

LiDAR Scanner

TOF LiDAR Scanner

TOF principle

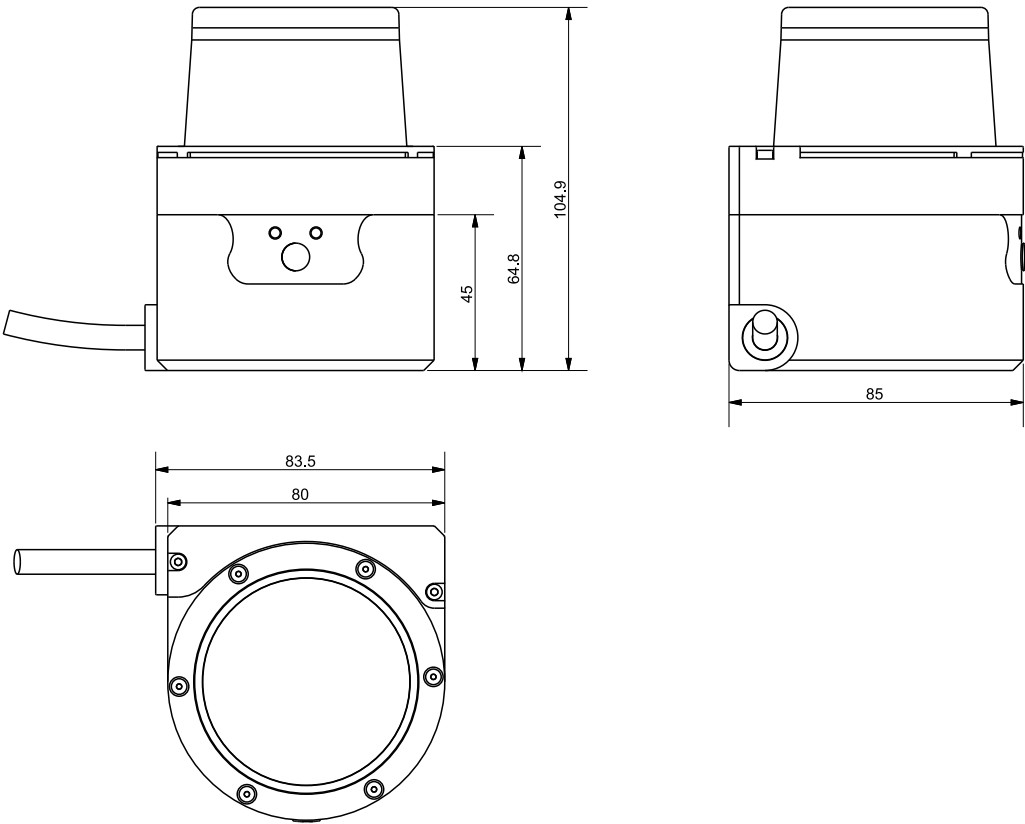


Appearance		
Light source	Infrared laser(905nm)	
Laser safety level	Class 1 (GB7247.1-2012, Eye-safe IEC)	
Laser spot light diameter	8mm	
Laser spot light scan angle	12.5 mrad	
Scanning angle range	300°	
Scanning frequency	25Hz(system default)/12.5Hz/6.25Hz	
Scanning angle resolution	0.5° (system default)/0.25° /0.125°	
Sensing range	0.1m ~ 20m	0.1m ~40m
10% reflectivity range	15m	30m
Outdoor performance	Anti-dusty, Anti-sunlight	
Rain fog and smoke penetration	Supported	
Measurement error	System error (typical)	± 5cm
	Statistical error (1σ)	± 2cm
Built-in application Regional monitoring	Monitoring mode: Point number monitoring / target width monitoring / contour monitoring	
	Monitor signal level: Attention / warning / alarm	
	Number of regional groups: 16 groups, support self-learning background exclusion	
	Concurrent work area group number: 16 (max)	
	Guide the network camera to monitor the target video positioning and tracking	
Self-test equipment	Contents:Transparent cover dirt / block / high temperature / low temperature Output mode: Indicator + TCP packets	
Ethernet	Rate: 10/100 Mbps; Network protocol: TCP/IP; Function: Device configuration / measurement data output /monitor signal output	
I/O Input	Quantity: 4; Type: Switching level input; High level range: 10V~28V DC; Low level range: 0V~5V DC Preset function: Monitor area selection (0x0 - 0xF); Regional monitoring disarm / forced alarm, active level: high level	
I/O Output	Quantity: 4; Type: PNP switch output ; Output voltage: Supply voltage;Power on: OFF;Device ready (OUT), active state: pass (High level), zone detection signal output (OUT2/OUT3/OUT4) active state: configurable	
Indicator light	Quantity: 2; Definition: ERR (Device alarm: Fault/Abnormal ,Transparent cover dirty / block, high and low temperature, Dense fog); HTR (operation status indication: detection signal / self-learning)	
Front panel button	Quantity: 1; Definition: Shielded monitor signal output / start background self-learning /restart device	
Operating voltage	10V~ 28V DC	
Power	5W(measuring),3.6W@DC 12V/14.4W@DC 24V(heating)	
Outer covering protection rank(IP)	IP65(GB4208-2008)	
Insulation resistance	1M Ω (GB16796-2009.5.4.4)	
Dielectric strength	0.5KV(GB16796-2009.5.4.3)	
