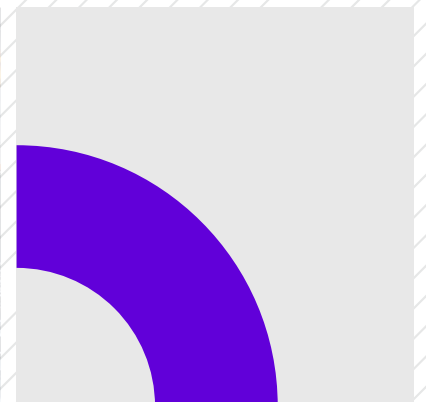
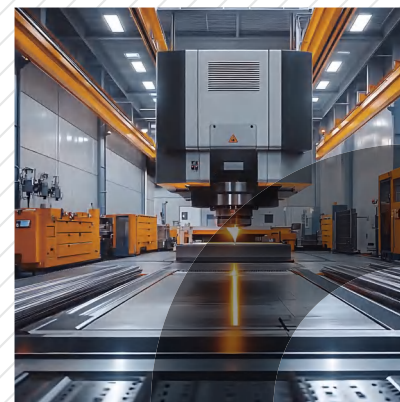
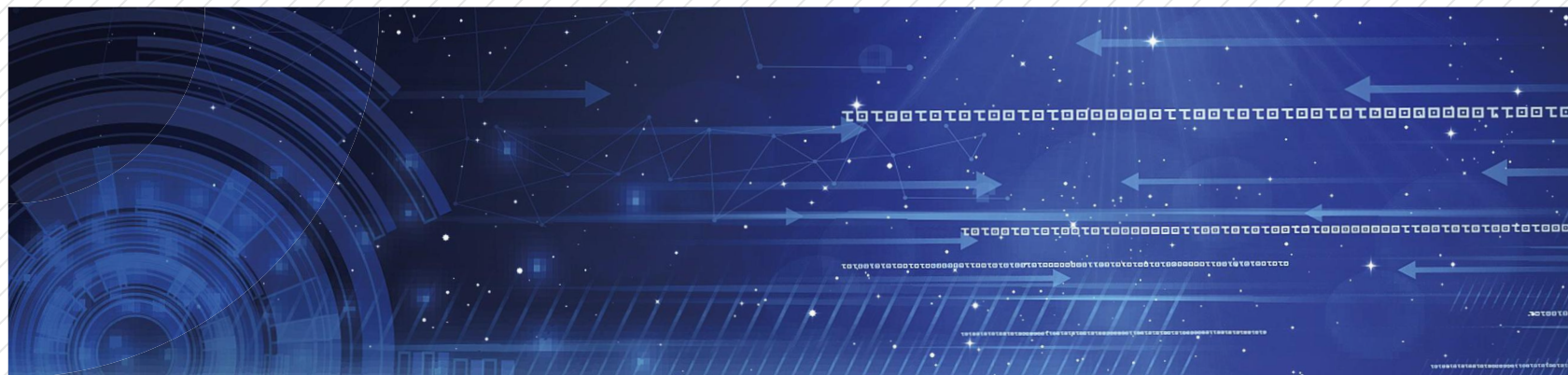




GATPOR



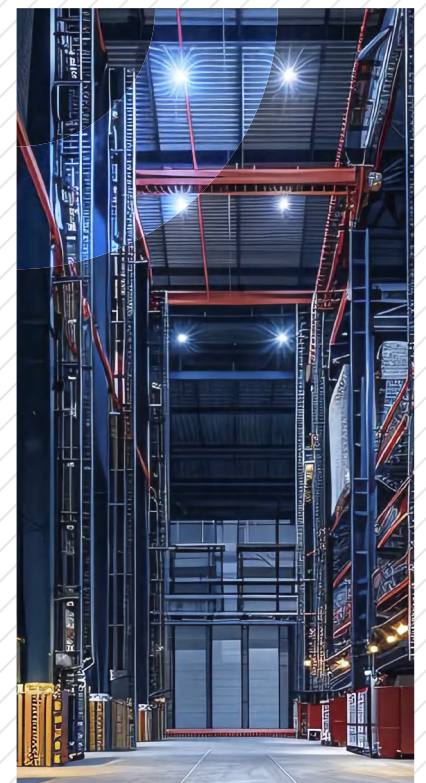
Official website : www.shjmzn.com
Businesscontact : 13371865086 (Marketing Department)
Saleshotline : 18101799606 (Manager Yang)
Technicalsupport : 18918029106 (Manager Yu)
Businesscooperation : marketing@sh-jmzn.com
CompanyAddress : 2/F,Building2,No.4588Cao'anRoad, JiadingDistrict, Shanghai, China



HIGH-PERFORMANCE PHOTONIC SENSOR BASED ON LASER TECHNOLOGY

Gather Power, Gain the Point

ShanghaiJumengIntelligent Technology Co., Ltd





GATPOR

GATPOR was founded in 2019 with a mission to become a globally leading provider of industrial sensor solutions. The company operates a 5,000-square-meter automated laser sensor R&D and manufacturing facility, featuring a self-developed, fully automated testing and calibration platform equipped with 100-meter-long, high-precision linear motor technology.

After over six years of independent R&D, GATPOR's high-precision laser ranging sensors deliver performance advantages including **long-range detection**, **high accuracy**, **high refresh rates**, and **resistance to strong light interference**, driving industrial upgrades and domestic substitution. These products are widely applied across smart elevators, industrial and logistics automation, smart parking, ports and terminals, rail transit, photovoltaic, lithium battery, and other automation sectors.

The company has secured over 50 invention patents, utility model patents, and software copyrights. In 2022, it was recognized as a Shanghai High-Tech Enterprise. Early 2023 saw the completion of tens of millions of yuan in angel round financing, alongside obtaining ISO9001 Quality Management System certification and product CE certification. By 2025, it completed tens of millions of yuan in Pre-A round financing.

Why Choose Us

- **Methodology of Vehicle-mounted LiDAR for Industrial Applications**
With the mature method of vehicle-mounted lidar, it can realize the industrial ranging with longer distance, more accurate, stronger anti-interference and faster response.
- **An interdisciplinary team with on-site expertise ensures actionable solutions**
The core team comprises experts from leading enterprises including Step, Hesai, Chinese Academy of Sciences, and Omron, with expertise in laser ranging, motion control, and industrial automation.
- **Full-chain in-house R&D and local delivery to truly reduce overall costs**
With full-chain mastery from algorithms and optics to production lines and quality control, controllable supply chains and delivery schedules, backed by over 40 patents and software copyrights.

Certificates & Awards



Catalogue



WeChat



Channel



TikTok



Official Website

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LD800 Series
Laser Ranging Sensor



LD800 Series

Laser Ranging Sensor

LD800 series laser ranging sensor is a rangefinder sensor using absolute measurement method, suitable for horizontal and vertical position measurement of various machinery; refresh speed 500Hz, accuracy 1mm, maximum measurement distance 200m, weight only 140g.

productmodel	range	repeat ability precis-ion	communication inte-rface	workingtempera-ture
LD812 200	200m	±1mm	RS485+CANopen	-10°C ~55°C
LD812 200W	200m	±1mm	RS485+CANopen	-40°C ~75°C



resistance to strong light



Extra small



Ultra-lightweight



ultra-low power consumption



Ultra-long distance



Aerospace, shipbuilding, and military-specific

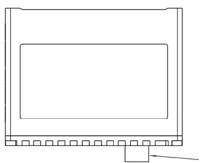
It is widely used in aerospace, shipbuilding, military industry, and high-end manufacturing industry.

