

Additional Value for Factory Automation Sensors

Displacement
Sensors



BGS/TOF Distance Setting Sensors

Laser Sensors



Photoelectric Sensors



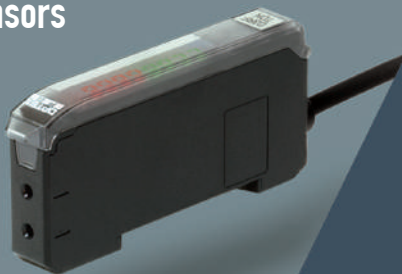
Transparent-object
Detection Sensors

Color Mark Sensors



Communication Units

Fiber Sensors



Vision Sensors



Non-contact
Thermometers





Realize World's No. 1 Linearity : +/-0.015%F.S.

CDX Series



Web Server CDA amplifier

Model	Repeat accuracy	Measurement range*1	Reflection mode
CDX-L15A/LW15A	0.25 μm	15 +/-1 mm	Specular
CDX-30A/W30A	0.25 μm	30 +/-5 mm	Specular / Diffuse
CDX-85A/W85A	0.25 μm	85 +/-20 mm	Specular / Diffuse
CDX-150A/W150A	0.25 μm	150 +/-40 mm	Diffuse

*1: Value of diffuse installation

Small-sized, amplifier built-in sensors for wide range of measurement distances

CD33 Series



UQ1 I/F Unit

Model	Repeat accuracy	Measurement range*1	Reflection mode
CD33-L30*30*	2μm	30 +/-4 mm	Specular / Diffuse
CD33-L50*50*	5μm	50 +/-10 mm	Specular / Diffuse
CD33-L85*85*	10μm	85 +/-20 mm	Specular / Diffuse
CD33-120*	30μm	120 +/-60 mm	Diffuse
CD33-250*	75μm	250 +/-150 mm	Diffuse

*1: Value of diffuse installation

Compact, amplifier built-in sensors

CD22 Series



W17.8xD31 xH44.4mm CDA amplifier

Model	Repeat accuracy	Measurement range	Laser class
CD22-15*	1μm	15 +/-5 mm	Class 1
CD22-35*	6μm	35 +/-15 mm	Class 1
CD22-100*	20μm	100 +/-50 mm	Class 2



Flexible system building with 11 Sensor heads and a 3ch amplifier

CD5 Series

Specular / Diffuse UQ1 I/F Unit



Through-beam edge sensor for width and gap measurement

TD1 Series

W9.6xD21 xH61mm CDA amplifier



2-dimensional laser sensor for width and height measurement

LS Series

3 control outputs 1 analog output

Compact amplifier for data calculation, multiple outputs and network connectivity

CDA Series



Master / slave CD22 Sensor TD1 Sensor

Communication interface unit for Mitsubishi PLC

UQ1 Series



2 channels CD33 Sensor



Smallest Time-of-Flight sensors in the class

Laser

IO-Link

TOF-DL Series

- Display
- Analog Output
- 3 Control Outputs
- IO-Link

TOF-L Series

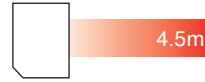
- Long distance

Sensing distance

TOF-DL



TOF-L



Minimum detectable height difference = 0.08 mm

Laser

BGS-HDL Series

- 0.08 mm GAP
- 2 Control Outputs

BGS-HL Series

- 0.08 mm GAP
- 1 control output

BGS-HLM Series

- 0.08 mm GAP
- SUS Housing
- 1 control output

Sensing distance

Short range



Middle range



Industry-standard laser BGS sensor

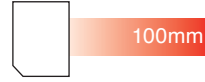
Laser

BGS-ZL Series

- 25.4mm screw pitch
- Low hysteresis

Sensing distance

Short range



Middle range



Diffuse reflective and Retro reflective models

Laser

TOF-3V Series

- Retro reflective
- Diffuse reflective
- up to 20m



CMOS laser sensor with teaching functions

Laser

BGS-DL Series

- Display
- Teaching



Laser Type with Potentiometer

Laser

BGS-DL (Volume) Series

- up to 700mm



Industry-standard LED BGS sensor

BGS-Z Series

- 25.4mm screw pitch



Stainless steel housing for water and oil resistance

IP67g

BGS-ZM Series

- 25.4mm screw pitch
- SUS Housing



Small-sized with elongated installation holes

BGS-S/2S Series

- BGS-S W10xD17.4xH28mm
- BGS-2S W11xD20xH31mm



Basic BGS sensors

BGS Series

- Low hysteresis



AC/DC power models

BGS-2V Series

- AC/DC and DC24V
- up to 1m
- Relay output



M18 cylindrical housing

BGS-C2 Series

- Metal Housing
- Plastic Housing



High-power amplifier-separate laser sensors

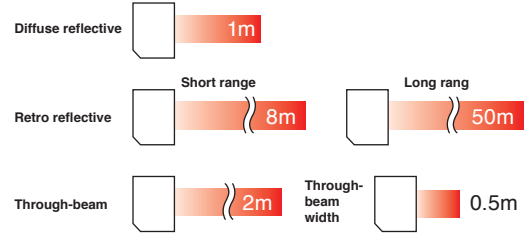
Laser



DS Series

- Coaxial
- 1 or 2 control outputs
- 4-20mA output
- Flexible Teaching
- Master/slave Max. 8 units

