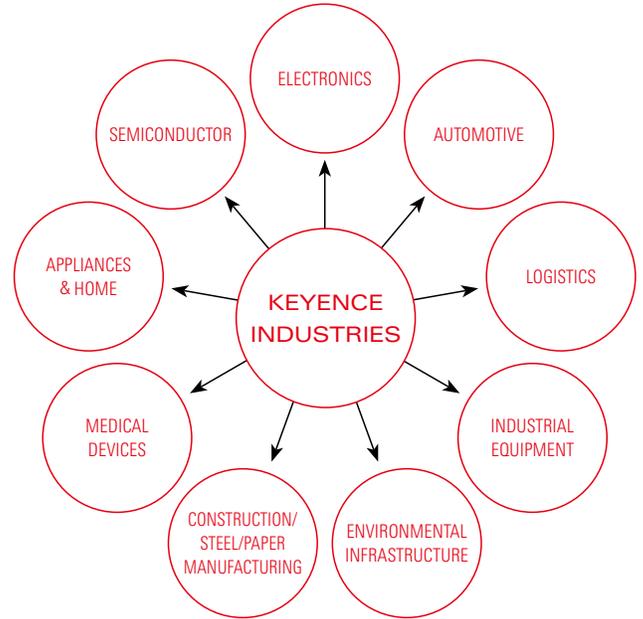


KEYENCE is dedicated to providing ADDED VALUE solutions for engineers in nearly all industries. We provide the tools that let manufacturers and researchers stay competitive in the global marketplace.

KEYENCE VALUE

KEYENCE has steadily grown since 1974 to become a world leader of innovation in the development of automation, quality assurance and R&D.



KEYENCE products are used in a wide variety of industries and fields

KEYENCE offers a wide range of factory automation products including automation sensors & safety equipment, static eliminators, barcode readers, measuring instruments, vision systems, laser markers and digital microscopes.

Innovation

KEYENCE has been ranked as one of Forbes' "World's Most Innovative Companies" every year since the list's inception in 2011. Our products not only meet current but also future customer requirements in many manufacturing and R&D industries. We have also been named one of Business Week's "1000 Best Valued companies".

Direct Sales Network

KEYENCE employs a large number of sales engineers throughout the world enabling invaluable direct on-site support. This direct approach allows us to meet customers' needs at every stage of their businesses, from design and research through production and beyond. Today, KEYENCE serves over 200,000 customers in some 70 countries around the world.