Software interface & dimension drawing

LD800 Series Laser Ranging Sensor



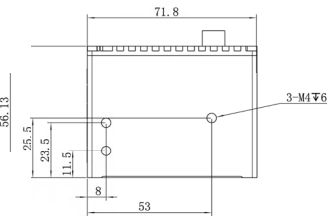
▲ software interface



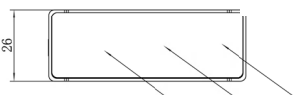
▲ vertical view



▲ right elevation



▲ upward view



▲ front view

Technical Parameter

Parameter	model	LD800 series
Range measurement technical parameters	measuring range	0.3-200m
	Accuracy	±2mm
	Repeatability precision	±1mm
	Output frame rate	100Hz
	Spot diameter	≤ 30mm
	Response time	Static: 25ms; Dynamic: 5ms
	Resolution ratio	Adjustable to 0.1mm/1mm
	Temperature drift	≤ 0.1mm/K
	Translational speed	≤ 10m/s
	Start time	6 second
Optical parameters	Working temperature	-20°C ~70°C
	Illuminant	Laser, infrared
Electrical parameters	Wavelength	905nm+650nm
	Service voltage	18V~30V DC
RS485 interface parameters	Working current	≤ 30mA / 24V DC
	Bit rate	9600/19200/38400/57600/115200
	Data bit	8
CANopen interface parameters	Parity check bit	None
	Stop bit	1
Mechanical parameter	Baud rate (kbit/s)	20/50/57.143/100/125/250/500/1000
	Size	26mm x 72mm x 55mm
	Hull	Alufer
	Lens	Glass
	Weight	Approximately 140 grams
Enviromental parameter	Levels of protection	IP55
	Environmental light disturbance	Not affected by ambient light (ambient illumination 100 kLux)
	Working temperature	-10°C ~55°C W:-40°C ~75°C
	Storage temperature	-40°C ~85°C

LD500 Series
Laser Ranging Sensor



LD500 Series

Laser Ranging Sensor

The LD500 series high-speed and high-precision laser ranging sensor adopts the laser ranging technology based on dToF technology; the measurement speed is 500Hz, the accuracy is 1mm, and the maximum measurement distance is 200m.

product model	range	repeatability	communication interface	working temperature
LD512	20m/50m/100m/200m	±1 mm	CANopen+RS485	-10℃ ~55℃
LD512 W	20m/50m/100m/200m	±1mm	CANopen+RS485	-40℃ ~75℃
LD503	20m/50m/100m/200m	±1mm	SSI	-10℃ ~55℃
LD503 W	20m/50m/100m/200m	±1mm	SSI	-40℃ ~75℃
LD504	20m/50m/100m/200m	±1mm	PROFINET	-10℃ ~55℃
LD504 W	20m/50m/100m/200m	±1mm	PROFINET	-40℃ ~75℃



CE attestation



High reliability and fast refresh rate



Control precision



multiple communication protocol interface



Easy to install and set up



Not affected by ambient light

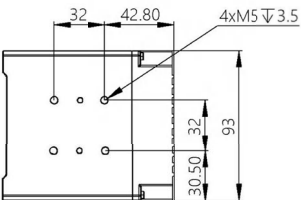
Widely used in positioning (x-axis and y-axis) for storage and retrieval systems; positioning for automated guidance systems; collision prevention and crane positioning (indoor); positioning for cat cranes; protection and anti-collision for three-dimensional warehouse stacking; laser positioning systems in the logistics industry; vertical positioning of load suspension devices in logistics; positioning and optical data transmission for elevators in the automotive industry.

Software interface & dimension drawing

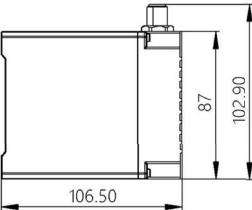
LD500 Series Laser Ranging Sensor



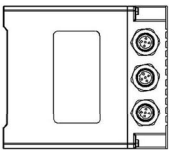
▲ software interface



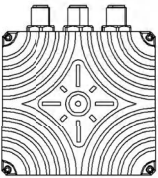
▲ Upward View



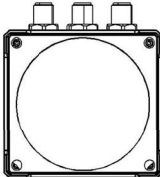
▲ Right Elevation



▲ Vertical View



▲ Back View

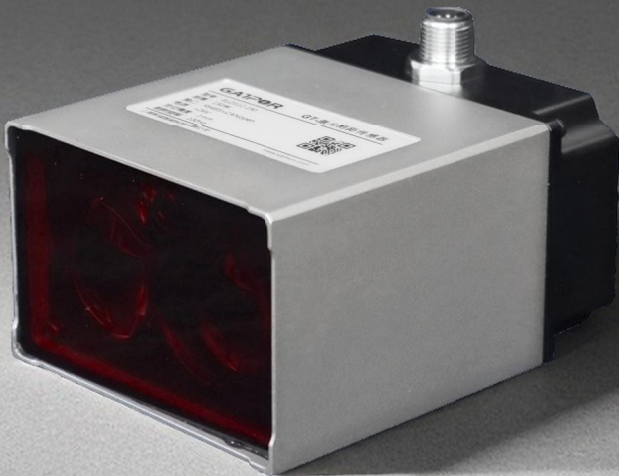


▲ Front Elevation

Technical Parameter

parameter	model	LD500 series
Range measurement technical parameters	Measuring range	20m/50m/100m/200m
	Repeatability precision	±1mm
	Output frame rate	500Hz
	Spot diameter	≤ 30mm/ ≤ 60mm/ ≤ 100mm/ ≤ 180mm
	Response time	Static: 20ms; Dynamic: 5ms
	Resolution ratio	Adjustable to 0.1mm/1mm
	Temperature drift	≤ 0.1mm/K
	Translational speed	≤ 15m/s
Optical parameters	Start time	6 second
	Illuminant	Laser, infrared
Electrical parameters	Wavelength	905nm+650nm
	Service voltage	18V-30V DC
RS485 interface parameters	Working current	≤ 120mA / 24V DC
	Bit rate	9600/19200/38400/57600/115200
	Data bit	8
	Parity check bit	None
CANopen interface parameters	Stop bit	1
	Baud rate (kbit/s)	20/50/57143/100/125/250/500/1000
SSI interface parameters	Clock frequency	80kHz~500kHz
	Transfer rate / mode	100Mbps/Full Duplex
PROFINET interface parameters	Maximum cable length	100m
	Size	106.5mm x 93mm x 102.9mm
Mechanical parameter	Hull	Alufer
	Lens	Glass
	Weight	Approximately 850 grams
	Levels of protection	IP55
Enviromental parameter	Environmental light disturbance	Not affected by ambient light (ambient illumination 100 kLux)
	Working temperature	-10℃ ~55℃ ; W: -40℃ ~75℃
	Storage temperature	-40℃ ~85℃
Product certification	CE attestation	IEC 61010-1:2010,IEC 61010-1:2010/AMD1:2016 EN 61010-1:2010.EN 61010-1:2010/A1:2019
	Laser security level	2 (EN60825:2014)

LD300 Series
Laser Ranging Sensor



LD300 Series

Laser Ranging Sensor

The LD300 series universal laser ranging sensor adopts laser ranging technology based on dToF technology; the measurement speed is 100Hz, the accuracy is 3mm, and the maximum measurement distance is 150m.

product model	range	repeatability precis-ion	communication interface	working temperature
LD312 50	50m	±3mm	RS485+CANopen	-10°C ~55°C
LD312 50W	50m	±3mm	RS485+CANopen	-40°C ~75°C
LD312 100	100m	±3mm	RS485+CANopen	-10°C ~55°C
LD312 100W	100m	±3mm	RS485+CANopen	-40°C ~75°C
LD312 150	150m	±3mm	RS485+CANopen	-10°C ~55°C
LD312 150W	150m	±3mm	RS485+CANopen	-40°C ~75°C

- 

Fast refresh
- 

High reliability
- 

Control precision
- 

multiple communication protocol interface
- 

Easy to install and set up
- 

Not affected by ambient light

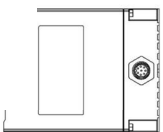
Widely used in positioning (x-axis and y-axis) for storage and retrieval systems; positioning for automated guidance systems; collision prevention and crane positioning (indoor); positioning for cat cranes; protection and anti-collision for three-dimensional warehouse stacking; laser positioning systems in the logistics industry; vertical positioning of load suspension devices in logistics; positioning and optical data transmission for elevators in the automotive industry.