Weight	0.6kg	
Dimension(L×W×H)	83.5 × 85 × 104.9(mm)	
Electromagnetic compatibility (EMC)	Electrostatic discharge	6KV (GB/T17626.2-2006, class 3)
	Fast bursts	1KV (GB/T17626.4-2008, class 2)
	Electromagnetic field radiation immunity	GB/T17626.3-2006, class 2
Surge immunity	GB / T17626.5-2008 Power interface: 1.2 / 50 μs, 2KV / 1KA (Class 3) Ethernet interface: 10 / 700 μs, 1KV / 25A (Class 2); I / O interface: 1.5 / 50 μs, 0.5KV / 0.25KA (Class 1)	
Impact	GB/T 2423.5	
Single impact	15g, 11ms	
Continuous impact	10g, 16ms	
Vibration	GB/T 2423.10	
Frequency Range	10Hz~150Hz	
Amplitude	5g	
Humidity	93%, +40℃, 2h (GB/T 2423.3)	
Operating temperature range	-25℃~+50℃	
Storage temperature range	-30℃~+70℃	
Ambient illumination range	≤70,000lux	
Model NO.	AS-21C	AS-41C

Unit:mm

Dimensions

Displacement



Power Interface

 I/O Power Network port	Socket	Type	Explanation
	DC002	Power	Female 2 pin
	Ethernet	RJ45 socket	4 pin
	I/O	Cable	10 pin

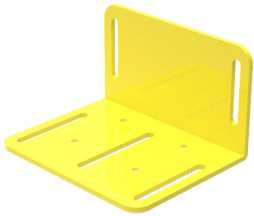
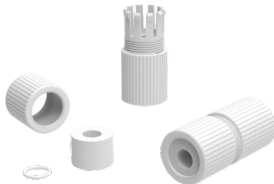
Fiber Optic
Slot Sensors
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Area
Ultrasonic
Vibration
Temperature
Cables
Tester

Guidance

Displacement

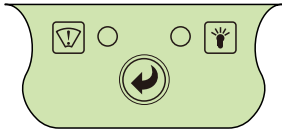
TOF measurement
Mini digital display
Built-in controller
Linear measurement
Magnetic displacement
LiDAR Scanner
Color confocal

Accessories

			Mounting screws, gasket and easy installation tool
Composite Bracket: AS-21C-AT 1 Piece	Power Cable: AS-21C-EC 1 Strip	Crystal Protective Cover: AS-21C-WJ 1 Piece	Accessories: M4x8 1 Set

LiDAR Scanner

Indicators and Operation Buttons

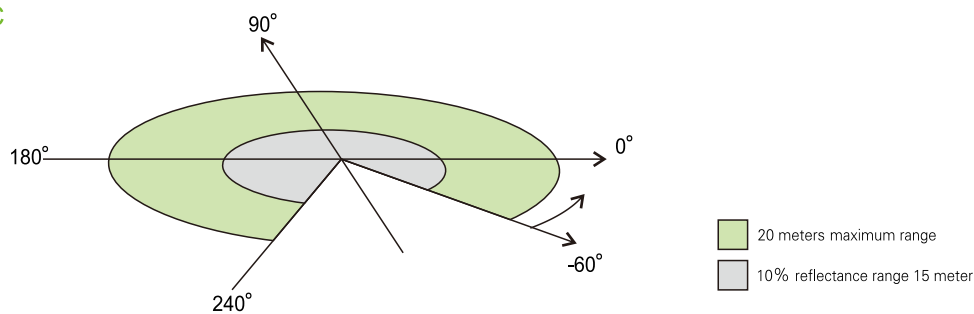
	Name	Instructions
	 ERR	Work fault indicator ◆ Startup state: Light on(About 27s) Always off: No fault ◆ Always on Internal fault ◆ Always on: Internal fault, Abnormal measurement ◆ Long flicker (0.25Hz) : High / low temperature alarm ◆ Short flicker(1Hz) : Transmissive cover is dirty/occluded ¹
	 HTR	Work status indicator ◆ Startup state: Off ◆ Off: The device does not start measuring/ready to restart ◆ Always on Equipment normal measurement ◆ Flash1 (0.5Hz) : Monitor Signal output ◆ Flash2 (1Hz) : Self-learning ² ◆ Flash3 (2.5Hz) : Ready to start self-learning ²
	 SLR	Operation button ◆ short press (1s~5s) Start background self-learning ◆ Long press $\geq 6s$: Delete background

