OPTEX FA

Factory Automation Sensors

OPTEX FA CO., LTD.

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

Ultra High-Accuracy Laser Displacement Sensor

CDX Series

FASTUS

Model	Repeatability	Measurement range*1	Laser class
CDX-L15A/LW15A	0.25 µm	15 +/-1 mm	Class 1
CDX-30A/W30A	0.25 µm	30 +/-5 mm	Class 1
CDX-85A/W85A	0.25 µm	85 +/-20 mm	Class 1
CDX-150A/W150A	0.25 µm	150 +/-40 mm	Class 1

・Connectable to CDA series
*1 Value of diffuse installation.

Ideal for long distance applications

C-MOS Laser Displacement Sensor

CD33 Series

iQss

Model	Repeatability	Measurement range*2	Laser class
CD33-30xx	2µm(4µm*1)	30 +/-4 mm	Class 2
CD33-50xx	5µm(8µm*1)	50 +/-10 mm	Class 2
CD33-85xx	10µm(15µm*1)	85 +/-20 mm	Class 2
CD33-120xx	30µm(45µm*1)	120 +/-60 mm	Class 2
CD33-250xx	75µm(100µm*1)	250 +/-150 mm	Class 2

・Connectable to UQ1 series
*1 The repeatability when response time is set to FAST is shown in parentheses.
*2 Value of diffuse installation.

Smallest displacement sensor in class

Compact Laser Displacement Sensor

CD22 Series

iQss FASTUS

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

・Connectable to CDA series

Next level integration of accuracy stability, and operability

High-performance Multi Laser Displacement Sensor
CD5 Series
iQss

Edge position measurement for any workpiece

Through-beam Edge Sensor
TD1 Series
Amplifier Unit CDA Series FASTUS

Line beam for fast, accurate measuring of height and width

2D Displacement Sensor
LS Series
FASTUS

Amplifier unit that can perform calculations and CC-Link communication

Displacement Sensor Amplifier Unit
CDA Series
iQss FASTUS

Can be connected to Mitsubishi Electric PLCs!

Control Unit
UQ1 Series
iQss

Featuring a 100 µs sampling period and ±0.1% linearity

High-accuracy Laser Displacement Sensor
CD4 Series

● FASTUS is a product brand of OPTEX FA.　● iQss is a Mitsubishi iQ Senser Solution.

Smallest TOF sensor in class

For long distance applications by Time-Of-Flight Principle

TOF-L/DL Series   F/ISTUS

TOF-L

Laser

· Max. sensing distance of 4.5 m
· Laser class 1
· Capable of stable detection even over long distances

TOF-DL

· Analog output type and 3-control-output type
· Laser class 1
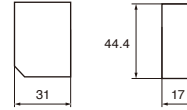· Built-in digital display for simple setup

TOF-L	TOF-DL
Sensing distance	Sensing distance
0 to 4.5 m	0.25 to 2.5 m

Dimension (mm)

TOF-L	TOF-DL
44.4	44.4
31 17	32.8 17.4
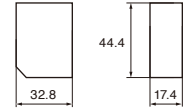
Minimum detectable height difference = 0.08 mm

High-resolution C-MOS Laser Type

BGS-HL/HDL Series
BGS-HLM Series   F/ISTUS

Laser

2 output Type

· Digital subpixel processing
· High resolution electronic shutter
· Built-in controller and 4-digit display

BGS-HL/HDL

Sensing distance

20 to 250 mm

Dimension (mm)

BGS-HL/HDL

44.4

31   17.8
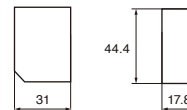
Laser and high power narrow beam LED type BGS!

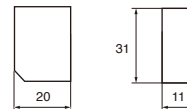LED/Laser, Standard Type

BGS-Z/ZL Series

Laser

Sensing distance

5 to 300 mm

· Types with sensing distances of 100 mm and 300 mm
· Industry standard size
· Highly accurate height difference detection through low hysteresis

Dimension (mm)

31

20   11

C-MOS Laser Type **BGS-DL Series** **Laser**	TOF Type **TOF-3V Series** **Laser**	Standard Elongated Hole, Small Type **BGS-S/2S Series**
Sensing distance 20 to 250 mm	Sensing distance 0.3 to 3 m	Sensing distance 5 to 300 mm

Stainless Steel Housing Type **BGS-ZM Series** **IP69K**	M18 Cylindrical Type **BGS-C2 Series**	M18 Threaded Front Mounting Type **BGS-Y Series**
Sensing distance 10 to 300 mm	Sensing distance 0 to 300 mm	Sensing distance 30 to 200 mm

Standard BGS Type **BGS Series**	Universal Voltage / Cable Type **BGS-2V Series**	
Sensing distance 0 to 300 mm	Sensing distance 10 to 1000 mm	

● FASTUS is a product brand of OPTEX FA.

