Sensor Products Overview

ELCO
INDUSTRIAL AUTOMATION

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Inductive Sensor

SENSOR

Small Size Product Series
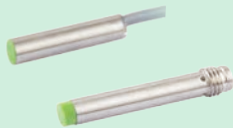
Small size product series in-clude KH03 / KM04 / KH04 / KM-05 / KH6.5 / KH08SS / M12SS. The products are designed in a compact shape and can be used in narrow spaces.

Technical Data

Rated operating distance	0.8 mm, 1 mm, 1.5 mm, 2 mm
Dimensions	M03 / M04 / M05 / M6.5 / M08 / M12
Voltage range	10 ... 30 V DC
Output	NPN / PNP / DC
Ambient temperature	-25 ... +70 °C
Protection class	IP67
Connection	Cable, connector
Housing material	Stainless steel, nickel plated brass

General Purpose Cylindrical M Series

M series products with metal housing, including M08 / M12 / M18 / M30 size, support DC 3-wire, AC-DC 2-wire output, IP67 protection level, high light LED indicator, widely used in a variety of mechanical equipment.

Technical Data

Rated operating distance	2 mm, 3 mm, 4 mm, 5 mm, 8 mm, 10 mm,
	15 mm, 10 mm, 15 mm
Dimensions	M08 / M12 / M18 / M30
Voltage range	10 ... 30 V DC / 20 ... 250 V AC/DC
Output	NPN / PNP / DC / AC
Ambient temperature	-25 ... +70 °C
Protection class	IP67
Connection	Cable, connector
Housing material	Nickel plated brass

High-performance Cylindrical G Series

High-performance cylindrical G series products, threaded cylindrical shape, with metal housing, including M05 / M08 / M12 / M18 / M30, support DC 3-wire, AC-DC 2-wire output, IP68 protection level, high light LED indicator, widely used in a variety of mechanical equipment and industry applications.

Technical Data

Rated operating distance	1.5 mm, 2 mm, 4 mm, 6 mm, 8 mm, 12 mm,
	15 mm, 16 mm, 15 mm, 20 mm, 22 mm, 30 mm
Dimensions	M05 / M08 / M12 / M18 / M30
Voltage range	10 ... 30 V DC / 20 ... 250 V AC/DC
Output	NPN / PNP / DC / AC
Ambient temperature	-30 ... +85 °C
Protection class	IP68
Connection	Cable, connector
Housing material	Stainless steel, nickel plated brass

Square Q Series

Square series products are mainly adopts PBT material shell and contains MQ08 / Q08 / Q12 / Q15C / Q18 / Q18C / Q25 / Q30 / Q40 / W40 / WL40 / W80 products such as size, support for DC, AC/DC output, IP67 degree of protection, highlighting the LED indicator light.

Technical Data

Rated operating distance	1.5 mm, 2 mm, 4 mm, 5 mm, 7 mm, 8 mm, 10 mm,
	15 mm, 20 mm, 25 mm, 40 mm, 50 mm, 70 mm
Dimensions	MQ08 / Q08 / Q12 / Q15C / Q18 / Q18C / Q25 /
	Q30 / Q40 / W40 / WL40 / W80
Voltage range	10 ... 30 V DC / 20 ... 250 V AC/DC
Output	NPN / PNP / DC / AC
Ambient temperature	-25 ... +70 °C
Protection class	IP67
Connection	Cable, connector, terminal
Housing material	PBT, stainless steel

All Metal Package Type

All-metal package products adopt stainless steel integrated package housing design, including M08 / M12 / M18 / M30 size, support DC 3-wire, AC-DC 2-wire output, IP67 protection level, PUR cable, high light LED indicator, suitable for food, machine tools and other equipment.

Technical Data

Rated operating distance	1 mm, 2 mm, 4 mm, 5 mm, 8 mm, 10 mm, 15 mm
Dimensions	M08 / M12 / M18 / M30
Voltage range	10 ... 30 V DC / 20 ... 250 V AC/DC
Output	NPN / PNP / DC / AC
Ambient temperature	-25 ... +70 °C
Protection class	IP67
Connection	Cable, connector
Housing material	Stainless steel

High Pressure Type

High pressure products with metal housing, up to 500 BAR, including M12 / M14 / M18 size, support DC, 3-wire output, IP68 protection level, widely used in construction machinery and other equipment.

Technical Data

Rated operating distance	1.5 mm, 2 mm, 3 mm
Dimensions	M12 / M14 / M18
Voltage range	10 ... 30 V DC
Output	NPN / PNP
Ambient temperature	-25 ... +70 °C
Protection class	IP68
Connection	Connector
Housing material	Stainless steel

## Intrinsically Safe Series

The safety explosion-proof products include M05 / M6.5 / M08 / M12 / M18 / M30 / C40 / CL40 / C80 size, support NAMUR output, AC-DC 2-line output, protection level, high brightness LED indicator, widely used in explosion-proof equipment and explosion-proof environment.

Technical Data

Rated operating distance	1 mm, 1.5 mm, 4 mm, 5 mm, 8 mm, 10 mm, 15 mm, 20 mm, 40 mm, 50 mm
Dimensions	M05 / M6.5 / M08 / M12 / M18 / M30 / C40 / CL40 / C80
Voltage range	7.7 ... 9 V DC
Output	DC
Ambient temperature	-25 ... +70 °C
Protection class	IP67
Connection	Cable, connector
Housing material	PBT, nickel plated brass

High Temperature Type
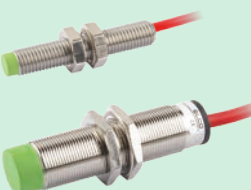
Square series products are mainly adopts PBT material shell and contains MQ08 / Q08 / Q12 / Q15C / Q18 / Q18C / Q25 / Q30 / Q40 / W40 / WL40 / W80, support for DC and AC/DC output, IP67 degree of protection, high lighting the LED indicator light, widely used in automobile, metallurgy, lifting, conveying and other industries.