Software interface & dimension drawing

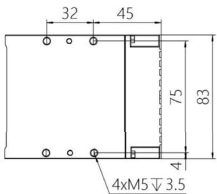
LD300 Series Laser Ranging Sensor



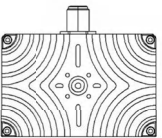
▲ software interface



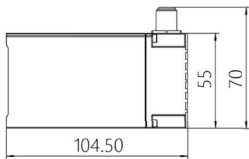
▲ Vertical View



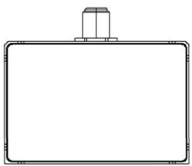
▲ upward view



▲ back view



▲ Right Elevation



▲ Front Elevation

Technical Parameter

parameter	model	LD300 series
Range measurement technical parameters	Measuring range	20m/50m/100m/150m
	Repeatability precision	±3mm
	Output frame rate	100Hz
	Spot diameter	≤ 30mm/ ≤ 60mm/ ≤ 100mm/ ≤ 150mm
	Response time	Static: 30ms; Dynamic: 10ms
	Resolution ratio	Adjustable to 0.1mm/1mm
	Temperature drift	≤ 0.15mm/K
	Translational speed	≤ 10m/s
	Start time	6 second
Optical parameters	Illuminant	Laser, infrared
	Wavelength	905nm+650nm
Electrical parameters	Service voltage	18V~30V DC
	Working current	≤ 120mA / 24V DC
RS485 interface parameters	Bit rate	9600/19200/38400/57600/115200
	Data bit	8
	Parity check bit	None
	Stop bit	1
CANopen interface parameters	Baud rate (kbit/s)	20/50/57/143/100/125/250/500/1000
	Size	104.50mm x 83mm x 70mm
Mechanical parameter	Hull	Alufer
	Lens	Glass
	Weight	Approximately 600 grams
	Levels of protection	IP55
	Environmental light disturbance	Not affected by ambient light (ambient illumination 100 kLux)
Enviromental parameter	Working temperature	-10°C ~55°C ; W: -40°C ~75°C
	Storage temperature	-40°C ~85°C

ELD200 Series
Laser Ranging Sensor



ELD200 Series

Laser Ranging Sensor

Polystrong Intelligent ELD200 series laser ranging sensor adopts laser ranging technology based on dToF technology, measuring speed 100Hz, accuracy 1mm, the longest measurement distance 20m/25m.

product model	range	repeatabilityprecision	communication interface	working temperature
ELD212 20	20m/25m	±1mm	RS485+CANopen	-20°C ~70°C

- Fast refresh
- High reliability
- Control precision
- multiple communication protocol interface
- Easy to install and set up
- Not affected by ambient light

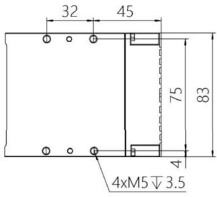
The system is widely used in the vertical positioning of the crane in the warehouse, the vertical positioning of the electric suspended conveyor, and the diameter monitoring in the process of the coil winding.

Software interface & dimension drawing

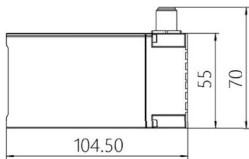
ELD200 Laser Ranging Sensor



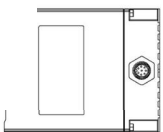
▲ software interface



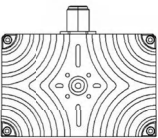
▲ upward view



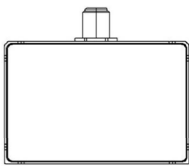
▲ right elevation



▲ vertical view



▲ back view



▲ front elevation

Technical Parameter

parameter	model	ELD200 series
Range measurement technical parameters	Measuring range	20m/25m
	Repeatability	±1mm
	Output frame rate	100Hz
	Spot diameter	≤ 30mm
	Response time	Static: 25ms; Dynamic: 5ms
	Resolution ratio	0.1mm/1mm adjustable
	Temperature drift	≤ 0.1mm/K
	Moving speed	≤ 10m/s
	Startup time	6 seconds
Optical parameters	Light source	Laser, infrared
	Wavelength	905nm+650nm
Electrical parameters	Supply voltage	18V~30V DC
	Operating current	≤ 120mA / 24V DC
RS485 interface parameters	Baud rate (bit/s)	9600/19200/38400/57600/115200
	Data bits	8
	Parity	None
	Stop bits	1
CANopen interface parameters	Baud rate (kbit/s)	20/50/57.143/100/125/250/500/1000
Mechanical parameter	Dimensions	104.50mm × 83mm × 70mm
	Housing	Aluminum alloy
	Lens	Glass
	Weight	Approx. 600g
	Protection class	IP55
Enviromental parameter	Ambient light interference	Immune to ambient light (ambient illuminance 100kLux)
	Operating temperature	-20°C ~ 70°C
	Storage temperature	-40°C ~ 85°C

LD100 Series
Laser Ranging Sensor



LD100 Series

Laser Ranging Sensor

LD100 series laser rangefinder sensor is a rangefinder sensor using absolute measurement method, suitable for horizontal and vertical position measurement of various machinery; refresh speed 100Hz, accuracy 1mm, maximum measurement distance 15m.

product model	range	repeatability precisio	communication interface	working temperature
LD112 15	15m	±1mm	RS485+CANopen	-10°C ~55°C
LD112 15W	15m	±1mm	RS485+CANopen	-40°C ~75°C
LD115 15	15m	±1mm	RS485+4-20mA+2-channel switch signal	-10°C ~55°C
LD115 15W	15m	±1mm	RS485+4-20mA+2-channel switch signal	-40°C ~75°C

- 

CE attestation
- 

Fast refresh
- 

High reliability and precise control
- 

Not affected by ambient light
- 

Easy to install and set up
- 

Super high costperformance ratio

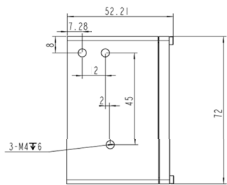
It is widely used in automated warehousing, logistics equipment, stacker crane movement and lifting, hoisting equipment trolley translation, hoisting rig, trolley lifting mechanism, and elevator position system. Replacing pull-wire encoders, it effectively improves the reliability of equipment operation.