Corporate Information

Global Headquarters: Osaka Japan

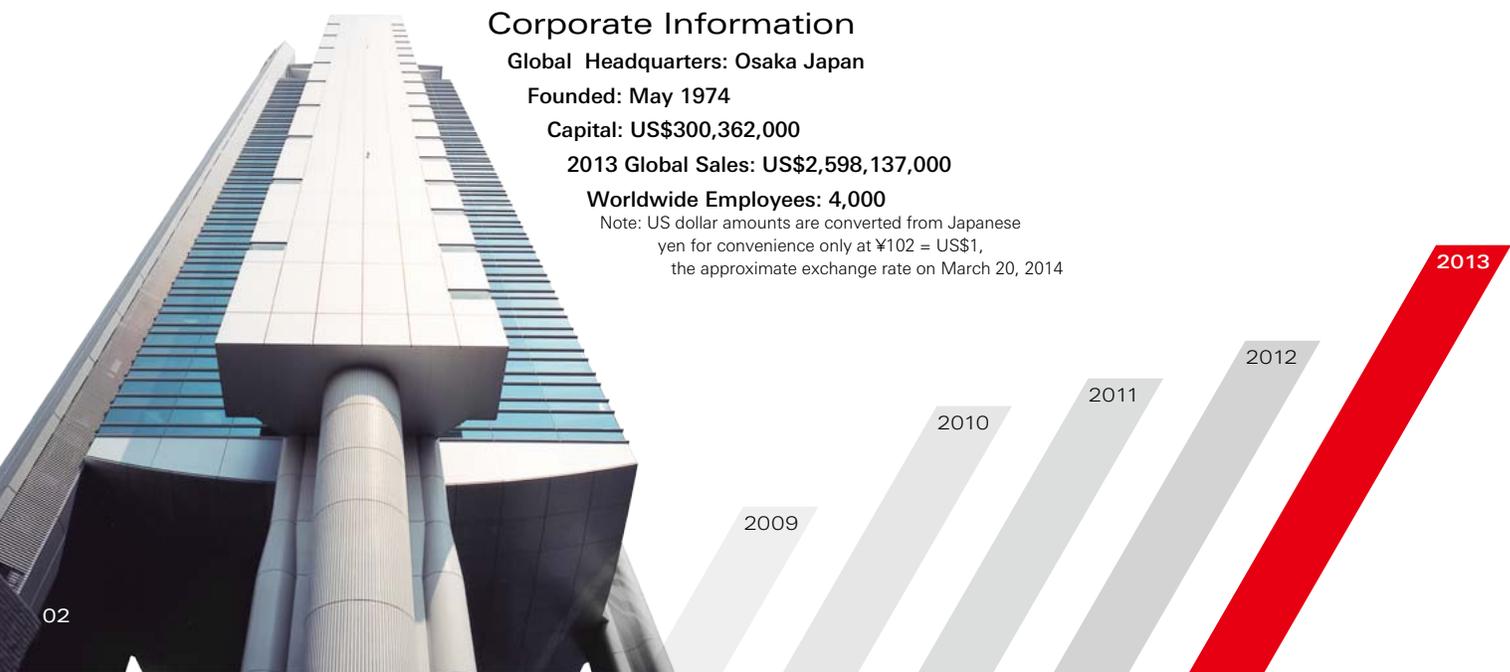
Founded: May 1974

Capital: US\$300,362,000

2013 Global Sales: US\$2,598,137,000

Worldwide Employees: 4,000

Note: US dollar amounts are converted from Japanese yen for convenience only at ¥102 = US\$1, the approximate exchange rate on March 20, 2014



Sensors



Reliable presence/absence detection

Process Controls/
Process Sensors



Monitor system pressure and flow

1D/2D Code Readers



Ultra-compact digital barcode readers

Machine Vision Systems



Ultra-high-speed, multi-camera universal machine vision system

Versatile Products

Products for manufacturing and research and development: Sensing, Vision, Measurement, Laser Markers and Microscope products

KEYENCE products are designed to add value to the manufacturing and research practices of our customers. Our products are engineered to be versatile, so they can be used in every industry for a wide variety of applications. KEYENCE offers the world's best products for today and tomorrow's application needs.

Laser Markers/
Inkjet Printers



High speed 3-axis laser makers

Digital Microscopes



High resolution images, 3D profiles, and superior depth of field

Image Measurement



Place and press measurement

Laser Displacement Sensors



High-speed, high-accuracy CMOS laser displacement sensors

Static Eliminators



High-speed/wide area static eliminator

Safety Curtains and Scanners



Machine guarding solutions



KEYENCE Service & Support

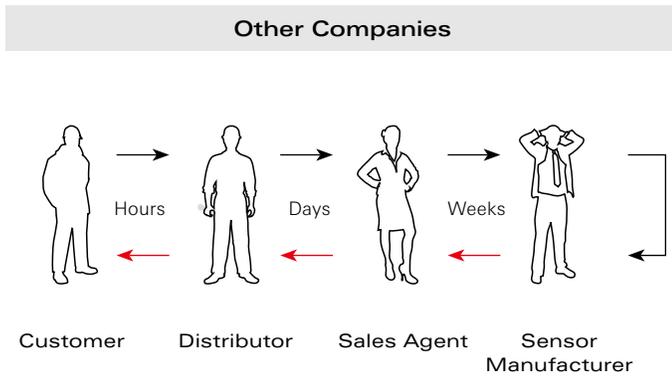
Direct Sales Network

KEYENCE incorporates direct sales rather than having distributors or sales agents. Our technically trained sales engineers have extensive product knowledge along with application and industry experience. Customers can expect on-site support to quickly solve applications saving invaluable time.

Value Added Products

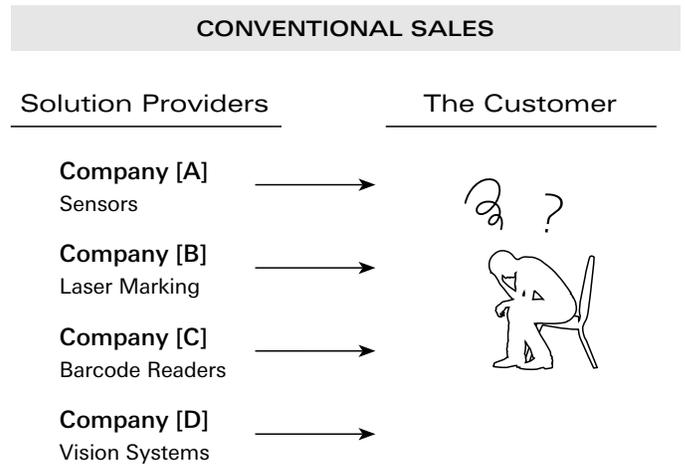
KEYENCE sells a broad range of products, enabling comprehensive support for a wide range of equipment across all industry sectors.