Technical Data

Rated operating distance	2 mm, 4 mm, 5 mm, 8 mm, 10 mm, 15 mm
Dimensions	M08 / M12 / M18 / M30
Voltage range	10 ... 30 V DC / 20 ... 250 V AC/DC
Output	NPN / PNP / DC / AC
Ambient Temperature	-25 ... +70 °C
Protection class	IP67
Connection	Cable, connector
Housing material	Stainless steel, nickel plated brass

Inductive Sensor

Temperature Extension-low Temperature Series

Low temperature series product dimensions incluede M08 / M12 / M18 / M30 / W40 / WL40 / W80, the min-temperature is -40 °C, output support DC, 3 wire and AC/DC, 2-wire, IP67, LED indicator. It is used in code storage and refrig eration equipment.

Technical Data

|	
Rated operating distance	2 mm, 4 mm, 5 mm, 7 mm, 8 mm, 10 mm,
	15 mm, 20 mm, 30 mm, 40 mm, 50 mm, 70 mm
Dimensions	M08 / M12 / M18 / M30 / W40 / WL40 / W80
Voltage range	10 ... 30 V DC / 20 ... 250 V AC/DC
Output	NPN / PNP / DC / AC
Ambient Temperature	-40 ... +70 °C
Protection class	IP67
Connection	Cable, connector
Housing material	PA, nickel plated brass

PTFE-Coated Series

This series product coated is PTFE. Suitable for weiding scenarios, include M08 / M12 / M18 / M30, output support DC, 3-wire, IP67. LED indicator.It is used in welding equipment and automobile weiding stations.

Technical Data

Rated operating distance	2 mm, 3 mm, 4 mm, 5 mm, 8 mm, 10 mm
Dimensions	M08 / M12 / M18 / M30
Voltage range	10 ... 30 V DC
Output	NPN / PNP
Ambient Temperature	-25 ... +70 °C
Protection class	IP67
Connection	Cable, connector
Housing material	Nickel plated brass

Analog Output Series
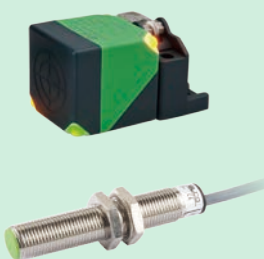
Analog output series product dimensions include metal barrel M12 / M18 / M30 and square W40, output support analog current and volatge the product has high stability IP67, LED indicator. It is widely used in the wind power industry.

Technical Data

Rated operating distance	2 mm, 3 mm, 4 mm, 5 mm, 8 mm, 10 mm,
	15 mm, 10 mm, 15 mm
Dimensions	M12 / M18 / M30 / W40
Voltage range	15 ... 30 V DC
Output	I/U
Ambient Temperature	-25 ... +70 °C
Protection class	IP67
Connection	Cable, connector
Housing material	PA, nickel plated brass

Factor=1 Series

Factor=1 series product housing material include stainless steel and PTFE-coated. It can detection coppor and aluminum no-attenuation. Dimensions include M12 / M18 / M30, output support DC, 3-wire, IP67, LED indicator. It is widely used in the detection of non-iron materials.

Technical Data

Rated operating distance	4 mm, 8 mm, 15 mm
Dimensions	M12 / M18 / M30
Voltage range	10 ... 30 V DC
Output	NPN / PNP
Ambient Temperature	-25 ... +70 °C
Protection class	IP67
Connection	Connector
Housing material	Stainless steel, PTFE-Coated

Clamp Position Sensor Series

Low temperature series product dimensions incluede M08 / M12 / M18 / M30 / W40 / WL40 / W80, the min-temperature is -40 °C, output support DC, 3 wire and AC/DC, 2-wire, IP67, LED indicator. It is used in code storage and refrig eration equipment.

Technical Data

Rated operating distance	2 mm
Dimensions	47 x 18 x 18 mm
Voltage range	10 ... 30 V DC
Output	NPN / PNP
Ambient Temperature	-25 ... +70 °C
Protection class	IP67
Connection	Connector
Housing material	PBT

Capacitive Sensor

SENSOR

Metal Housing Capacitive Sensor Series

The product used metal housing. Dimensions include M12 / M18 / M30, output support DC, 3-wire, AC, 2-wire, it has the sensitivity adjusting, IP67, LED indicator. The product is used in lithium battery, photovoltaic cleaning, glass machinery industry.

Technical Data	
Rated operating distance	2 mm, 4 mm, 5 mm, 8 mm, 10 mm, 12 mm,
	15 mm, 22 mm
Dimensions	M12 / M18 / M30
Voltage range	10 ... 30 V DC / 20 ... 250 V AC/DC
Output	PNP / NPN / AC
Ambient temperature	-25 ... +70 °C
Protection class	IP67
Connection	Cable, connector
Housing material	Stainless steel, nickel plated brass

Plastic Housing Capacitive Sensor Series

The product used plastic housing. Dimensions include M12 / M18 / M30 / S34, output support DC, 3-wire, AC, 2-wire, it has the sensitivity adjusting, IP67, LED indicator. The product is used in lithium battery, photovoltaic cleaning, glass machinery industry.