Software interface & dimension drawing

LD100 Series Laser Ranging Sensor



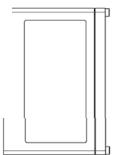
software interface



upward view



Right Elevation



vertical view



Front Outline

Technical Parameter

parameter	Model	LD100 series
Range measurement technical parameters	Measurementrange	0.3-15m
	Accuracy	±2mm
	Repeatability precision	±1mm
	Output frame rate	100Hz
	Spot diameter	≤ 30mm
	Response time	Static: 25ms; Dynamic: 5ms
	Resolution ratio	Adjustable to 0.1mm/1mm
	Temperature drift	≤ 0.1mm/K
	Translational speed	≤ 10m/s
	Start time	6 second
Optical parameters	Working temperature	-10°C ~55°C ; W: -40°C ~75°C
	Illuminant	Laser, infrared
	Wavelength	905nm+650nm
Electrical parameters	Service voltage	18V~30V DC
	Working current	≤30mA / 24V DC
RS485 interface parameters	Bit rate	9600/19200/38400/57600/115200
	Data bit	8
	Parity check bit	None
	Stop bit	1
CANopen interface parameters	Baud rate (kbit/s)	20/50/57.143/100/125/250/500/1000
Mechanical parameter	Size	26mm x 72mm x 55mm
	Hull	Alufer
	Lens	Glass
	Weight	Approximately 140 grams
	Levels of protection	IP55
Enviromental parameter	Environmental light disturbance	Not affected by ambient light (ambient illumination 100 kLux)
	Working temperature	-10°C ~55°C ; W: -40°C ~75°C
	Storage temperature	-40°C ~85°C

PS Series
ToF Photoelectric Sensor

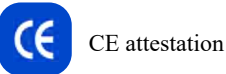


PS Series

ToF Photoelectric Sensor

The PS series of Poly Intelligent uses TOF laser ranging technology to detect the presence of objects in any position. The refresh speed is 50Hz, the maximum measurement distance is 5m, and the repeatability is 5mm.

Product Model	measured range	Refresh	repeatability precision	Output type	working temperature
PS01/PS01M8	0.3m/2m/5m	50Hz	±5mm	NPN/PNP	-20℃ ~65℃
PS03	0.3m/2m/5m	50Hz	±5mm	RS485	-20℃ ~65℃
PS04/PS04M8	0.5m	50Hz	+10mm	NPN/PNP	-20℃ ~65℃
PS05	2m/5m	50Hz	±5mm	NPN/PNP	-20℃ ~65℃



CE attestation



High precision, long range, wide coverage



quick response



Detectable glass



Set detection distance in one click

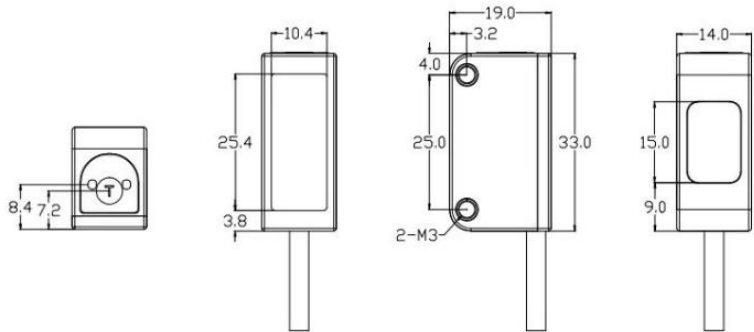


lead-out / plug-in type

Widely used in drop detection; anti-slip protection in pallet warehouses; safe lifting height detection; shuttle car collision prevention in small parts warehouses; idle operation monitoring of assembly machines; chip stacking and presence detection; roll diameter control; logistics equipment; food equipment/packaging machines; forming machines.

Dimension drawing & interface diagram

PS Series ToF Photoelectric Sensors



▲ Dimension drawing

Technical Parameter

model	PS01	PS03	PS04	PS05
Product features	Normalized form	RS485 interface	Detect transparent object and spring	Red dot demonstration
Measured range	0.3m/2m/5m		0.5m	2m/5m
Repeatability precision	±5mm		+10mm	±5mm
Illuminant	940nm infrared laser			940nm infrared laser 650nm instructional laser
Interference resistant	Resistance to strong light interference			
Refresh speed	50hz			
Spot size	8mm@50cm, 30mm@100cm		30mm@10cm 60mm@20cm	8mm@50cm 30mm@100cm
Levels of protection	IP55			
Working temperature	-20℃ ~65℃			
Storage temperature	-40℃ ~75℃			
Static electricity ESD	±6KV			
Supply voltage	+12V~+24V			
Working current	8mA~20mA			
Power dissipation	<1W			
Maximum output current	<100mA			
Output type	PNP/NPN	RS485	PNP/NPN	PNP/NPN
Size	19mm x 14mm x 10.4mm (length x width x height)			22mmx14mmx33mm
Shell material	PVC			
Line type	2.5x4P sheath Lead-out / plug-in type	2.5x4P sheath Lead-out / plug-in type	2.5x4P sheath Lead-out / plug-in type	2.5x4P sheath Lead-out / plug-in type
Wire length	2M			

PS06 Series
Of Compact Photoelectric Sensors



PS06 Series
Of Compact Photoelectric Sensors

The PS series of Poly Intelligent uses TOF laser ranging technology to detect the presence of objects in any position. The refresh speed is 100Hz, the maximum measurement distance is 40~500mm (custom), and the repeatability is 5mm.

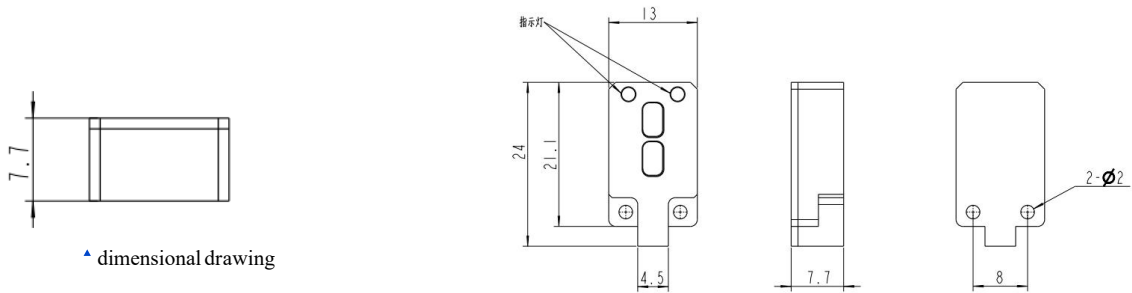
product model	measuring range	repeatability precis-ion	Refresh speed	levels of protection	Output type
PS06	40~500mm (customizable)	±5mm	100Hz	IP55	NPN

-  Compact size
-  high reliability
-  Multi-material detection
-  quick response
-  high-accuracy
-  Mirror surface ±25. Deflection detectable.

It is widely used in scenarios with limited installation space and significant variations in object angles and materials, such as PCB and metal sheet production lines.

Dimension drawing

PS06 Series Of Compact Photoelectric Sensors



dimensional drawing

Technical Parameter

Model	PS06
Measured range	40~500mm (customizable)
Repeatability precision	±5mm
Illuminant	940nm infrared laser
Interference resistant	Resistance to strong light interference
Refresh speed	100hz
Spot size	12mm*12mm/30mm
Divergence angle	±25°
Levels of protection	IP55
Working temperature	-20°C ~65°C
Storage temperature	-40°C ~75°C
Static electricity ESD	±6KV
Supply voltage	+12V~+24V
Working current	8mA~20mA
Power dissipation	<1W
Maximum output current	<100Ma
Output type	NPN
Size	24mm x 13mm x 7.7mm (length x width x height)
Shell material	PVC
Line type	2.5x4P sheath, lead-out type
Wire length	2 Mi

DS1000 Series
Laser Displacement Sensor



DS1000 Series

Laser Displacement Sensor

The DS1000 series laser displacement sensor is a triangulation sensor suitable for distance measurement in the range of 200mm to 1000mm facing the target plane.

product model	range	repeatability precis-ion	communication inte-rface	working tempera-ture
DS 1000	200mm-1000mm	0.03-0.5mm*1	RS485	-10°C -50°C

*1: 200-300/0.03mm; 300-400/0.05mm; 400-500/0.1mm; 600-800/0.4mm; 800-1000/0.5mm



metal case



Maximum detection range: 1000 mm

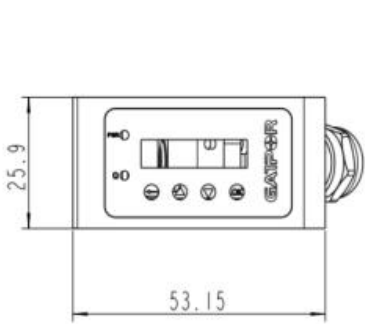


Response time <1ms

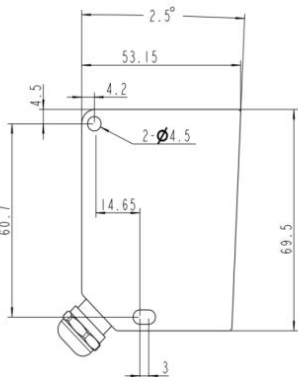
It is widely used in positioning and moving automation mechanism, target detection on automatic production line, object detection, and mobile equipment.