Find your solution efficiently and avoid having to consult with multiple vendors.

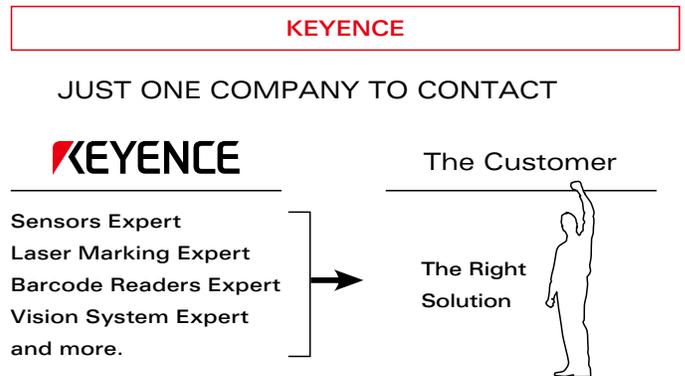
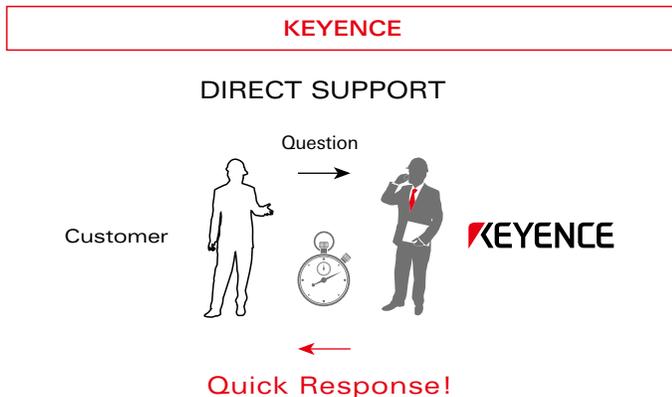


Onsite line operations stall while waiting for support

You need direct access to the people that can provide you with quick and practical solutions.



Consulting with and managing multiple solution providers is troublesome and time consuming.