Technical Data	
Rated operating distance	2 mm, 4 mm, 5 mm, 8 mm, 10 mm, 12 mm,
	15 mm, 22 mm
Dimensions	M12 / M18 / M30 / S34
Voltage range	10 ... 30 V DC / 20 ... 250 V AC/DC
Output	PNP / NPN / AC
Ambient temperature	-25 ... +70 °C
Protection class	IP67
Connection	Cable, connector
Housing material	PBT

Plastic Square Capacitive Sensor Series

The product used plastic material housing, support multiple mounting sizes output support DC, 3-wire, it has the sensitivity adjusting, IP67, LED indicator. The product is used in lithium battery, photovoltaic cleaning, glass machinery industry.

Technical Data	
Rated operating distance	8 mm, 10 mm
Dimensions	Q07 / Q34
Voltage range	10 ... 30 V DC
Output	PNP / NPN
Ambient temperature	-25 ... +70 °C
Protection class	IP67
Connection	Cable, connector
Housing material	PBT

Capacitive Level Measurement Series

The product use plastic housing, output support DC 3-wire, it has the sensitivity adjusting, IP67, LED indicator. The product is used in lithium battery, photovoltaic cleaning, nonstandard equipment and other industries.

Technical Data	
Serial wall thickness/	≤ 1 mm@ Ø 8-11 mm,
pipe diameter	≤ 1.5 mm@ Ø 12-26 mm
Dimensions	F43
Voltage range	10 ... 30 V DC
Output	PNP / NPN
Ambient temperature	-25 ... +70 °C
Protection class	IP67
Connection	Cable
Housing material	PBT

SENSOR

Ultrasonic Sensor

Metal Housing M18 Series

Metal housing M18 product, output support DC, 3-wireand analog voltage and current. The setting distance is operated by setting line, IP65, LED indicator, small blind spots, small sound cones, support for short distance.

Technical Data

Rated operating distance	150 mm, 350 mm, 500 mm, 1000 mm
Dimensions	M18
Voltage range	15 ... 30 V DC
Output	PNP / NPN / analog
Ambient temperature	-25 ... +70 °C
Protection class	IP65
Connection	Connector
Housing material	Nickel plated brass

Metal Housing M30 Series

Metal housing M30 product, the max rated operating distance is 4 m, output support DC, 3-wire and analog voltage. The setting distance is operated by settingline, IP65, LED indicator, support for medium and long-range detection.

Technical Data

Rated operating distance	3000 mm, 4000 mm
Dimensions	M30
Voltage range	15 ... 30 V DC
Output	PNP / NPN / analog
Ambient temperature	-25 ... +70 °C
Protection class	IP65
Connection	Connector
Housing material	Nickel plated brass

Double Sheet Sensor Series

Double sheet sensor, housing diameter M18, the product is based on the ultrasonic thru-beam principle, output support 2 x DC 3-wire. The setting distance is operated by setting line, IP65, LED indicator, applied to inspections single sheet and double sheet.

Technical Data

Rated operating distance	60 mm
Dimensions	M18
Voltage range	18 ... 30 V DC
Output	PNP / NPN
Ambient temperature	-25 ... +70 °C
Protection class	IP65
Connection	Connector
Housing material	Nickel plated brass

Universal Photoelectric Sensor

OP12

- Plastic M12 cylindrical mounting mode
- Products adopts infrared light
- Strong resistance to environmental light interference
- Compact body, used in 3C electronics, subway brake, semiconductor and other industries

Technical Data	
Detection mode	Opposed
Distance	5 m
Light source	Infrared
Output	NPN; PNP
Switching mode	Light-on; dark-on
Operating voltage	10 ... 30 V DC
Load current	≤ 50 mA
Ambient temperature	-10 ... +50 °C
Connection	2 m PVC cable

OP18

- Plastic M18 cylindrical mounting mode
- High cost performance, rich model selection
- TK series Review-Vitreous body detection
- Used in logistics conveying, car washing machine, glass machinery and other industries

Technical Data	
Detection mode	Opposed; retro-reflective; diffused;
	diffuse reflective vitreous body detect
Distance	Opposed: 10 m; retro-rflective: 3 m;
	diffused: 100, 200, 400, 600 mm;
	diffuse reflctive vitreous body detect: 50, 100
Light source	Infrared, red light
Output	NPN, PNP
Switching mode	Light-on and dark-on
Operating voltage	10 ... 30 V DC
Load current	≤ 100 mA
Ambient temperature	-25 ... +65 °C
Connection	2 m PVC cable; M12 connector, 4-pin

OM18

- Metal M18 cylindrical mounting mode
- Rich model selection, including laser opposed
- TK series Review-Vitreous body detection
- Used in logistics conveying, car washing machine, glass machinery and other industries

Technical Data	
Detection mode	Opposed; retro-reflective; diffused;
	diffuse reflective vitreous body detect
Distance	Opposed: 10, 30, 60 m; retro-rflective: 3 m;
	diffused: 100, 200, 400, 600 mm;
	diffuse reflective vitreous body detect:
	50, 100, 200, 300 mm
Light source	Red laser; infrared; red light
Output	NPN; PNP
Switching mode	Light-on and dark-on
Operating voltage	10 ... 30 V DC
Load current	≤ 100 mA
Ambient temperature	-25 ... +65 °C
Connection	2 m PVC cable; M12 connector, 4-pin