Sensing distance



Industry-standard Laser Sensors

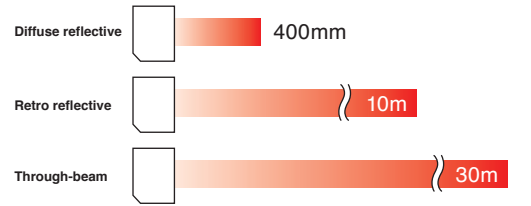
Laser



Z-L Series

- 25.4mm screw pitch
- 250µs

Sensing distance



IO-Link supported LED sensors

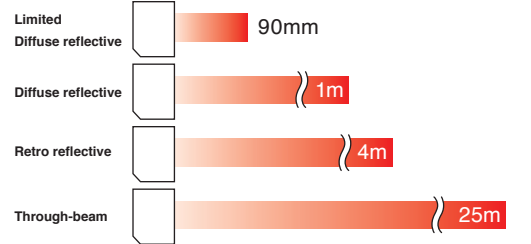
IO-Link



Z4 Series

- IO-Link
- NPN PNP output

Sensing distance



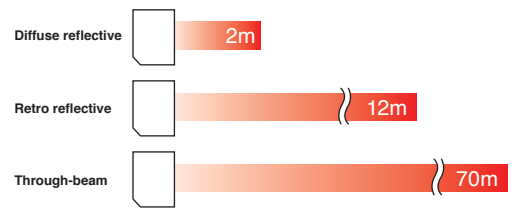
Universal power input sensors with terminal blocks



V3/V4 Series

- AC/DC and DC24V
- Relay output
- Terminal block

Sensing distance



High performance and wide range of line-up

Z3 Series

- Limited diffuse
- Wide diffuse
- Diffuse reflective
- Retro reflective
- Through-beam



Standard LED sensors

Z2 Series

- Diffuse reflective
- Retro reflective
- Through-beam



Stainless steel housing for water and oil resistance

IP67g

Z-M Series

- Diffuse reflective
- Retro reflective
- Through-beam



M18 cylindrical metal housing

C-R Series

Infrared

- Limited diffuse
- Diffuse reflective
- Retro reflective
- Through-beam



M18 cylindrical metal and plastic housing

C2 Series

Infrared

- Limited diffuse
- Diffuse reflective
- Retro reflective
- Through-beam



Miniature Flat On/Side On Sensors

E Series

- Flat On / Side On
- Limited diffuse
- Diffuse reflective
- Through-beam



Resin-filled environmental resistant sensors

J Series

Infrared

- Head On / Side On
- Limited diffuse
- Wide diffuse
- Diffuse reflective
- Retro reflective
- Through-beam



Small-sized sensors

S Series

- Diffuse reflective
- Retro reflective
- Through-beam
- W10xD17.4 xH28mm



AC/DC power models

V/V2 Series

Infrared

- AC/DC / DC power
- Diffuse reflective
- Terminal block
- Retro reflective
- Through-beam
- Relay output





Laser

High power laser sensors with flexible adjustability



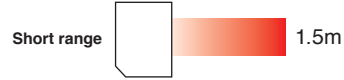
DR-Q Series

Coaxial retro reflective

Digital teaching

Sensing distance

Coaxial retro reflective



Long-time seller with a wide range of detection distances



KR-Q Series

Wide / Pin spots

Retro reflective

500mm

1.5m

2.5m

Small-sized sensors

SR-Q Series

Wide spots

Retro reflective

W10×D17.4×H28mm

300mm



High-performance coaxial sensors

ZR-QX Series

Coaxial retro reflective

2m



Standard transparent-object detection sensors

Z3R-Q Series

Retro reflective

2m



RGB LED color mark sensor

DM Series

Digital teaching

Color / Mark mode

8 banks

18±2mm



Fiber sensor amplifier with white LED light

D3WF Series

Master / slave Max. 16 units

UC1 UC2

62mm



Field network communication units



UC1-CL11 **CC-Link**

UC1-EC **EtherCAT**

UC1-EP **EtherNet/IP**

Slave adapter

Max. 16 devices

CDA amplifier

D3RF/D3WF Sensors



Compact IO-Link master unit

UR-MS16DT

IO-Link

16 channels

Input/Output

IO-Link / NPN / PNP

Online setting



CC-Link **IE TSN**
CC-Link **IE Field**

IO-Link gateway for fiber sensors and displacement sensor amplifiers

UC2-IOL

IO-Link

Max. 16 devices

D3RF/D3WF Sensors

CDA amplifier





Fiber Sensor Amplifier

High performance with a wide range of line-up



D3RF Series

- Stand-alone
- Master / slave Max. 16 units
- 1ch / 2ch outputs
- Digital teaching
- Up to 16µs
- UC1 UC2