Excellent water resistance / oil resistance!

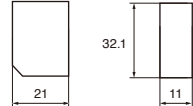Stainless Steel Housing Type

Z-M Series   `IP69K`

- Longest sensing distance in the class
- Employs a low deterioration 4-element red LED for the light source
- Degree of protection: IP69K (cable type)

Sensing distance

0 to **30** m

*Through-beam type

Dimension (mm)

32.1 | 21 | 11

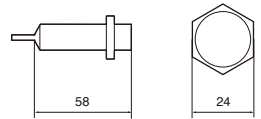## Best-in-class robust and powerful

M18 Cylindrical Type

C-R Series   `IR Type`

- Large sensing distance
- Full-metal housing in brass
- Easy to Align even the long distance

Sensing distance

0 to **25** m

*Through-beam type

Dimension (mm)

58 | 24

Popular model of sensor
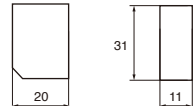
Small Type

Z3 Series   FASTUS

- Longest sensing distance in class at 25 m
- Significantly reduced dead zone
- Indicators visible from any angle

Sensing distance

0 to **25** m

*Through-beam type

Dimension (mm)

31 | 20 | 11

M18 Cylindrical Type
C2 Series
Sensing distance
0 to **20** m
*Through-beam type

Digital Amplifier Separate Type   `Laser`
DS Series
Sensing distance
0.5 to **50** m
*Coaxial retro-reflective type

Small Type
Z2 Series
Sensing distance
0 to **25** m
*Through-beam type

Resin Filled Type   `IR Type`
J Series
Sensing distance
0 to **10** m
*Through-beam type

M18 Threaded Front Mounting Type
Y Series
Sensing distance
0 to **30** m
*Through-beam type

Amplifier Built-in Type   `Laser`
Z-L Series
Sensing distance
0 to **30** m
*Through-beam type

Small Type
S Series
Sensing distance
0 to **4** m
*Through-beam type

Universal Voltage Type
V/V2/V3/V4 Series
Sensing distance
0 to **70** m
*Through-beam type

Long Range Type   `Laser`
D Series
Sensing distance
0 to **40** m
*Through-beam type

Miniature Type
E Series
Sensing distance
0 to **500** mm
*Through-beam type

Standard Elongated Hole Type
S2 Series
Discontinued in September 2019
Sensing distance
0 to **12** m
*Through-beam type

Stainless Protective Type
K Series
Sensing distance
0 to **7** m
*Through-beam type

● FASTUS is a product brand of OPTEX FA.

Fiber Amplifier

Linking

Fastest high-speed response in the world

High Speed Digital Fiber Sensor

D3RF/D3IF Series

2 output Type   **iQss**

Response time
16 μs to **8** ms

・ Even when 16 units are linked, only 18 wires are necessary
・ New generation specify cations for sensing distance as well
・ Detection of only water is possible(D3IF)

Alone

V2RF

D1RF

Choose between "intelligent" or "simple"

Teach-In + Display/Potentiometer Type

D1RF/V2RF Series   **FASTUS**

Response time
50 μs to **250** μs

・ Teach-In + Display type and Potentiometer type
・ Degree of protection: IP66

Easy sensitivity adjustments without the use of tools

Fiber Sensor
BRF/BIF Series

Fiber amplifiers featuring dual outputs, dual displays

Digital Fiber Sensor
D2RF Series

Management and control of sensors over a network

CC-Link Communication Unit
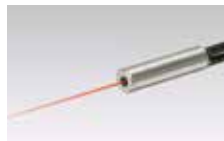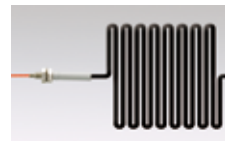**UC1 Series**

iQss
CC-Link
FASTUS

Fiber Units

Easy mounting	Thread type	Cylindrical type
Flexible R1 (R1 mm)	Retro-reflective type	

Sleeve type (straight view)	Sleeve type (side view)	Flexible R4/R2 (R4 mm, R2 mm)
Flexible R2 (R2 mm)	Limited diffuse reflective type	

Heat resistant (130°C or below)	Small object detection	Screen/Array
Heat resistant (180 to 200°C)	Liquid level / leakage / water detection	

Chemical resistant	Narrow view / wafer mapping	Heat resistant (250 to 350°C)
Lens for through-beam type		

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Popular model of transparent object detection sensor