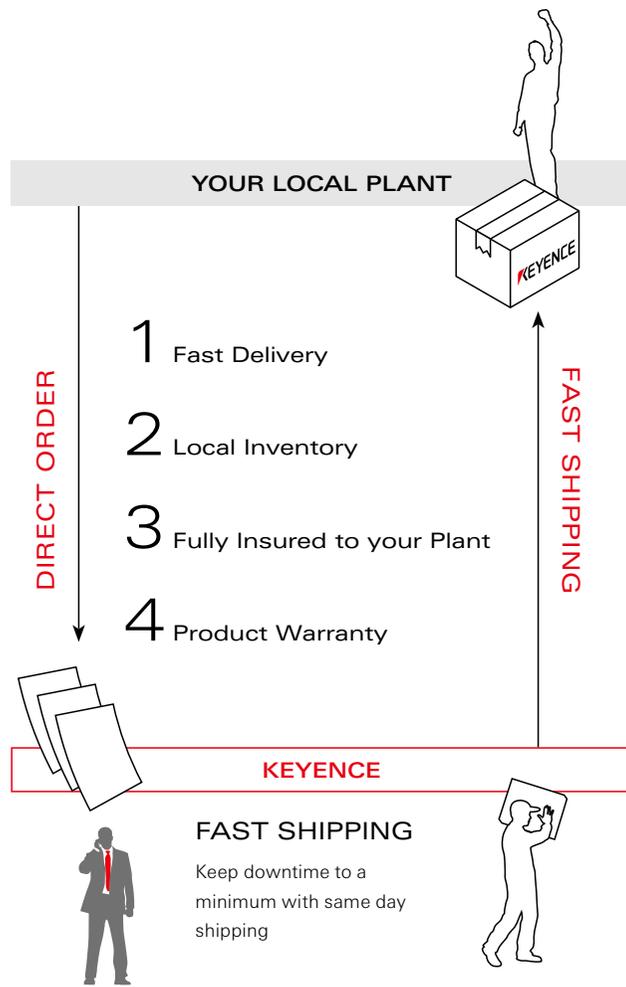




Same-Day Shipping is Available

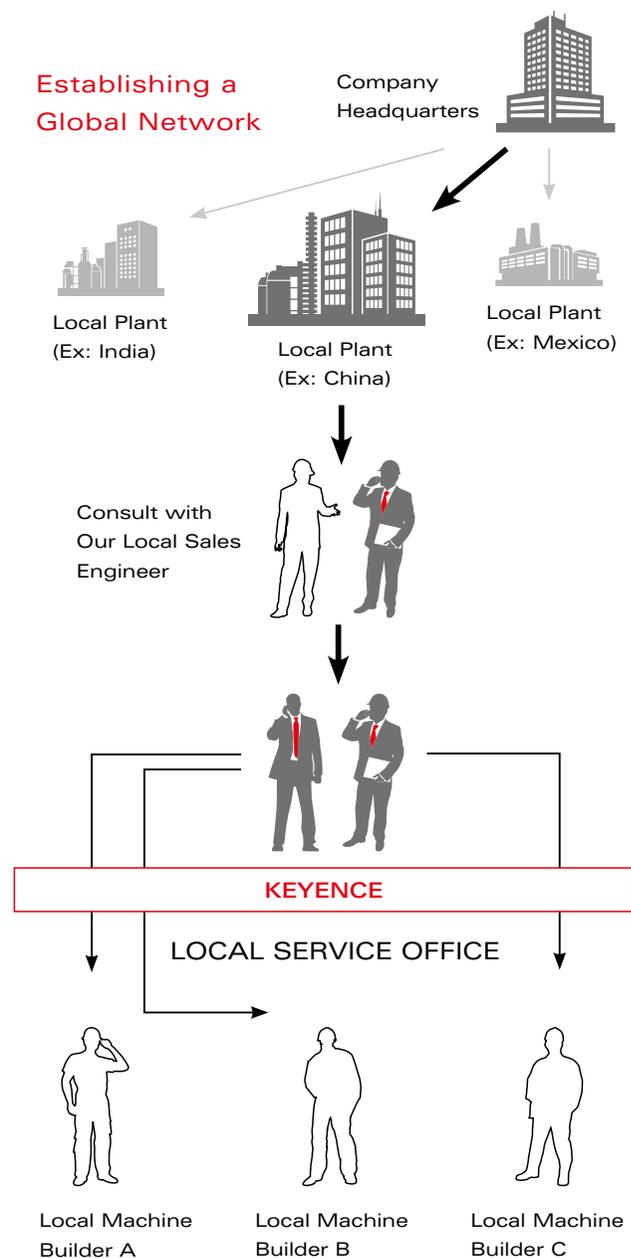
Same Day Shipping

With most items in stock, received orders can ship the same day, reducing your overhead costs and losses due to work stoppage.



Globally Local

KEYENCE works closely with machine builders in many countries and can make introductions and suggestions for improvements in remodeling and developing turn-key solutions at your overseas plants.



Quick delivery of products to customers.

Order time for same day shipping

EUROPE

Business location	Local time
Germany	By 3 p.m.*
Austria, Belgium, Netherlands, Switzerland & Eastern Europe	By 2 p.m.
UK	By 3 p.m.
France	By noon
Italy	By 11 a.m.
	*2 p.m.(Friday)

NORTH AMERICA/ SOUTH AMERICA

Business location	Local time
USA	By 4 p.m. CST
Canada	By 2 p.m. EST
Mexico	By 2 p.m. CST

EASTERN ASIA

Business location	Local time
Taiwan	By 4 p.m.
China	By 4 p.m.
Hong Kong	By 11 a.m.
Korea	By 4 p.m.

SOUTH-EASTERN ASIA/ SOUTHERN ASIA

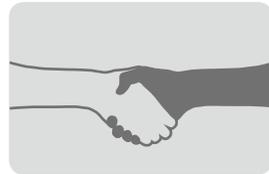
Business location	Local time
Singapore, Indonesia, Philippines, Vietnam, India	By 9 : 15 a.m.
Malaysia	By 4 p.m.
Thailand	By 2 p.m.