Dimension drawing

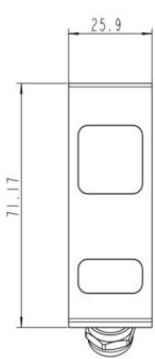
DS1000 Series Laser Displacement Sensor



Vertical View



Left View



Front View

Technical Parameter

parameter	model	DS1000 Series
Measuring technical parameters	Measuring range	200mm~1000mm
	Accuracy	1mm
	Repeatability precision	0.03-0.5mm*1
	Spot diameter	2mm@1m
	Response time	60ms*2
	Analog resolution	0.195 mm (12-bit)
	Start time	≤ 0.2 seconds
	Working temperature	-10~50°C
Optical parameters	Illuminant	Laser
	Wavelength	650nm
	Laser security level	2 (EN60825:2014)
	Laser attenuation	0.5% per year
Electrical parameters	Service voltage	18~30V DC
	Working current	≤70mA/24V DC
RS485 interface parameters	Bit rate	4800, 9600, 14400, 19200, 38400, 56000, 57600,115200, 128000, 256000
	Data bit	8
	Parity check bit	None
	Stop bit	1
Mechanical parameter	Size	25mm x 70mm x 50mm
	Hull	Alufer
	Lens	Glass
	Weight	Approximately 200 grams
	Levels of protection	IP55
Enviromental parameter	Environmental light disturbance	Not affected by ambient light (ambient illumination 100 kLux)
	Working temperature	-10~50°C
	Storage temperature	-25~75°C
	Static electricity ESD	±6kV

*1: 200-300/0.03mm; 300-400/0.05mm; 400-500/0.1mm; 600-800/0.4mm; 800-1000/0.5mm

*2: Response time for switching from one tested material to another

DZ Series
Laser Displacement Sensor



DZ series

Laser Displacement Sensor

Polytronics DZ series laser displacement sensor is based on triangulation method to achieve high-precision measurement of short-distance scene. The maximum range is 400mm (±200mm), the fastest 1.6ms Response Time; Supports PNP/NPN, Analog 4-20mA, RS485 Output.

product model		Measure the distance between centers	measuring range	Repeat accuracy	light source power
DZ030N	DZ030P	30mm	±5mm	5μm	1mW
DZ050N	DZ050P	50mm	±15mm	10μm	1mW
DZ100N	DZ100P	100mm	±35mm	20μm	1mW
DZ200N	DZ200P	200mm	±80mm	50μm	1mW
DZ400N	DZ400P	400mm	±200mm	100μm(200-400mm) 300μm(400-600mm)	1mW

- 

high-accuracy
- 

Small volume
- 

Multiple range specifications
- 

Multiple output interfaces
- 

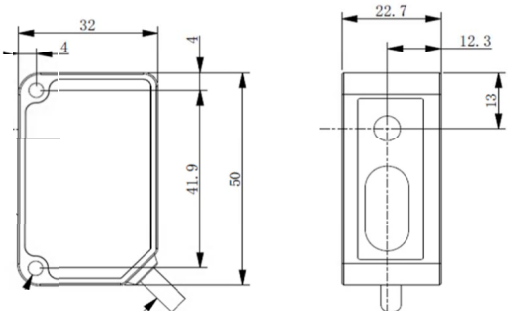
Response time as fast as 1.6ms
- 

All-metal casing with superior protection

It is widely used in the field of industrial automation for accurate position measurement.

Dimension drawing

DZ Series Laser Displacement Sensor



▲ Dimensional Drawing

Technical Parameter

kind		30mm	50mm	100mm	200mm	400mm
Model	NPN + 4~20mA + RS485	DZ030N	DZ050N	DZ100N	DZ200N	DZ400N
	PNP + 4~20mA + RS485	DZ030P	DZ050P	DZ100P	DZ200P	DZ400P
Distance between measurement centers		30mm	50mm	100mm	200mm	400mm
Measuring range		±5mm	±15mm	±35mm	±80mm	±200mm
Repeatability precision		5μm	10μm	30μm	100μm	300μm
						(Detection range 200~400mm)
						800μm
						(Detection range 400~600mm)
Linear accuracy		+0.1% F.S.(F.S.=10mm)	+0.1% F.S.(F.S.=30mm)	+0.1% F.S.(F.S.=70mm)	+0.2% F.S.(F.S.=160mm)	+0.2% F.S.(F.S.=400mm)
Spot definition		Φ50μm	Φ70μm	Φ150μm	Φ300μm	Φ500μm
Illuminant	Wavelength	Red semiconductor laser 655nm				
	Maximum output	1mW				
Laser class (GB/IEC)		class2				
Sampling period		1.6ms to 64ms (default: 8ms)				
Temperature characteristic		0.05% F.S./°C				
RS485 communication specification		Half-duplex				
External input function		Measure hold / Peak hold / Peak-to-peak hold / Valley hold / Average hold / Trigger upload / Laser switch				
Digital output		Open-circuit collector NPN or PNP output, Max 100mA/DC30V, residual voltage 1.8V				
Imitate Volume output	Analog current	4~20mA, with a maximum load resistance of 300 ohms				
Supply voltage		DC12~24V+10% (fluctuation P-P below 10%)				
Consumption current		Below 80mA				
Guard circuit		Reverse connection protection, overcurrent protection, short-circuit protection				
Environmental parameter	Protection level	IP65				
	Use ambient temperature and humidity	-10~50°C/35~85% RH (no condensation or icing)				
	Storage environmental temperature/humidity	-20~60°C / 35~85% RH (no condensation or icing)				
	Ambient light illumination	Incandescent lamp: below 3000Lx				
	Vibration resistance	10~55Hz dual-amplitude 1.5mmX, with 2 hours of recording in X, Y, and Z directions				
	Resistance to shock	500 m/s (approximately 50G) in the X, Y, and Z directions, each with 3 measurements				
Material quality		Shell: Die-cast aluminum				
Cable		F5mm wire diameter, 2 meters, 7-core drag chain shielded cable				
Weight		Approximately 85g (including the cable)				

OPC Series
Optical Communication Modules



OPC series

Optical Communication Modules

The PolyStrong Intelligent OPC Series Optical Communication Module utilizes 850nm infrared pulse modulation technology, supporting RS485, CAN, and 10-bit signal protocols for efficient and stable signal transmission. It features 6 input channels (10-bit each), 6 output channels (10-bit each), 1 RS485 interface, and 1 CAN interface, with a maximum transmission distance of 5 meters.

name	model	contact distance	direction of docking	Lineout length	IO quantity	External enable	RS485	CAN
optical communication module	GTOPC-NS-2M	2 meters	side	1 meters	6I6O	1	1	0
optical communication module	GTOPC-CS-2M	2 meters	side	1 meters	6I6O	1	1	1
optical communication module	GTOPC-NF-2M	2 meters	front	1 meters	6I6O	1	1	0
optical communication module	GTOPC-CF-2M	2 meters	front	1 meters	6I6O	1	1	1
optical communication module	GTOPC-NS-5M	5 meters	side	1 meters	6I6O	1	1	0
optical communication module	GTOPC-CS-5M	5 meters	side	1 meters	6I6O	1	1	1
optical communication module	GTOPC-NF-5M	5 meters	front	1 meters	6I6O	1	1	0
optical communication module	GTOPC-CF-5M	5 meters	front	1 meters	6I6O	1	1	1



Fast speed



anti-interference



rich serial port



High reliability

It is widely used in laser ranging scenarios; in laser chip processing and manufacturing, fiber optic modules are used in industrial automation networks.