OG18

- Plastic M18 short cylindrical installation mode
- Opposed-red/infrared light optional
- Products include fixed distance BGS diffuse
- Used in logistics conveying, brake machine, packaging machinery and other industries

Technical Data

Detection mode	Opposed; tetro-reflective; diffused; fixed distance BGS
Distance	Opposed: 25, 30m; retro-reflective: 3.5; diffused: 200, 400, 600 mm; fixed distance BGS: 50, 100, 150, 200 mm
Light source	Infrared; red light
Output	NPN; PNP
Switching mode	Light-on and dark-on; Light-on/dark-on
Operating voltage	10 … 30 V DC
Load current	≤ 100 mA
Ambient temperature	-25 … +55 °C
Connection	2 m PVC cable; M12 connector, 4-pin

OSQ18

- Plastic M18 cylindrical and rectangular mounting mode
- Laser opposed 30 m, laser retro-reflective 8 m
- Can provide fixed distance BGS diffuse
- Used in logistics transportation, photovoltaic, three-dimensional garage and other industries

Technical Data

Detection mode	Opposed; retro-reflective; diffused; fixed distance BGS
Distance	Opposed: 25, 30 m; retro-reflective: 3.5, 8 m; diffused: 200, 400, 600 mm; fixed distance BGS: 50, 100, 150, 200 mm
Light source	Red laser; infrared ; red light
Output	NPN; PNP
Switching mode	Light-on and dark-on
Operating voltage	10 … 30 V DC
Load current	≤ 100 mA
Ambient temperature	-25 … +55 °C
Connection	2 m PVC cable; M12 connector, 4-pin

OS4

- Plastic sheet design, small body
- Frontal firing and side firing
- Fixed range BGS diffuse has excellent black and white attenuation characteristics
- Used in lithium coating machine, 3C, semiconductor and other industries

Technical Data

Detection mode	Opposed (front, side); diffused, fixed distance BGS
Distance	Opposed: 500 mm, 1 m; diffused: 30 mm; fixed distance BGS: 15, 30 mm
Light source	Red light
Output	NPN; PNP
Switching mode	Light-on; dark-on
Operating voltage	10 … 30 V DC
Load current	≤ 50 mA
Ambient temperature	-10 … +55 °C
Connection	2 m PVC cable

Universal Photoelectric Sensor

OS22

- Plastic small square, small body, adhesive process design
- Red light and infrared light are optional
- BGS can provide fixed range and adjustable range products
- Used in photovoltaic logistics, 3C, semiconductor and other industries

Technical Data

Detection mode	Opposed; BGS
Distance	Opposed: 1, 2 m; BGS: 15, 30, 120 mm
Light source	Infrared; red light
Output	NPN; PNP
Switching mode	Light-on; dark-on
Operating voltage	10 ... 30 V DC
Load current	≤ 50 mA
Ambient temperature	-10 ... +55 °C
Connection	2 m PVC cable

OS10

- Plastic small square, standard mounting hole spacing 25.4 mm
- Infrared light, red light, laser optional
- BGS diffuse has excellent black and white attenuation characteristics
- Used in logistics transportation, photovoltaic, lithium and other industries

Technical Data

Detection mode	Opposed; retro-reflective; diffused; BGS
Distance	Opposed: 25, 30 m; retro-reflective: 3, 5 m;
	diffused: 1000 mm; BGS: 65, 150, 350 mm
Light source	Red laser; infrared; red light
Output	NPN; PNP
Switching mode	Light-on / dark-on
Operating voltage	10 ... 30 V DC
Load current	≤ 100 mA
Ambient temperature	-25...+55 °C
Connection	2 m PVC cable; M8 connector, 4-pin

OS10S

- Plastic small square, standard mounting hole spacing 25.4 mm
- Red light source design, light and dark current level meter can be adjusted
- TOF long distance BGS diffuse, the detection distance is not affected by the color of the measured object
- Used in logistics transportation, photovoltaic, lithium and other industries

Technical Data

Detection mode	Opposed; retro-reflective; diffused; BGS;
	vitreous body detect; BGS TOF
Distance	Opposed: 10, 30 m; retro-reflective: 3, 5 m;
	diffused: 150, 350 mm; vitreous body detect:
	100, 250 mm; BGS TOF: 1000, 1500, 4000 mm
Light source	Red laser; infrared; red light; Blue light
Output	NPN; PNP; RS485
Switching mode	Light-on; dark-on; Light-on / dark-on
Operating voltage	10 ... 30 V DC
Load current	≤ 100 mA
Ambient temperature	-25 ... +55 °C
Connection	2 m PVC cable; M8 connector, 4-pin

OS10U

- Plastic small square, encapsulation process design
- Laser light source, button teaching detection distance
- Triangulation ranging principle Diffused, mm level high-precision detection
- Used in automotive parts, 3C, semiconductor and other industries

Technical Data

Detection mode	Triangulation ranging principle diffused;
	Retro-reflective (Vitreous body detect)
Distance	Diffused: 30 … 300 mm
Light source	Red laser; Blue light
Output	NPN; PNP; Push-Pull; RS485; IO-Link
Switching mode	Light-on / dark-on
Operating voltage	10 … 30 V DC
Load current	≤ 100 mA
Ambient temperature	-20 … +50 °C
Connection	2 m PVC cable