SAME DAY SHIPPING



DIRECT SUPPORT



DIRECT SALES



TRAINING/ SEMINARS

KEYENCE CORPORATION OF AMERICA

KEYENCE CANADA

KEYENCE MEXICO



KEYENCE BRAZIL

KEYENCE DEUTSCHLAND GmbH

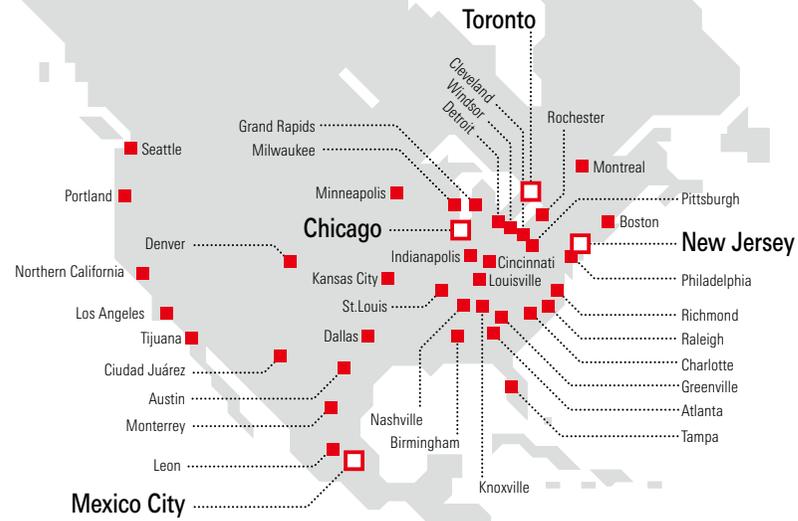
KEYENCE INTERNATIONAL (BELGIUM) NV/SA

KEYENCE FRANCE SAS

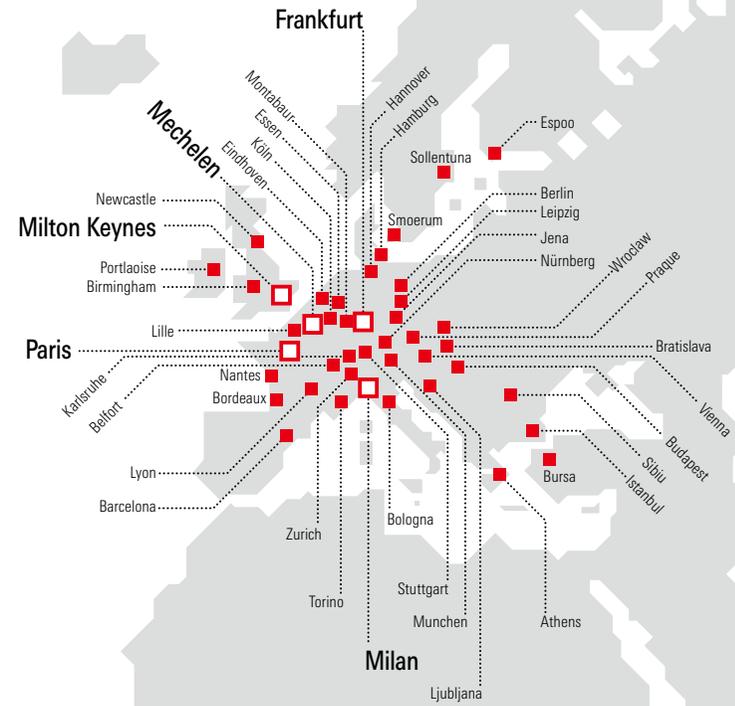
KEYENCE ITALIA S.p.A.

KEYENCE (UK) LIMITED

KEYENCE SINGAPORE PTE LTD.



São Paulo



Engineers with in-depth expertise support production sites anywhere in the world

Global Support :
 Over
200 Offices
 in more than
44 Countries



KEYENCE (MALAYSIA) SDN BHD

KEYENCE (THAILAND) CO., LTD.

PT. KEYENCE INDONESIA

KEYENCE VIETNAM CO., LTD.

KEYENCE INDIA PVT. LTD.

KEYENCE CHINA

KEYENCE TAIWAN CO., LTD.



SENSORS

FIBEROPTIC

FS & FU Series



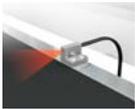
High function amplifiers and a vast array of sensor head options provide reliable solutions for the most challenging detection conditions.