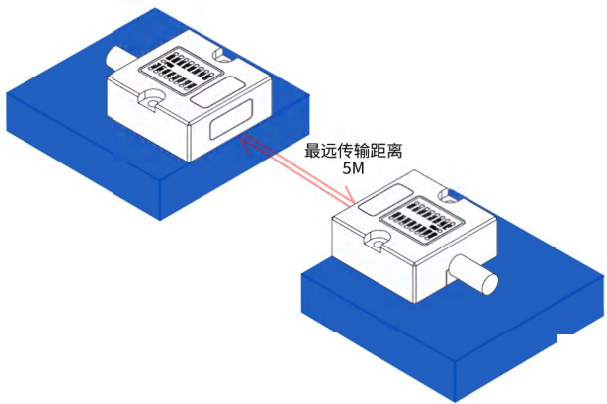
Usage Instructions

OPC Series Optical Communication Modules

RS485
115200

CAN
250KHz

IO
6



▲ Use Slides

Technical Parameter

parameter	model	OPC series	
Power supply parameters	Input voltage	DC9-30V	
	Input currenton	< 200mA @24V	
Contact distance		2M / 5M	
Destination		Side / Front	
Optical path parameter		Pulse modulation, infrared 850nm, ±15 degrees	
Signal output		Flexible shielded cable, 20-core, 0.15mm², 26AWG, 1 meter in length	
IO joggle	Import	Bidirectional optical coupling isolates input, S/S selects input level (S/S to 0V,24V input valid; S/S to 24V,0V input valid) 1 External channel enable, 6-channel signal input	
	Output	Open-circuit output, NPN type, current <30mA 6 channel signal output	
RS485 interface	Interface parameters	115200 (parameterizable) / 8 / 1 / N	
	Mailing address	Default is 1 (modifiable as a parameter)	
	Communicating protocol	Modbus RTU / Custom	
CAN joggle	Interface parameters	Default: 250KHz (adjustable)	Some models lack a CAN interface.
	Communicating protocol	Customize	
Pilot lamp		Power indicator, IO indicator, optical communication status indicator, Optical communication data indicator light, wired (485/CAN) communication indicator light	
Security guard		Input power reversed, input power overcurrent, output port short circuit, RS485 signal protection, CAN signal protection	
Structure	Outline dimension	50mm(L) X 50mm(W) X 20mm(H)	
	Way to install	Screw fit installation	
	Shell material	6061 Aluminum alloy	
Environment	Working temperature	-20 to 70°C (no condensation)	
	Working humidity	Less than 80% (no condensation)	
	Medium environment	Non-corrosive, not suitable for use in environments containing radioactive substances, strong magnetic fields, intense infrared interference, or vacuum, nor for flammable gases or metal dust.	
	Storage temperature	-25 to 80°C (no condensation)	
	Storage humidity	Less than 85% (no condensation)	

SubLink
Wireless Data Transmission Device



SubLink
Wireless Data Transmission Device

The PolyStrong Intelligent SubLink wireless data transmission module uses low-frequency band wireless signals, and adopts modulation and demodulation technology, anti-interference and frequency hopping technology to achieve long-distance, low-power and stable data transmission. The working frequency band is 433MHz, the transmission distance is 1km, the maximum transmission speed is 500Kbps, and the modulation mode is FSK/2GFSK.

product model	receiving sensitivity	transmission speed	transmission dist-ance	communication inte-rface	working tempera-ture
SubLink	-108dBm(BW=40K)	40K-500K	>1 km	RS232/RS485RS	-20℃ ~70℃

-  anti-interference
-  Long transmission distance
-  Wide radio frequency range
-  EMC performance is high
-  high sensitivity

Widely used in production line data acquisition; wireless equipment control; intelligent warehouse management; mobile maintenance and inspection; remote monitoring and data transmission.

Usage Instructions

SubLink Wireless Data Transmission Device



▲ Use Slides

Technical Parameter

class	Indicator name	parameter
Radio frequency	Frequency range	425MHz~525MHz (channel configurable via AT command)
	Transmitting power	1dB~20dB
	Receiving sensitivity	-108dBm(BW = 40K)
	Transmission speed	40K~500K (can be customized according to customer requirements)
	Transmission distance	>1 km
	Antenna connection	SMA
	Modulation mode	FSK, 2GFSK (customizable according to customer requirements)
Transparent interface	RS232 or RS485	Switch using the internal dial switch
	Baud rate	1200~115200 Set via AT command
Power dissipation	Input voltage	+9V~+28V
	Maximum current	Input +12V:90mA Input +24V:45mA
EMC function	Electrostatic protection level	Port contact discharge ±6 kV, air discharge ±10 kV
	Electrical fast pulse train jamming	±2KV
	Working temperature	-20℃ ~+70℃
Interface specification	+V	Power input port / Can be powered through a round-head connector
	0V	GND
	Tx	Serial transmission
	Rx	Serial receiving
	A	RS485 Communication A
	B	RS485 Communication B
Key	RESET	Factory data reset
Pilot lamp	Run	System running indicator
	Rf	RF communication indicator light
	Pwr	Power light

US series
Slot Photoelectric Switch



US series
Slot Photoelectric Switch

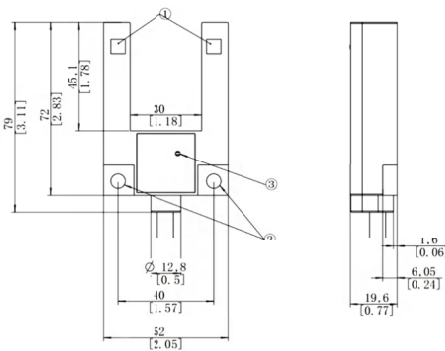
Utilizing 940nm infrared emission and reception sensors with software-based transceiver decoding technology, this system operates unaffected by visible or infrared light in working environments, demonstrating strong anti-interference capabilities. It maintains stable detection performance even under direct exposure to outdoor sunlight, indoor lighting, or industrial infrared radiation. The system employs a 95% high-efficiency switching power supply and low-resistance high-precision ADC sampling to reduce normal operating current to 5mA, enhancing power efficiency while minimizing heat generation and achieving near-zero temperature rise. With a response time under 1ms, it can detect small objects and moving targets with precision.

Product model	Illuminant	Levels of protection	Power dissipation	Output type	Material quality
US01O M	940nm infrared	IP55	< 0.25 W	NPN+PNP normally open output	Metal
US01C M	940nm infrared	IP55	< 0.25 W	NPN+PNP normally closed output	Metal

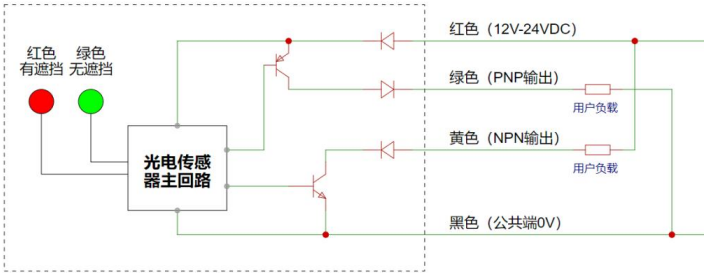
-  anti-interference
-  low power consumption
-  quick response
-  high-accuracy
-  Standard installation size
-  no modulation

Both infrared transmitter and receiver sensors employ multi-convex focusing systems. The light-shielding structure precisely controls the angles of emitted and received beams, effectively preventing false detection of distant targets. Featuring industry-standard slot and screw hole dimensions, the design ensures effortless installation. With integrated infrared encoding/decoding technology and optimized hardware/software tuning, the system eliminates sensitivity adjustments during field deployment, enabling rapid setup.