OS20

- Plastic small square, compatible mounting hole spacing
- BGS is a product that provides the detection distance of linear light source
- No dead zones in the coaxial, precise location function
- Used in pharmaceutical machinery, patch machine, food machinery and other industries

Technical Data

Detection mode	BGS; polarized retro-reflective detection
Distance	BGS: 100, 300 mm; retro-reflective: 5m
Light source	Red laser; infrared; red light
Output	PNP; NPN
Switching mode	Light-on / dark-on
Operating voltage	10 … 30 V DC
Load current	≤ 100 mA
Ambient temperature	-25 … +55 °C
Connection	2 m PVC cable; M8 connector, 4-pin

OS50

- Plastic square 50*50 size, adjustable connector direction
- Infrared light, red light, laser optional, long detection distance
- Can provide wide voltage power supply, relay output
- Used in garage, storage, logistics, crane collision prevention and other industries.

Technical Data

Detection mode	Opposed; retro-reflective; diffused
Distance	Opposed: 20, 40, 60 m; retro-reflective: 6, 10 m;
	diffused: 1000, 2500, 3500, 7000 mm
Light source	Red laser; infrared; red light
Output	PNP; NPN; relay
Switching mode	Light-on and dark-on; NO and NC
Operating voltage	10 … 30 V DC (NPN,PNP);
	24 … 240 V AC/DC (relay)
Load current	≤200 mA (NPN,PNP); ≤3A (relay)
Ambient temperature	-25 … +55 °C
Connection	2 m PVC cable; M12 connector, 4-pin

Universal Photoelectric Sensor

OSM70

- Metal large square, laser light source, long detection distance
- Can provide wide voltage power supply, relay output
- Laser mirror adopts coaxial technology, no blind area
- Used in automobile manufacturing, metallurgy, stacker, crowning and other industries

Technical Data

Detection mode	Opposed; retro-reflective; BGS TOF
Distance	Opposed: 150 m; retro-reflective: 25, 30 m;
	BGS TOF: 3, 4 m
Light source	Red laser; infrared
Output	PNP; NPN; relay
Switching mode	Light-on and dark-on; NO + NC
Operating voltage	10 ... 30 V DC (NPN,PNP);
	24 ... 240 V AC/DC (relay)
Load current	≤ 200 mA (NPN,PNP); ≤ 3A (relay)
Ambient temperature	-25 ... +55 °C
Connection	2 m PVC cable; M12 connector, 4-pin

Measuring Type Photoelectric Sensor

OSM40

- Stainless steel housing, laser displacement sensor
- LED display and button setting
- Output switching quantity, analog, RS485, IO-link optional
- Used in auto parts, AGV, new energy and other industries

Technical Data

Detection mode	Laser displacement
Distance	25 ... 35 mm, 35 ... 70 mm, 60 ... 160 mm,
	100 ... 300 mm, 150 ... 800 mm, 110 ... 1000 mm,
	150 ... 2000 mm
Light source	Red laser
Output	2 x NPN/PNP, NPN/PNP and analog mA/V,
	NPN/PNP and 485, NPN/PNP and IO-Link
Switching mode	Light-on / dark-on
Operating voltage	10 ... 30 V DC
Load current	≤ 150 mA
Ambient temperature	-10 ... +50 °C
Connection	2 m PVC cable, M12 connector, 5-pin

SENSOR

Measuring Type Photoelectric Sensor

OSM41

- Metal housing, laser displacement sensor
- LED display and button setting
- High precision displacement ranging and long distance TOF ranging
- Used in auto parts, AGV, wind power, dispensing machine and other industries

Technical Data

Detection mode	Laser displacement; Laser TOF
Distance	Laser displacement: 30±5 mm, 50±15 mm,
	100±35 mm, 200±80 mm, 400±200mm;
	Laser TOF: 50 … 2500, 50 … 4000 mm, 0.1 … 10 m
Light source	Red laser, Infrared laser
Output	2 x NPN/PNP; NPN/PNP and analog mA/V;
	NPN/PNP and 485
Switching mode	Light-on / dark-on
Operating voltage	10 … 30 V DC
Load current	≤ 150 mA
Ambient temperature	-10 … +50 °C
Connection	2 m PVC cable

OSM42

- Metal housing, laser ranging switch
- Button to teach detection distance
- Two switch output
- Used in automotive parts, stackers, shuttle cars and other industries

Technical Data

Detection mode	Laser displacement; laser TOF
Distance	Laser displacement: 150 … 1200 mm,
	150 … 150 mm, 150 … 2000 mm;
	laser TOF: 50 … 2500, 50 … 4000 mm
Light source	Red laser
Output	2 x Push-Pull
Switching mode	Light-on / dark-on
Operating voltage	10 … 30 V DC
Load current	≤ 150 mA
Ambient temperature	-10 … +50 °C
Connection	2 m PVC cable

OSM45

- Metal housing, laser ranging sensor
- LED display and button setting
- Output switching quantity, analog quantity, RS485
- Used in new energy, woodworking machinery, 3C electronics and other industries

Technical Data

Detection mode	Laser displacement
Distance	25 … 300 mm, 35 … 310 mm, 25 … 500 mm,
	35 … 510 mm
Light source	Red laser
Output	NPN/PNP and analog mA/V; NPN/PNP and 485
Switching mode	Light-on / dark-on
Operating voltage	10 … 30 V DC
Load current	≤ 150 mA
Ambient temperature	-10 … +50 °C
Connection	2 m PVC cable; M12 connector, 5-pin

