

LR Series

Laser Displacement Sensor



- Small size, small light spot and high precision.
- It has dual output of switching value and analog value at the same time.
- Multiple functions, multiple detection modes, applicable to many applications.
- Large output indicator at the top.
- White digital tube shows the distance value, clear and bright.
- Film button, easy operation.
- Aluminum alloy shell, strong and durable.



Technical Specifications

Model Selection	PNP	LR-30-PS	LR-50-PS	LR-100-PS	LR-200-PS	LR-400-PS
	NPN	LR-30-NS	LR-50-NS	LR-100-NS	LR-200-NS	LR-400-NS
Measure Center Distance		30mm	50mm	100mm	200mm	400mm
Measurement Range		±5mm	±15mm	±35mm	±80mm	±200mm
Repeatability		10μm	50μm	100μm	200μm	400μm (Measuring distance 200mm-400mm) 800μm (Measuring distance 400mm-600mm)
Linearity		±0.2%F.S.	±0.2%F.S.	±0.2%F.S.	±0.3%F.S.	±0.3%F.S. (Measuring distance 200mm-400mm) ±0.3%F.S. (Measuring distance 400mm-600mm)
Temperature Characteristic		±0.3%F.S./°C				
Light Source		Red semiconductor laser Class 2 (JIS/IEC/GB) / Class II, Max. output: 1mW, Emission peak wavelength: 655nm				
Beam Diameter		about Ø50μm	about Ø100μm	about Ø150μm	about Ø300μm	about Ø500μm
Supply Voltage		12-24VDC±10%, Ripple P-P 10% or less				
Power Consumption		40mA or less(at 24VDC supply voltage), 60mA or less(at 12VDC supply voltage)				
Output Operation		L.ON / D.ON Switchable				
Control Output		PNP/NPN open-collector transistor *Max. sink current: 50mA *Applied voltage: 30VDC or less (Between control output to 0V) *Residual voltage: 1.5V or less (At 50mA sink current) *Leakage current: 0.1mA or less				
Short-circuit Protection		Incorporated (Auto reset type)				
Analog Output	Voltage Output (Warning: +5.2V)	Output range: 0 to 5V / Output impedance: 300Ω or less				
	Current Output (Warning: 0mA)	Output range: 4 to 20mA / Output impedance: 300Ω or less				
Response Time		Switchable between 1.5ms / 5ms / 10ms				
External Input		NPN non-concact input, Valid: 0 to +1.2VDC Input impedance: approx. 10kΩ				
Protection		IP67 (IEC)				
Degree of Pollution		2				
Ambient Temperature		-10~+45°C / Storage:-20~+60°C (No freezing and No condensation)				
Ambient Humidity		35~85%RH / Storage: 35~85%RH				
Ambient Illuminance		Incandescent lamp: Acceptance surface illuminance 3.000lux or less				
Operating Altitude		2000m or less				
Cable		0.15mm 5-core composite cable, 2m				
Material		Enclosure: Aluminum die-cast, Fron cover: Acrylic				
Weight		Approx. 35g (without cable) / Approx. 85g (including cable)				
Applicable Standard		EMC Directive Compliance				

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Dimensions

*Unit : mm