Dimension drawing
US Series Slot Photoelectric Switch



Dimension drawing



Technical Parameter

model	US series	
Model	US01O M	US01C M
Illuminant	940nm infrared	
Levels of protection	IP55	
Working temperature	-20°C - 65°C	
Storage temperature	-40°C - 75°C	
Static electricity ESD	±6kV	
Supply voltage	12-24VDC	
Working current	< 10 mA	
Load current	< 100 mA	
Power dissipation	< 0.25 W	
Output type	NPN+PNP normally open output	NPN+PNP normally closed output
Size	Dimensions: 72 mm long × 52 mm wide × 20 mm thick; U-shaped groove: 30 mm wide × 45 mm deep	
Shell material	Metal	
Pigment	Blue	
Cable	2.0m PVC wire lead-out type	

EST Miniature Series
Inductive Proximity Switch



EST Miniature Series

Inductive Proximity Switch

The EST Mini Series by Poly Smart is an inductive proximity switch with [ultra-compact size](#),[1kHz response speed](#),[high IP protection rating](#), and stable operation across-20 to 70°C. It is particularly suitable for tool magazines in machine tool processing centers.



Extra small



IP67 protection rating



Stable operation across the full temperature range



Supports custom non-standard sizes and shapes

Product miniaturization; vacuum encapsulation ensures high protection levels; even the smallest product in the series retains various electrical protections.

Technical Parameters & Dimension Drawings

EST Miniature Series Inductive Proximity Switch

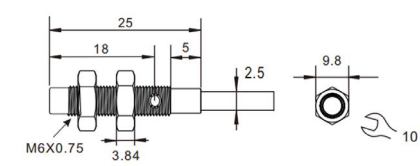
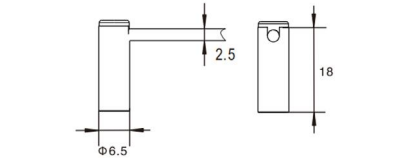
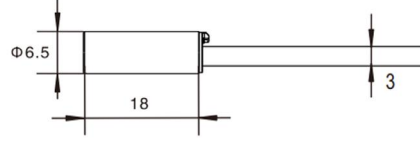
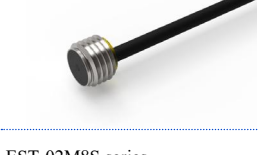
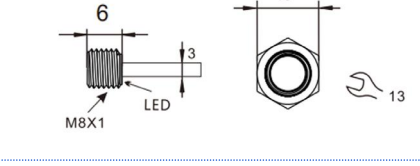
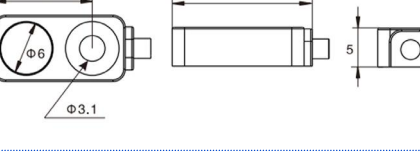
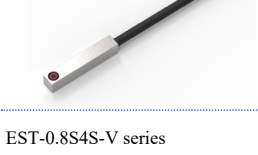
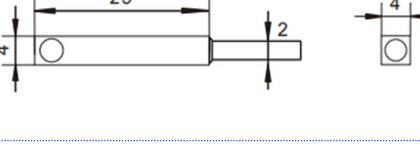
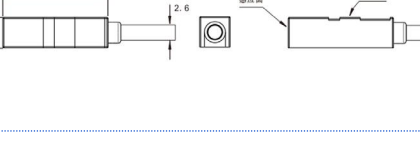
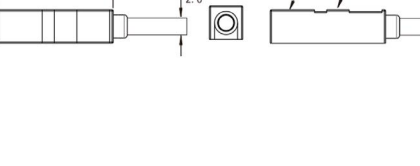
Model	Blueprint	Parameter	
EST-0.8O3S series		Detection distance	0.8mm
		Size / Diameter	3mm
		Output method	NO/NC
			PO/PC
EST-1.2O3N series		Detection distance	1.2mm
		Size / Diameter	3mm
		Output method	NO/NC
			PO/PC
EST-0.8M4S series		Detection distance	0.8mm
		Size / Diameter	4mm
		Output method	NO/NC
			PO/PC
EST-1.2M4N series		Detection distance	1.2mm
		Size / Diameter	4mm
		Output method	NO/NC
			PO/PC
EST-1.5O4S series		Detection distance	1.5mm
		Size / Diameter	4mm
		Output method	NO/NC
			PO/PC
EST-02O4N series		Detection distance	2mm
		Size / Diameter	4mm
		Output method	NO/NC
			PO/PC
EST-1.5M5S series		Detection distance	1.5mm
		Size / Diameter	5mm
		Output method	NO/NC
			PO/PC
EST-02M5N series		Detection distance	2mm
		Size / Diameter	5mm
		Output method	NO/NC
			PO/PC

EST Miniature Series
Inductive Proximity Switch



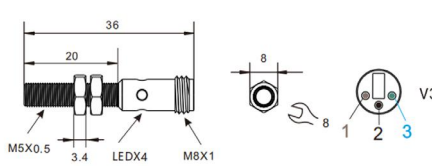
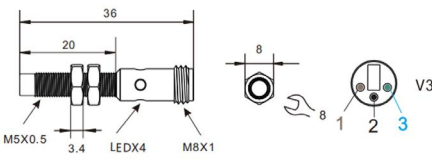
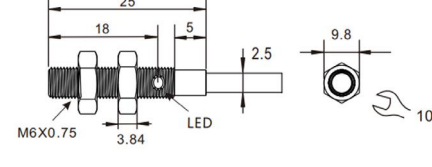
Technical Parameters & Dimension Drawings

EST Miniature Series Inductive Proximity Switch

		Detection distance	2mm
EST-02M6N series		Size / Diameter	6mm
		Output method	NO/NC PO/PC
		Detection distance	1.5mm
EST-1.5O6.5S-V series		Size / Diameter	6.5mm
		Output method	NO/NC PO/PC
		Detection distance	1.5mm
EST-1.5O6.5S series		Size / Diameter	6.5mm
		Output method	NO/NC PO/PC
		Detection distance	2mm
EST-02M8S series		Size / Diameter	8mm
		Output method	NO/NC PO/PC
		Detection distance	2mm
EST-02S8S-V series		Size / Diameter	8mm
		Output method	NO/NC PO/PC
		Detection distance	0.8mm
EST-0.8S4S-V series		Size / Diameter	4mm
		Output method	NO/NC PO/PC
		Detection distance	1.5mm
EST-1.5S5.5N series		Size / Diameter	5.5mm
		Output method	NO/NC PO/PC
		Detection distance	1.5mm
EST-1.5S5.5N-V series		Size / Diameter	5.5mm
		Output method	NO/NC PO/PC

Technical Parameters & Dimension Drawings

EST Miniature Series Inductive Proximity Switch

		Detection distance	1.5mm
EST-1.5M5S-T series		Size / Diameter	5mm
		Output method	NO/NC PO/PC
		Detection distance	2mm
EST-02M5N-T series		Size / Diameter	5mm
		Output method	NO/NC PO/PC
		Detection distance	1.5mm
EST-1.5M6S series		Size / Diameter	6mm
		Output method	NO/NC PO/PC

ESA Enhanced Series
Inductive Proximity Switch



ESA Enhanced Series

Inductive Proximity Switch

The PolySmart ESA Enhanced Series is an inductive proximity switch designed for specialized applications. Featuring 2-3 times greater detection range, it maintains stable performance across full temperature ranges and complete measurement scales. With full IP67 protection and IP69K options available, this product line excels in demanding environments requiring high performance and reliability, including variable measurement distances, high-temperature conditions, outdoor operations, and high-vibration applications.