Measuring Type Photoelectric Sensor

OSM58

- Metal housing, laser ranging sensor
- LED display and button setting
- Output switching quantity, analog quantity, RS485, IO-LINK
- Used in automobile manufacturing, AGV, crane collision prevention and other industries

Technical Data

Detection mode	Laser displacement
Distance	0.15 … 5 m
Light source	Red laser
Output	NPN/PNP + analog mA/V + IO-LINK;
	NPN/PNP + analog mA/V + RS485
Switching mode	Light-on / Dark-on
Operating voltage	10 … 30 V DC
Load current	≤ 150 mA
Ambient temperature	-10 … +50 °C
Connection	M12 connector, 5-pin; M12 connector, 8-pin

OSM61

- Metal housing, μm class laser ranging sensor
- LED display and button setting
- Output switching quantity, analog quantity, RS485
- Used in new energy, 3C, semiconductor and other industries

Technical Data

Detection mode	Laser displacement
Distance	30±4 mm, 50±10 mm, 85±20 mm, 120±60 mm,
	250±150 mm
Light source	Red laser
Output	2 x Push-Pull and analog mA/V and RS485
Switching mode	Light-on / dark-on
Operating voltage	10 … 30 V DC
Load current	≤ 150 mA
Ambient temperature	-10 … +50 °C
Connection	2 m PVC cable

OSMT60

The OSMT60 series needs to be used with the OSC1 controller with a push-button teaching function. A variety of working modes are available, and there are multiple output types at the same time.

The M1-EC6 communication unit module can be connected to the OSC1 series controller EtherCAT network. It can be operated directly on the host computer, and the parameters can be adjusted remotely, Easy to debug.

Used in packaging machinery, lithium, textile machinery and other industries.

Technical Data

Detection mode	Opposed
Distance	Measuring width: 10 mm; distance: 0-300 mm
Light source	Red laser
Output	2 x Push-Pull and analog mA/V;
	2 x Push-Pull and RS485
Switching mode	Light-on / dark-on
Operating voltage	12 … 24 V DC
Load current	≤150 mA
Ambient temperature	-10 … +50 °C
Connection	2 m PVC cable

OSM60A

- OSM60A can teach marginal locations or areas.
- Improve reliability and process stability by teaching edge comparison.
- It has the characteristics of high precision, high sensitivity and high resistance to light interference.
- Used in packaging printing, electronic manufacturing and other industries.

Technical Data

Detection mode	Diffused deviation correction
Distance	Measuring width: 32 mm;
	Detection distance: 100±4 mm
Light source	White LED
Output	IO-LINK
Switching mode	Configurable
Operating voltage	12 ... 24 V DC
Load current	≤ 150 mA
Ambient temperature	-10 ... +50 °C
Connection	M12 connector, 5-pin

OSM300

- Metal shell, mirror reflection ranging up to 100 meters
- Rich fieldbus interface
- LED display and button setting
- Suitable for stackers, automatic parking systems, lifting equipment, etc

Technical Data

Detection mode	Retro-reflective laser ranging;
	Diffused laser ranging
Distance	Retro-reflective: 0.15...100m;
	Diffused: 0.15 ...20m
Light source	Red laser
Output	Ethernet/IP and SSI; ProfiNet and SSI;
	IO-Link + analog mA/V + NPN/PNP + RS422
Operating voltage	18 ... 30 V DC
Ambient temperature	-20 ... +55 °C
Connection	M12 4-pin, M12 connector, 4-pin

SENSOR

Optical
Data Transmitter

ODC300

- Metal housing, optical data transmission
- Parallel optical axis operation, no reflection surface interference
- Fast transparent transmission without communication protocol, up to 100 M bit/s
- Common interface types EtherNet TCP/IP, PROFINET
- Used in automobile manufacturing, three-dimensional warehouse, stacker and other industries

Technical Data

Detection mode	Optical data transmission
Distance	0.1 ... 120 m
Light source	Red laser, Infrared laser
Interface type	Main type ProfiNet
Transmission rate	100 M bit/s
Output	PNP / NPN / PP
Operating voltage	18 ... 30 V DC
Ambient temperature	-20 ... +50 °C
Connection	M12 4-pin; M12 connector, 4-pin

Color and Color Marker Sensors

OSM47

- Metal housing, spot size adjustable
- LED digital display and button teaching
- Long detection distance, support IO-Link
- Used in logistics transportation, packaging machinery, new energy and other industries

Technical Data

Detection mode	Color detect
Distance	30 ... 500 mm
Light source	White LED
Output	2 × NPN / PNP; NPN / PNP AND IO-Link
Switching mode	Light-on / dark-on
Operating voltage	10 ... 30 V DC
Load current	24 V DC 65 mA
Ambient temperature	-20 ... +50 °C
Connection	2 m PVC cable; M12 connector, 5-pin

OS48

- Using three-color RGB light source
- Color label mode and color mode are optional
- Ultra-fast response speed
- Used in packaging, printing, paper and other industries

Technical Data

Detection mode	Color detect
Distance	10±3 mm
Light source	Red / green / blue composite LED
Output	NPN, PNP
Switching mode	Light-on / Dark-on
Operating voltage	DC 12 ... 24 V
Load current	≤ 100 mA
Ambient temperature	-10 ... +50 °C
Connection	2 m PVC cable

Optical Fiber sensor

OC10

- All series with digital display function;
- 23 us high response speed;
- With one-key setting, automatic maintenance, high power, zero transfer function;
- Support cascading function, the main unit can be cascaded with 16 expansion units;
- The multifunctional output unit can be cascaded with 8 linear expansion units;
- Used in 3C electronics, lithium, photovoltaic, semiconductor and other industries.