Durable IP66 and analog-output models



D2RF Series

- Stand-alone
- Master / slave Max. 8 units
- 1ch / 2ch outputs
- Digital teaching
- 4-20mA output
- IP66 model
- Up to 60µs

High usability with digital teaching and IP66 protection



D1RF Series

- Stand-alone
- Up to 50µs

Easy teaching with sensitivity indicator



V2RF Series

- Stand-alone
- 250µs

Digital teaching for mark detection



D2GF Series

- Master / slave
- Up to 60µs

Green LED

Potentiometer adjustment for mark detection



BGF Series

- Stand-alone
- 250µs

Green LED

Infrared light source for water detection



D3IF Series

- Stand-alone
- Up to 16µs

Infrared

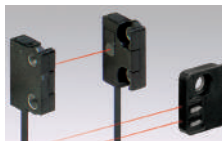
Basic potentiometer models



BRF Series

- Stand-alone
- 50µs / 250µs

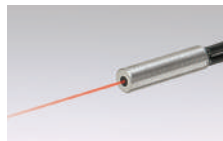
Fiber Units



Easy mounting



Thread



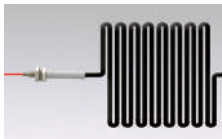
Cylindrical



Sleeve (straight view)



Sleeve (side view)



Flexible R1



Flexible R2



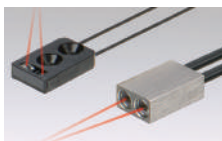
Flex resistance R4/R2



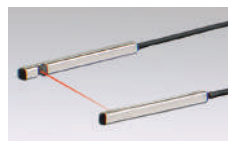
Retro-reflective



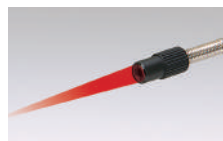
Screen/Array



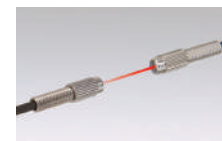
Limited diffuse reflective



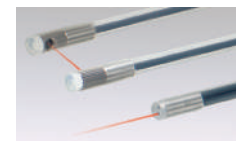
Narrow view / wafer mapping



Small object detection



Lens for through-beam



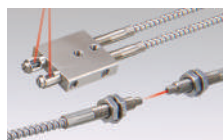
Chemical resistant



Heat resistant (130°C or below)



Heat resistant (180 to 200°C)



Heat resistant (250 to 350°C)



Liquid level / leakage



Water detection



Installation Models

Compact sensor head for flexible installation

IP69K



CS Series

Measurement range

-40~500°C / -40~932°F 0~1000°C / 32~1832°F

Heat resistance

0~100°C / 32~212°F 0~180°C / 32~356°F

4~20mA output

2 × C Contact

M18 cylindrical models

IP67

SA-80 Series

Measurement range

0~200°C / 32~392°F 0~400°C / 32~752°F

Heat resistance

0~70°C / 32~158°F

4~20mA output



All-in-one models

IP65

BA Series

Measurement range

0~500°C / 32~932°F

Heat resistance

0~50°C / 32~122°F

4~20mA output

1mV/°C output



Separate models

IP67

BS Series

Measurement range

0~500°C / 32~932°F

Heat resistance

0~50°C / 32~122°F 0~150°C / 32~302°F

4~20mA output

1mV/°C output



*with optional cooling jacket

Hand-held Models

Wide Measurement Range

PT-2LD

Measurement range

-40~510°C / -40~950°F



PT-5LD

Waterproof, Shock Resistant

PT-5LD/7LD

Measurement range

PT-5LD 0~500°C / 32~932°F

PT-7LD -30~200°C / -22~392°F

PT-7LD



Long Range with Narrow FOV

PT-S80/U80

Measurement range

-30~600°C / -22~1112°F

PT-U80-USB I/F
Data memory



Multiple-camera vision sensor systems with a separate controller

MVS Series

MVS-EM-R : Edge Measurement

MVS-OCR2 : Optical Character Recognition

MVS-PM-R : Color Pattern Matching

Max. 3 cameras

4.3" display

Touch operation

Lighting control

NPN/PNP x 6

Ethernet

USB



All-in-one vision sensors with camera, lighting, monitor and controller

CVS Series

CVSE1 : Easy Setup Color Matching

CVS1 : Color Matching

CVS2 : Color Pattern Matching

CVS3 : Edge Matching

CVS4 : Optical Character Recognition

Multiple viewing areas

NPN/PNP x 2

W42×D33.8 ×H95mm

External lighting & monitor

IP67



CVSE1



CVS1



CVS2



CVS3



CVS4



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