1:Including being blocked by dense fog or the detection area being blocked.

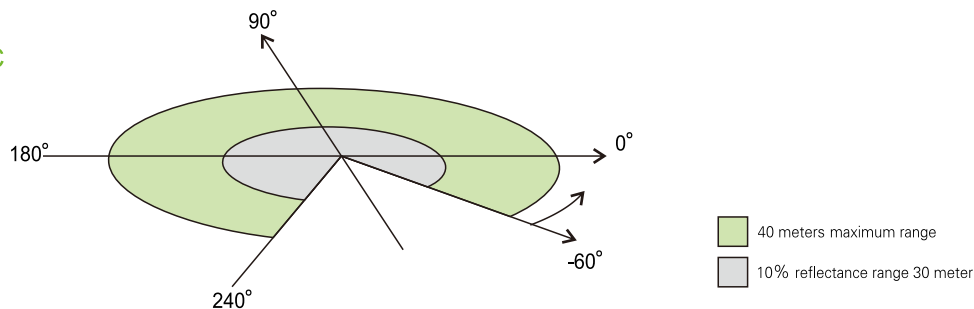
2:Including "background self-learning" and "normal goal self-learning"(customized function).

Measuring coordinate system/scan range/range

AS-21C



AS-41C



TOF principle

NEW!



Appearance	
Light source	Infrared laser(905nm)
Laser safety level	Class1(GB7247.1-2012, Eye-safe IEC)
Laser spot light diameter	10mm
Laser spot light scan angle	10.0(H) 2.0(V)mrad
Scanning angle range	360°
Scanning frequency	12.5Hz
Scanning angle resolution	0.5°
Sensing range	0.1m ~20m
10% reflectivity range	15m
Outdoor performance	Indoor, anti - light, anti - dirt
Rain fog and smoke penetration	Support
Measurement error	System error (typical) Statistical error (1σ)
	± 5cm (1m~15m) ± 2cm (1m~15m)
Built-in application	Monitoring mode: point number monitoring / target width monitoring / contour monitoring
Regional monitoring	Monitoring signal type: attention / warning / alarm Number of regional groups: 16 groups Number of concurrent work area groups: 16 (max) Can detect targets of any shape, support normal target self-learning function
Self-test equipment	Contents: Dirty cover / blocking / high temperature / low temperature; output method: indicator + TCP message
Ethernet	Rate: 10/100 Mbps; network protocol: TCP / IP; function: device configuration / measurement data output / monitor signal output
I/O Input	Quantity: 4; Type: Level input; High level range: 10V~28V DC; Low level range: 0V~5V DC; Preset function: monitoring area selection (0x0 ~ 0xF); area monitoring disarm / force alarm, effective level: high level;
I/O Output	Quantity: 4; Type: PNP switch output; Output voltage: power supply voltage; Power-on state: off; Device ready (OUT), valid state: on, zone detection signal output (OUT2 / OUT3 / OUT4) valid state: configurable
Indicator light	Quantity: 2; Definition: ERR (equipment alarm: failure / abnormality, dirty / transparent cover, high and low temperature, dense fog); HTR (operation status indication: detection signal / self-learning)
Operating voltage	12V~28V DC
Power	4.5W@DC 24V
Outer covering protection rank(IP)	IP65(GB4208-2008)
Insulation resistance	1M Ω (GB16796-2009.5.4.4)
Dielectric strength	0.5KV(GB16796-2009.5.4.3)
Weight	0.5kg
Dimension(L×W×H)	86.0 × 85.0 × 59.5(mm)
Electromagnetic compatibility (EMC)	Electrostatic discharge
	Fast bursts
	Electromagnetic field radiation immunity
	6KV (GB/T17626.2-2006, Class 3) 1KV (GB/T17626.4-2008, Class 2) GB/T17626.3-2006, Class 2
Surge immunity	GB/T17626.5-2008; Power interface: 1.2/50 μs, 2KV/1KA (Class 3) ; Ethernet interface: 10/700 μs, 1KV/25A (Class 2) ; I/O interface: 1.5/50 μs, 0.5KV/0.25KA (Class 1) ;
Impact	GB/T 2423.5
Single impact	15g, 11ms
Continuous impact	10g, 16ms
Vibration	GB/T 2423.10
Frequency Range	10Hz~150Hz
Amplitude	5g
Humidity	93% , +40℃ , 2h (GB/T 2423.3)
Operating temperature range	-10℃~+45℃
Storage temperature range	-30℃~+70℃
Ambient illumination range	≤70,000lux
Model NO.	AS-11C