Technical Data

Detection mode	Opposed; Retro-reflective;
	Diffused (Depends on the type of fiber)
Light source	Red 4-element LED (wavelength 630 nm)
Output	NPN, PNP, IO-link, Analog
Switching mode	Light-on / Dark-on
Operating voltage	DC 12 ... 24 V
Load current	Free-standing type ≤ 100 mA,
	Cascade type ≤ 20 mA
Ambient temperature	-10 ... +50 °C
Connection	2 m PVC cable; M8 connector, 4-pin

Contact Displacement Sensor

SENSOR

GM

- The GM-H detection head needs to be used with the GM-K controller;

Controller key teaching, a variety of working modes can be selected;

The controller can be cascaded with 8 sensors, GM-EC communication unit with EC interface;

Used in automotive, photovoltaic, semiconductor and other industries.

Technical Data

Detection mode	Contact measurement
Distance	32 mm
Measurement accuracy	3 um
Output	2 x Push-Pull + AnalogV/mA; 2xPush-Pull + RS485
Switching mode	Light-on / Dark-on
Operating voltage	12 ... 24 V DC
Load current	≤ 150 mA
Ambient temperature	-10 ... +50 °C
Connection	2 m PVC cable

Intelligent 3D laser Profile Sensor

SENSOR

LVM21

- Adopting high-performance lasers, low-distortion optical components, and ultra-high-precision CMOS

- Each profile is composed of 1456 points, with a maximum repeatable accuracy of 0.5 micrometers (µm) along the Z-axis, and a selectable field of view ranging from 19mm to 1160mm

- Using multiple exposure technology,Maximum scan rate 5000 Hz

- The built-in powerful embedded 3D measurement tool processes the sampled data at high speed, and the measurement results are output in real time without additional calculation

Technical Data

Data points	1456
Repeatability Z	0.5 µm
Scan rate	270-5000 Hz
Field of view (MAX)	1160 mm
Light source wavelength	405 nm / 660 nm
Protocols	Modbus, ProfiNet

Intelligent 3D laser Profile Sensor

LVM22

- Adopting high-performance lasers, low-distortion optical components, and ultra-high-precision CMOS

- Each profile is composed of 2048 points, with a maximum repeatable accuracy of 0.4 micrometers (μm) along the Z-axis, and a selectable field of view ranging from 27mm to 600mm

- Using multiple exposure technology, Maximum scan rate 5000 Hz

- The built-in powerful embedded 3D measurement tool processes the sampled data at high speed, and the measurement results are output in real time without additional calculation

Technical Data	
Data points	2048
Repeatability Z	0.4 μm
Scan rate	240-5000 Hz
Field of view (MAX)	600 mm
Light source wavelength	405 nm / 660 nm
Protocols	Modbus, ProfiNet

LVM23

- Adopting high-performance lasers, low-distortion optical components, and ultra-high-precision CMOS

- Each profile is composed of 1456 points, with a maximum repeatable accuracy of 0.3 micrometers (μm) along the Z-axis, and a selectable field of view ranging from 19mm to 1160mm

- Using multiple exposure technology, Maximum scan rate 12000 Hz

- The built-in powerful embedded 3D measurement tool processes the sampled data at high speed, and the measurement results are output in real time without additional calculation

Technical Data	
Data points	4200
Repeatability Z	0.3 μm
Scan rate	316-12000 Hz
Field of view (MAX)	2000 mm
Light source wavelength	405 nm / 660 nm
Protocols	Modbus, ProfiNet

LVM24

- Adopting high-performance lasers, low-distortion optical components, and ultra-high-precision CMOS

- Each profile is composed of 3200 points, with a maximum repeatable accuracy of 0.1 micrometers (μm) along the Z-axis, and a selectable field of view ranging from 9.3 mm to 2332.8 mm

- Using multiple exposure technology, Maximum scan rate 40000 Hz

- The built-in powerful embedded 3D measurement tool processes the sampled data at high speed, and the measurement results are output in real time without additional calculation

Technical Data	
Data points	3200
Repeatability Z	0.1 μm
Scan rate	1400-40000 Hz
Field of view (MAX)	2332.8 mm
Light source wavelength	405 nm / 660 nm
Protocols	Modbus, ProfiNet

LVM25

- Adopting high-performance lasers, low-distortion optical components, and ultra-high-precision CMOS

- Each profile is composed of 4096 points, with a maximum repeatable accuracy of 0.1 micrometers (µm) along the Z-axis, and a selectable field of view ranging from 21.6 mm to 975.4 mm

- Using multiple exposure technology,Maximum scan rate 37900 Hz

- The built-in powerful embedded 3D measurement tool processes the sampled data at high speed, and the measurement results are output in real time without additional calculation

Technical Data

Data points	4096
Repeatability Z	0.1 µm
Scan rate	2000-37900 Hz
Resolution X (MIN)	5.3 um
Light source wavelength	405 nm/660 nm
Protocols	Modbus, ProfiNet

SENSOR

2D Adhesive camera

LVM-GD

- By detecting the width, position and continuity of the glue , the glue detection system realizes the online monitoring and de fect warning of the glue quality. The system collects the glue image in real time, analyzes the characteristics of the glue in the image, judges the quality of the glue , and finally feeds the detection results to the robot.