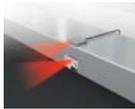
Threaded mounting



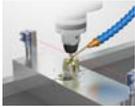
Set screw mounting



Integrated bracket mounting



Limited space mounting



Oil/Water environments



High temperature environments



Small targets



Variable target position



PHOTOEYE

GENERAL PURPOSE PHOTOEYE PZ Series



METAL PHOTOEYE PR-G Series



METAL MINIATURE PHOTOEYE PR-M/F Series



DISTANCE-BASED LASER PHOTOEYE LR Series



LASER

DISTANCE-BASED LASER SENSOR GV Series



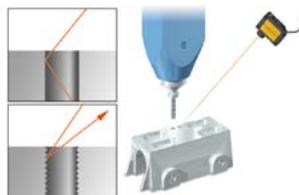
Stable detection of targets, regardless of color, surface finish, or background.



LASER SENSOR LV Series



Lasers are ideal for difficult applications, since they provide a small visible beam spot over long distances.



SPECIALTY

HEAVY DUTY PHOTOEYE PX Series



Ensure reliable detection, even under harsh washdown conditions.



COLOR, UV & LUSTER DETECTION CZ Series



Solve tough applications involving color, luster, and UV detection.



PRESSURE

AP Series



Versatile mounting and pressure detection options



GP Series



Ideal for both hydraulic and pneumatic applications.



PROXIMITY

ES Series



Reliable detection for all metal types.



FLOW

LIQUID FLOW FD-M Series



Maintenance free operation. Monitor instantaneous and accumulated flow of conductive liquids.

SAFETY

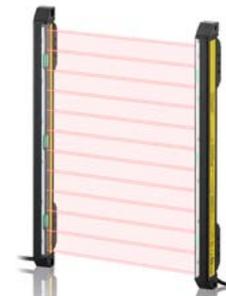
CURTAIN

GL-R Series



Built-in guarding, all-in-one functionality, and innovative wiring options make the GL-R Series a perfect solution for countless safety applications.

GL-S Series



Ultra slim design featuring built-in mounting brackets and simplified wiring configurations for seamless integration. Highly visible indicators provide operation status at all times.

SCANNER

SZ Series



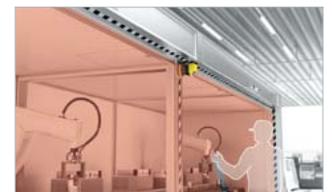
Safety laser scanners allow users to protect and monitor complex hazardous zones with ease.



Area protection



Collision prevention



Access protection



First laser scanner with a built-in muting function

HIGH PRECISION MEASUREMENT

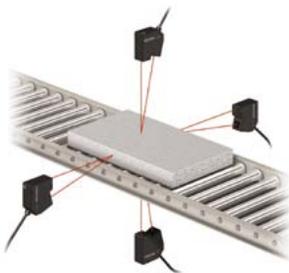
1D LASER DISPLACEMENT SENSOR

LK Series

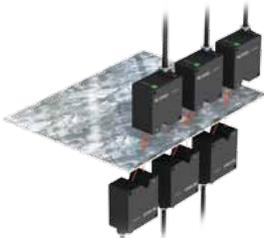


With a best-in-class sampling rate of 392 kHz, the LK Series can obtain reliable optical measurements of even the most rapidly moving processes. This series also has the highest accuracy and repeatability in its class.

- Coarse Targets
- Transparent Targets
- Fine Targets
- Mirror Targets



Measuring the thickness/width of a steel plate



Multi-point thickness measurement

2D/3D LASER DISPLACEMENT SENSOR

LJ Series



The LJ Series is ideal for high accuracy inline and offline measurements. High precision 3D measurement provides an accurate reproduction of surface profiles.