Fiber Optic

Slot Sensors

Photoelectric

Laser

Proximity

Displacement

Magnetic

Contact

Area

Ultrasonic

Vibration

Temperature

Cables

Tester

Guidance

Displacement

TOF measurement

Mini digital display

Built-in controller

Linear

measurement

Magnetic

displacement

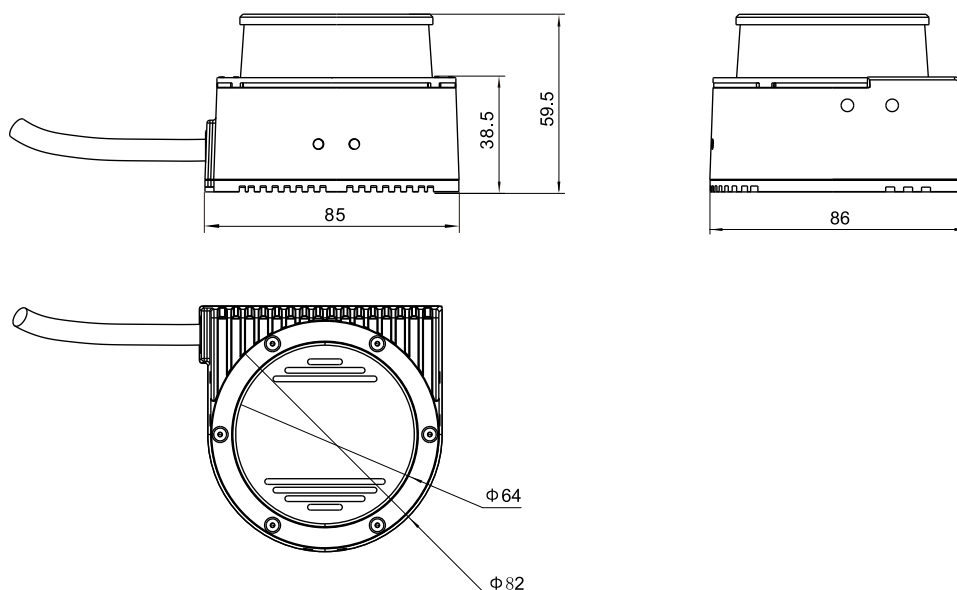
LiDAR Scanner

Color confocal

LiDAR Scanner

Dimensions

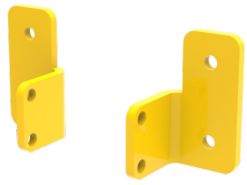
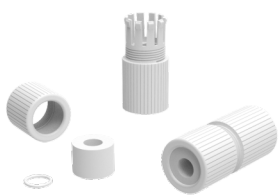
Unit:mm

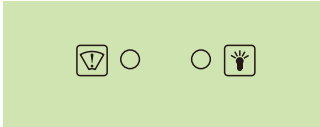


Power Interface

I/O Power Network port		Socket	Type	Explanation
		DC002	Power	Female 2 pin
		Ethernet	RJ45 socket	4 pin
		I/O	Cable	9 pin

