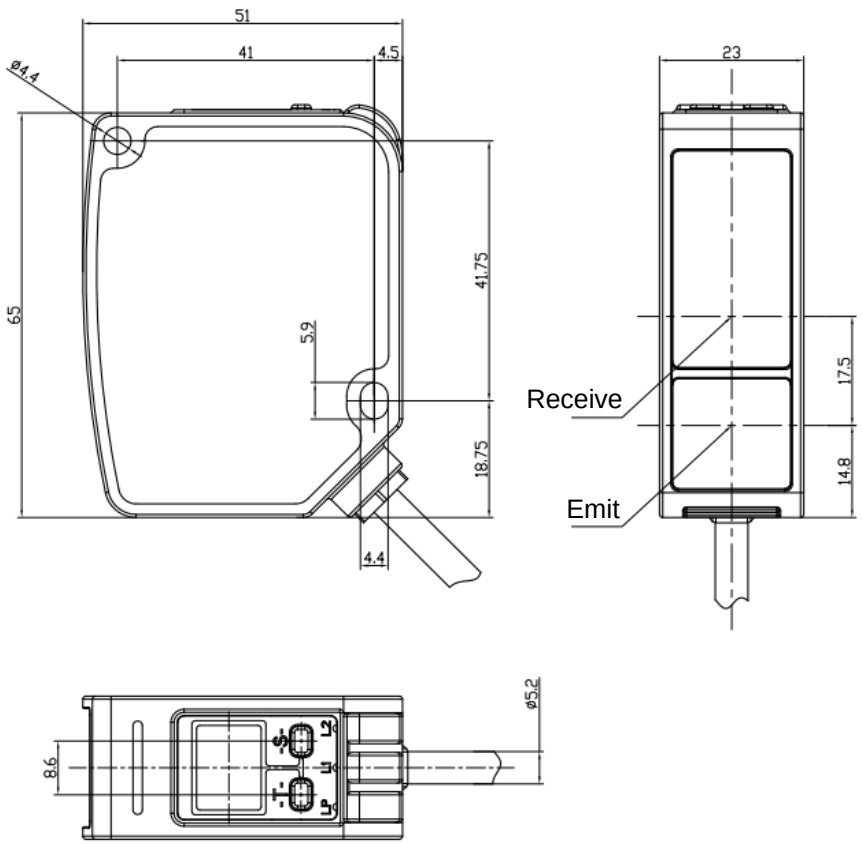
④Slave address,baud rate setting only for RS-485 series

⑤Protecion circuit only for switch output

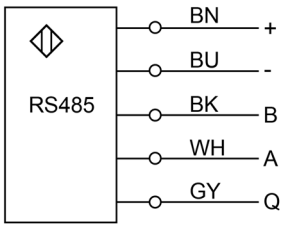
⑥Product operation steps and precautions in "Operation manual"

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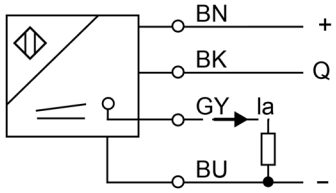
Dimension



Wiring diagram



Serial communication RS-485



Analog output 4...20mA

Remark:
The sensors are equipped with shielded cables,Q is the switch output.