- Main functions: online monitoring of the glue quality, detecting the position, width and continuity of the glue

- System time-consuming: real-time detection in the rubber gun work, do not occupy the production beat

- Analyze data: store images and data, provide data reports for process analysis and quality tracing

- Practical application: for the glue quality testing in automobile production

Technical data

Number of cameras	3
Single camera pixel	1440*1080
Installation distance (mm)	140±10
Single-camera view (mm)	upper 85, lower 94,
	waist 68
Resolution (mm/ pixel)	0.07
Detection accuracy (mm)	≥ 0.2
Frame rate (fps)	≤ 24

Code Reader

SENSOR

BC50

Able to flexibly read multiple barcode types, regardless of barcode orientation.

Adaptable to various barcode conditions, such as distortion, damage, and low lighting.

Excellent decoding performance to meet most conventional applications.

Extensive parameter configurations to cater to users in multiple industries.

Automatic switching between multiple parameter sets to adapt to changing environments.

Convenient debugging features such as automatic teaching and code self-learning.

Compact structure for flexible installation, supporting networking of multiple devices.

- Support for 1D and 2D code detection
- Small appearance, suitable for small space
- Can be set with keys and software, easy to operate
- LED lighting light source, can be controlled up and down separately
- Supports RS232, Profinet, and TCP/IP communication
- With a conventional light source and a polarized light model
- With high cost performanc

Safety Products

SENSOR

Safety Light Curtain

- TYPE 2, TYPE 4, IEC ISO13849-1, IEC 61508
- Metal slim housing, durable
- Distance: Max. 19 m
- Rich product specifications, protection height: 150 mm ... 1800 mm
- Multiple resolutions are optional: 14, 30, 50, 90 mm
- EDM function
- Automatic / manual reset function
- Applied to machine tools, automobiles, logistics, printing and packaging, rubber and plastic machinery and other industries

SENSOR

Safety Products

Safety Scanner

- Scanning range: 0-275°
- Safety Operating Range: Max. 5.5 m
- Warning zones up to 40 m
- 30 / 40 / 50 / 70 / 150 mm selectable detection capability
- Partial dynamic muting
- Metal brackets allowing full orientation and fast replacement

Obstacle Avoidance & Measurement Laser Radar

- Compact size
- Scanning Range: Max. 40 m
- Large scanning range: 0-270°
- No blind area, reliable detection near the window
- Excellent anti-light interference performance
- Multi-user monitoring, 4 customers can access the configuration software at the same time

Safety Relay Module

- Type 4, ISO 13849; Sil 3, IEC 61508
- Compact design, 22.5 mm
- Various coil voltages and output contacts are optional, 24 V AC/DC
- Single / double channel input are optional
- LED display channel 1, channel 2 working status
- 1N.O+1N.C, 2N.O, 3N.O+1 N.C, 4N.O
- Automatic / manual reset are optional
- Applied to the control of dangerous movement, such as automobile, Applied to the control of dangerous movement, such as automobile,

Safety Products

Cascade Safety Relay Module

• Rich series of safety relay module, Emergency-Stop Module, Time independent Module, Two-handed Module

• Multiple operation modesoptional

• Equipped with additional contact extension module

• Simple configuration for fast connection allocation

• LED displays operation status, rapid diagnosis of abnormalities

• Pluggable terminal, easy to operate and maintain

Safety Lock
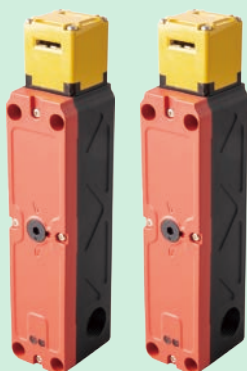
SL100: Safety lock

• Contains two series of mechanical locking M and electromagnetic locking E

• The maximum holding force of the locking latch is 1200 N

• Multiple contact outputs: 4 contact, 6 contact

• The end can be quickly adjusted and inserted from 5 directions

• LED lights indicate power, locked or unlocked status

• A variety of latch optional: horizontal latch, vertical latch, flexible latch

• Protection level IP67

• Optional manual emergency escape handle

Safety Switch

SW100: Safety switch

• There are three output types of contacts driven by latch, 3NC/1NO and 2NC/2NO and 1NC

• A variety of latch optional: horizontal latch, vertical latch, flexible latch

• The end can be installed from 5 directions to ensure that the installation is correct in various environments

• Wide temperature range: -40 ... +80 °C

• Protection level IP65

RFID Safety Lock

- RFID technology, to ensure higher security and confidentiality
- Working mode: Mechanical locking Electromagnetic locking
- Powerful locking force: Max. 2000 N
- Multiple functions: It also has the function of locking a nd monitoring
- Multiple encoding methods: unique encode and universal encode methods are optional
- Independent redundant dual output
- Self-test cross and mutual test design is adopted
- Flexible installation

RFID safety switch

- RFID non-contact safety door switch
- Compact size, easy to install
- Unique encode and universal encode methods are optional
- Cascading scheme is optional
- High cost performance advantage
- The magnetic holding force can reach 15 N, which can replace the door magnetic
- EDM detection function, manual reset / automatic reset optional

E-Stop Button

- Anti drop function

The normally closed contact module has monitoring function

- Contact module optional combination

Muti contact models selection to save time and costs

- One click installation function

The installation of the contact module terminal block is fast and convenient

- High security degree

Certified by authoritative institutions, with high reliability and security

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