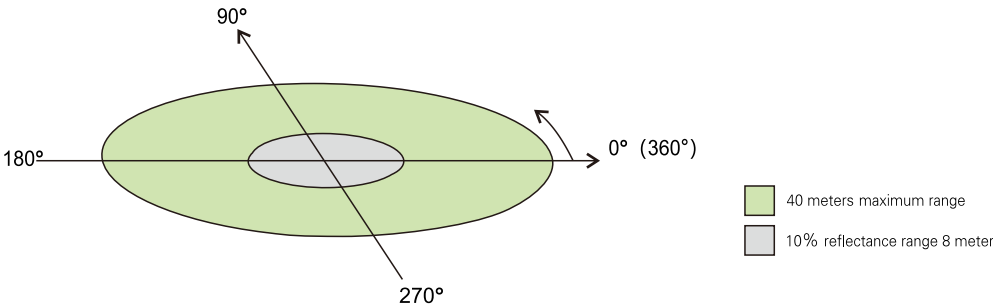
Accessories

			Mounting screws, gasket and easy installation tool
Side bracket: A AS-11C-AT	Cable:A piece of AS-11C-EC	Network cable crystal head waterproof jacket: A AS-11C-WJ	Accessories:A set of M4x8

	Name	Instructions
	 ERR	Work fault indicator ◆ Startup status: bright (About 27s) ◆ Off: No fault ◆ Steady light: Internal fault ◆ Long flicker (0.5 Hz): High temperature / low temperature alarm ◆ Short flicker (1Hz): Transmissive cover is dirty/occluded¹
	 HTR	Work status indicator ◆ Startup state: off ◆ Off: The device does not start measurement/ready to reboot ◆ Bright: Normal measurement of equipment ◆ Flashing 1 (0.5Hz): Monitor signal output ◆ Flashing 2 (1Hz): Self-learning² ◆ Flashing 3 (2.5Hz) : Ready for self-learning²

1:Including being blocked by dense fog or the detection area being blocked.
2:Including "background self-learning" and "normal goal self-learning"(customized function).

Measuring coordinate system/scan range/range



Fiber Optic

Slot Sensors

Photoelectric

Laser

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Temperature

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Tester

Guidance

Displacement

TOF measurement

Mini digital display

Built-in controller

Linear measurement

Magnetic displacement

LiDAR Scanner

Color confocal

LiDAR Scanner

Navigation type

TOF principle

NEW!