Larger detection range



All-stainless steel casing, corrosion-resistant



Stable operation across the full range



Stable operation across the entire temperature range



High protection rating, up to IP69K



Customizable high seismic-resistant products

Detection of metallic objects at greater distances than conventional methods; specialized integrated circuits with stable performance and diverse dimensions; waterproof, oil-resistant, and dustproof, capable of meeting most environmental requirements; reliable operation in pulse counting, position limiting, and presence detection.

Technical Parameters & Dimension Drawings

ESA Enhanced Series Inductive Proximity Switch

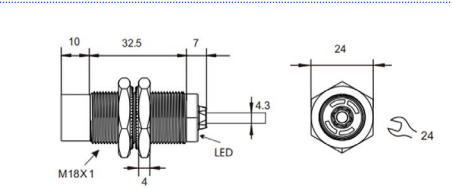
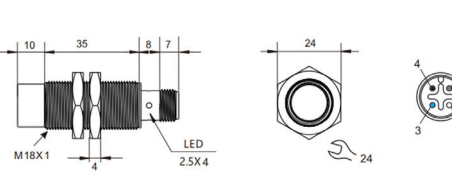
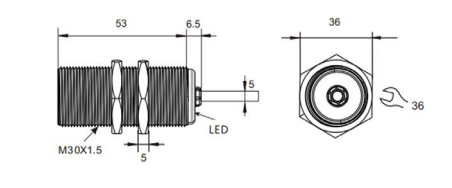
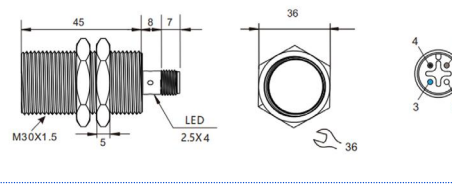
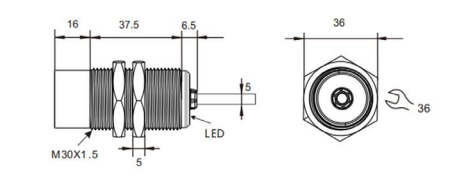
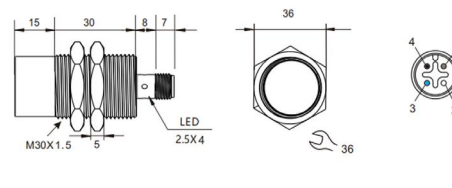
Model	Blueprint	Parameter	
ESA-M8S series		Detection distance	1mm/2mm
		Size / Diameter	8mm
		Output method	NO/NC PO/PC
ESA-M8S-T series		Detection distance	1mm/2mm
		Size / Diameter	8mm
		Output method	NO/NC PO/PC
ESA-M8N series		Detection distance	2mm/4mm/6mm
		Size / Diameter	8mm
		Output method	NO/NC PO/PC
ESA-M8N-T series		Detection distance	2mm/4mm/6mm
		Size / Diameter	8mm
		Output method	NO/NC PO/PC
ESA-M12S series		Detection distance	2mm/4mm
		Size / Diameter	12mm
		Output method	NO/NC PO/PC
ESA-M12S-T series		Detection distance	2mm/4mm
		Size / Diameter	12mm
		Output method	NO/NC PO/PC
ESA-M12N series		Detection distance	4mm/8mm
		Size / Diameter	12mm
		Output method	NO/NC PO/PC
ESA-M12N-T series		Detection distance	4mm/8mm
		Size / Diameter	12mm
		Output method	NO/NC PO/PC

ESA Enhanced Series
Inductive Proximity Switch



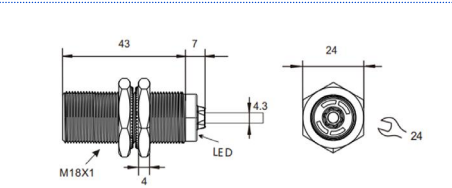
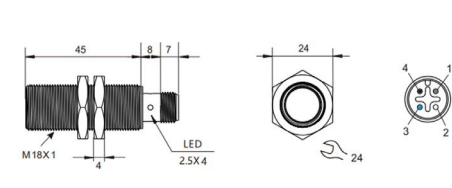
Technical Parameters & Dimension Drawings

ESA Enhanced Series Inductive Proximity Switch

 ESA-M18N series		Detection distance	8mm/12mm/16mm
		Size / Diameter	18mm
		Output method	NO/NC PO/PC
 ESA-M18N-T series		Detection distance	8mm/12mm/16mm
		Size / Diameter	18mm
		Output method	NO/NC PO/PC
 ESA-M30S series		Detection distance	10mm/15mm
		Size / Diameter	30mm
		Output method	NO/NC PO/PC
 ESA-M30S-T series		Detection distance	10mm/15mm
		Size / Diameter	30mm
		Output method	NO/NC PO/PC
 ESA-M30N series		Detection distance	15mm/25mm/30mm
		Size / Diameter	30mm
		Output method	NO/NC PO/PC
 ESA-M30N-T series		Detection distance	15mm/25mm/30mm
		Size / Diameter	30mm
		Output method	NO/NC PO/PC

Technical Parameters & Dimension Drawings

ESA Enhanced Series Inductive Proximity Switch

 ESA-M18S series		Detection distance	5mm/8mm
		Size / Diameter	18mm
		Output method	NO/NC PO/PC
 ESA-M18S-T series		Detection distance	5mm/8mm
		Size / Diameter	18mm
		Output method	NO/NC PO/PC



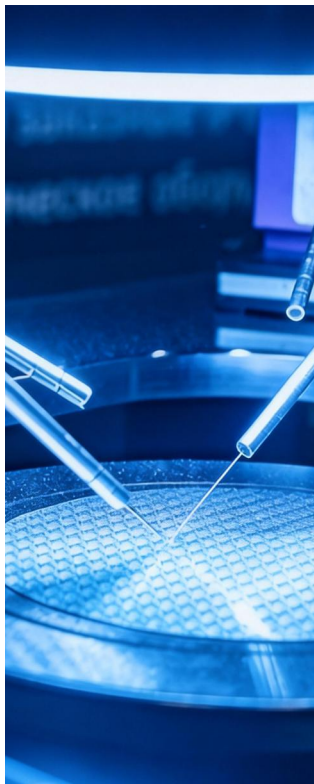
Industrial
Automation



Logistics



Smart Elevators



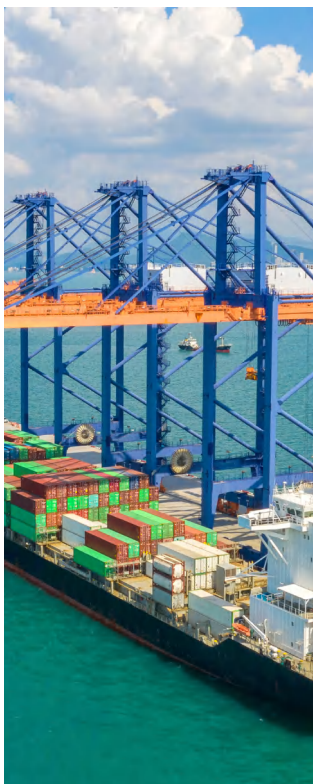
Intelligent Manufacturing



Specialized Equipment



Battery Swap Station



Portterminal



Low Altitude Economy

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