Stainless Protector/Small Type
KR-Q/SR-Q Series

【Size】
W12×D28.6×H37mm

Sensing distance
0.01 to **2.5** m

Easy to set up, finely adjustable laser

Digital Laser Type
DR-Q Series

【Size】
W15×D30×H44.4mm

Sensing distance
0 to **4** m

Coaxial type transparent object detection sensor

Coaxial Type
Z3R-Q/ZR-Q Series

【Size】
W11×D20×H31mm

Sensing distance
0 to **2** m

Flexible Installation M18 Threaded or 24.1mm Pitch Holes

M18 Threaded
Front Mounting Type
Y-Q Series

【Size】
W15×D28.8×H32.7mm

Sensing distance
0 to **1** m

RGB color/mark sensor for automatically selecting light source color

Digital Color/Mark Detection Type
DM Series

【Size】
W15×D30×H44.4mm

Sensing distance
18 +/- **2** mm

Stationary Type

World's smallest class sensor head

Installation in Limited Space Type
CS Series

IP69K

【Heat resistance】
120℃

Measurement range
0 to **1000** ℃
32 to 1832°F

*CS-30TAC-HT/
CS-40TAC-HT

Fast response of 100 ms / 90% is realized

M18 Cylindrical Type
SA-80 Series

IP67

【Heat resistance】
70℃

Measurement range
0 to **400** ℃
32 to 752°F

*SA-80T-4A

All-In-One with Analog
Output Type
BA Series

IP65

Measurement range
0 to **500** ℃
32 to 932°F

Sensor/Amplifier
Separate Type
BS Series

IP67

Measurement range
0 to **500** ℃
32 to 932°F

Fiber-Type
BF Series

IP65

For metal

Measurement range
400 to **1200** ℃
752 to 2192°F

Portable Type

PT-5LD

Waterproof,
Shock-Resistant Type
PT-5LD/7LD

Measurement range
0 to **500** ℃
32 to 932°F

PT-7LD

*PT-5LD

Long Range with Narrow
FOV Type
PT-S80/U80

Measurement range
−30 to **600** ℃
-22 to 1112°F

Wide Measurement
Range Type
PT-2LD

Measurement range
−40 to **510** ℃
-40 to 950°F

ø2.5mm Fine-Spot Type
PT-3S

Measurement range
0 to **200** ℃
-32 to 392°F

Discontinued in
September 2019

High function cameras specialized for pattern matching, measurement and OCR applications.
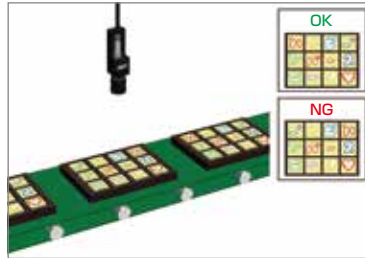
Multiple Camera Vision Sensor

MVS-OCR2
MVS-PM-R/EM-R FASTUS

- Prevents outflow of wrong printing to the market
- Up to 16 inspection windows available
  (MVS-PM-R/EM-R)
- Easy setup by touchscreen and numeric keys

Print inspection of carton box
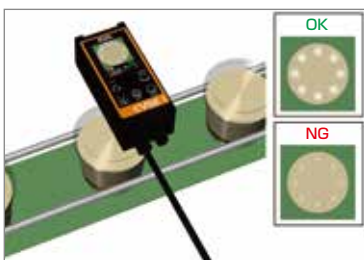

Chocolate arrangement monitoring

Complex inspections of packages and marking

Simple , Easy Setup & Compact
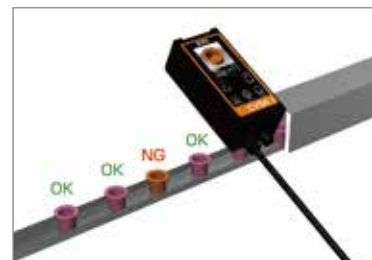
All in One Vision Sensor

CVS-RA Series

- All in one sensor
- Easy setup
- Degree of protection: IP67

CVSE1-RA

CVS1-RA

CVS2-RA

CVS3-RA

CVS4-RA

Presence of Transparent Lids

Checking existence of needle cap

Detection of Wrong Color of Caps

● FASTUS is a product brand of OPTEX FA.

Sales Office

Taking advantage of a global sales system with locations around the world, including overseas subsidiaries in the United States and China.

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FASTUS

Good Thinking, Good Future

*FASTUS is a product brand of OPTEX FA.

The value that the FASTUS brand aims to provide

01 | **SOLUTIONS**
We will provide our customers with optimal solutions and add value.

02 | **PRODUCTS**
We will add industry-leading value or one-of-a-kind value to our products.
QUALITY : Industry-leading quality and performance.
PRICE : Towards becoming the industry price leader.
QUICK RESPONSE : Same-day shipment offered for 100% of standard products.

03 | **SUSTAINABILITY**
We will add value to society and the environment through our products.

OPTEX FA **OPTEX FA CO., LTD.**

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