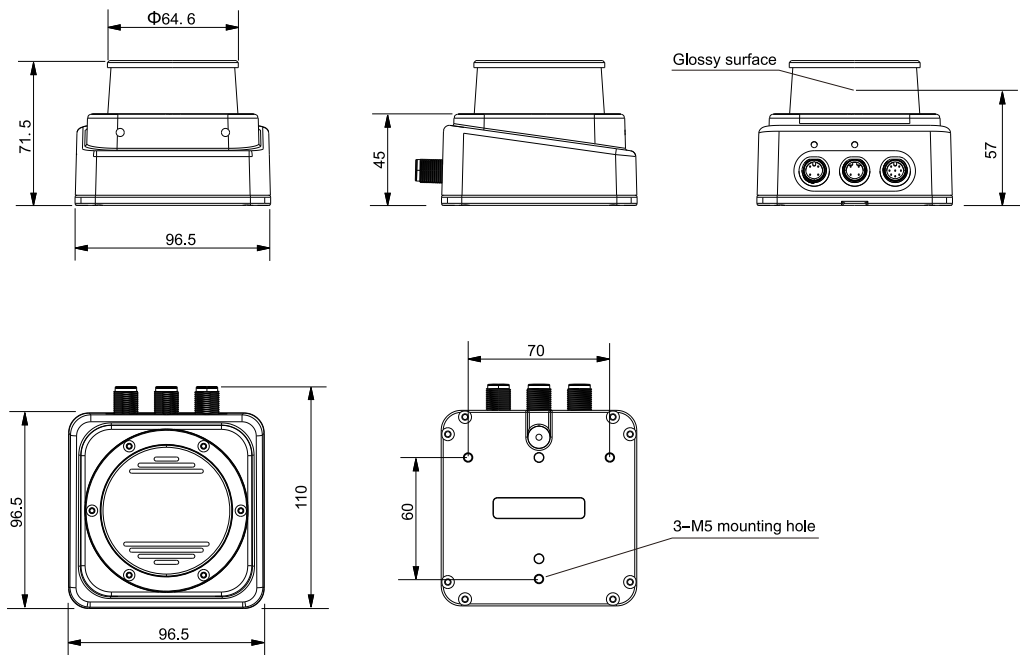
Appearance

Light source		Infrared laser (905nm)
Laser safety level		Class I (GB7247.1–2012, human eye safety)
Laser spot light diameter		10mm
Laser spot light scan angle		2.0(H)×8.0(V)mrad
Scanning angle range		360°
Scanning frequency		10Hz/20Hz
Scanning angle resolution		0.05° /0.1°
Sensing range		0.2m ~ 100m
RSSI Measurement Range		3% ~ 1000% (reflector)
10% reflectivity range		20m
Outdoor performance		Anti-sunlight, anti-dirt, support smoke penetration, use under non-rainfall conditio
Measurement data		Composite data (distance + RSSI)
Measurement error	System error (typical)	Distance measurement: 25mm(1m~20m) / 40mm(20m~50m); RSSI measurement: 2% (1m~20m) / 4% (20m~50m)
	Statistical error (1σ)	Distance measurement: 10mm(1m~20m) / 20mm(20m~50m); RSSI measurement: 1% (1m~20m) / 2% (20m~50m)
Self-test equipment		Content: Dirty/blocking/high temperature/low temperature of the translucent cove
Ethernet		Rate: 10/100 Mbps; function: device configuration/measurement data output
I/O Input		Quantity: 3; Type: level input (vs. general input common ground "GND IN"); high level range: 9 V – 30V DC; low level range: 0V–0.7V DC; Preset function: power saving and life extension control (In2 / In3), effective level: high lev
I/O Output		Quantity: 3; Type: PNP switch output (vs. power supply positive terminal); Power-on state: off; Preset function: equipment on Thread (OUT), effective state: op
Indicator light		Quantity: 4; Definition: PWR: power indicator; LNK: Ethernet indicator; ERR: working failure indicator; HTR: normal measurement indicator
Operating voltage		9V~30V DC
Power		5W@DC 24V
Outer covering protection rank(IP)		IP65(GB4208~2008)
Insulation resistance		1M Ω (GB16796~2009.5.4.4)
Dielectric strength		0.5KV(GB16796~2009.5.4.3)
Weight		0.7kg
Dimension(L×W×H)		97.0 × 97.0 × 72.0(mm)
Electromagnetic compatibility (EMC)	Electrostatic discharge	6KV (GB/T17626.2~2006, Class 3)
	Fast bursts	1KV (GB/T17626.4~2008, Class 2)
	Electromagnetic field radiation immunity	GB/T17626.3~2006, Class 2
Surge immunity		GB/T17626.5~2008; Power interface: 1.2/50 μs, 2KV/1KA (Class 3) ; Ethernet interface: 10/700 μs, 1KV/25A (Class 2) ; I/O interface: 1.5/50 μs, 0.5KV/0.25KA (Class 1) ;
Impact		GB/T 2423.5
Single impact		15g, 11ms
Continuous impact		10g, 16ms
Vibration		GB/T 2423.10
Frequency Range		10Hz~150Hz
Amplitude		5g
Humidity		93%, +40℃, 2h (GB/T 2423.3)
Operating temperature range		–10℃~+50℃
Storage temperature range		–30℃~+70℃
Ambient illumination range		≤80,000lux
Model NO.		AS-100C

Unit:mm

Dimensions

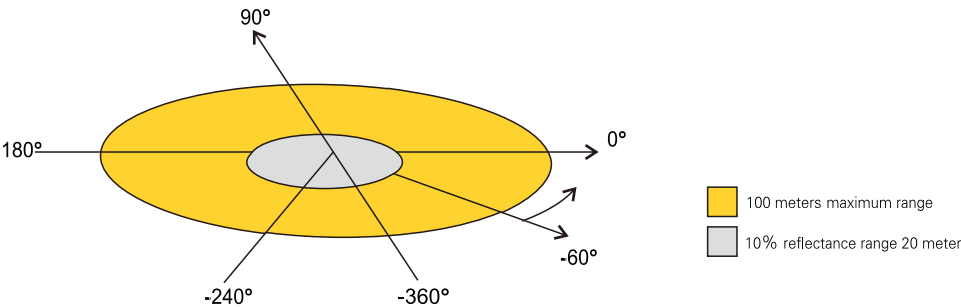
Displacement



Power connector

	Socket	Types	Number of terminal
	Power supply	M12(Type A), Male	4
	Etherne	M12(Type B), Male	4
	I/O	M12(Type B), Male	8

Measuring coordinate system/scanning range/range



- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic
- Contact
- Area
- Ultrasonic
- Vibration
- Temperature
- Cables
- Tester

Guidance

Displacement

- TOF measurement
- Mini digital display
- Built-in controller
- Linear measurement
- Magnetic displacement
- LiDAR Scanner
- Color confocal