Measure Up to 8 Features at the Same Time

- Peak Height
- Average Height
- Gap
- Angle
- Bottom Height
- Width/Position
- Cross Sectional Area
- Profile Comparison



OPTICAL MICROMETER

LS Series



Speed (Fastest in its class)

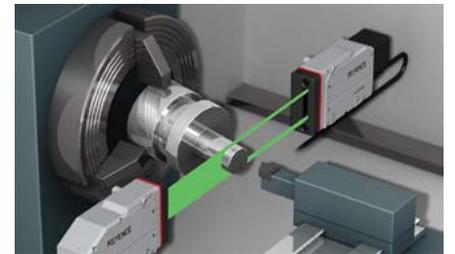
13.3 times faster than conventional systems

Stability (World first)

Active tilt and vibration correction

Durability (Low maintenance)

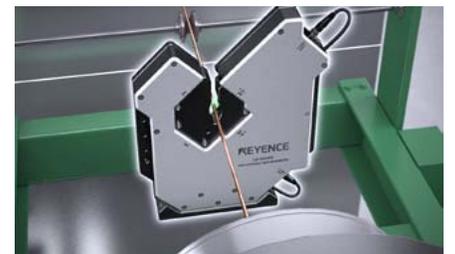
No moving parts



Measuring the run-out of a rotating shaft

2-Axis Optical Micrometer

LS-9006D/9030D **NEW**



Measurement of the outer diameter of a fine wire

MACHINE VISION SYSTEMS

MACHINE VISION SYSTEM

XG & CV-X Series

1D



Line Scan

- SURFACE INSPECTION
- FLAW DETECTION

KEYENCE was one of the first companies to develop the concept of using a camera for part inspection. Being involved in machine vision since the 1980's, our current machine vision system is the result of KEYENCE's immense industrial knowledge from solving countless applications in a wide variety of industries.



LumiTrax™ **NEW**

A fusion of high-speed cameras with intelligent lighting and an advanced inspection algorithm

The LumiTrax™ system captures targets with a newly developed ultra high-speed camera and controlled partial lighting. The completely new capturing method analyzes multiple images acquired with lighting from different directions to create shape (surface irregularity) and texture (pattern) images.

3D



LumiTrax™ Camera

XG Series

- FLAW/DEFECT DETECTION
- OCR

2D



21MP Camera
CV-X & XG Series

- OCR/ID READING

KEYENCE offers a complete solution and the support for all your image processing needs.



Cameras



Lighting



Lenses

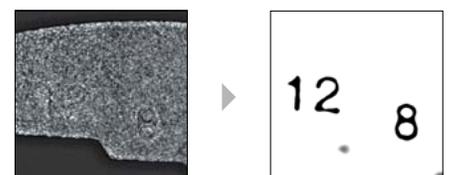


Displays

ETCHING INSPECTION



STAMPED CHARACTER INSPECTION ON METAL CASTING SURFACE



CODE READERS/STATIC

BARCODE READER

BL Series



High Scan Speed:
1300 scans/sec

High Resolution:
0.08 mm 0.0031"

Unmatched reading ability on
poor quality codes



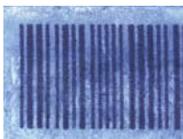
Verification of test tubes



Uneven background
(cardboard)



Curved part (sticker)



Shiny background
(aluminum)



Thick print lines
(coated paper)

1D/2D CODE READER

SR Series



AUTOFOCUS

The reader can be mounted at any distance and maintain a clear image.
[Up to 1000mm 39.37" away]

AUTOMATIC TUNING

Determines optimal settings for exposure time, image processing filter, etc.
[From about 750,000 combinations]

AUTOMATIC POLARIZATION

Glare can be eliminated with the built-in polarizing filter. Reader angle adjustment or external lighting is unnecessary.



Scratched



Thick printing



Thin printing



Parallel distortion

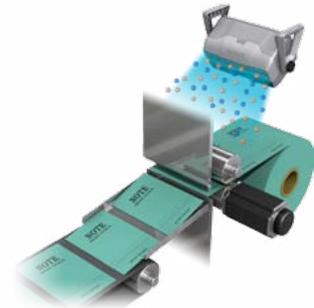
STATIC ELIMINATION

SJ Series



KEYENCE offers a wide variety of models to meet the needs of a new era of improved productivity and quality in the workplace.

- Spot, Bar, & Blower Types
- Built-In Display
- Low Voltage Wiring
- Calibration-Free Setup
- Low Maintenance Operation



Prevent particles from sticking to the cutting machine



Static elimination on films



Static elimination in feeder bowls

INTELLIGENT SENSORS

VISION SENSOR

IV Series



Difficult applications that formerly required multiple conventional photoelectric or proximity sensors can now be tackled easily with a vision sensor. Automatic focus, color imaging models, and high intensity illumination set the IV Series apart.



Multiple inspections in one field of view



Color detection tool checks printing

DIGITAL CONTACT SENSOR

GT2 Series



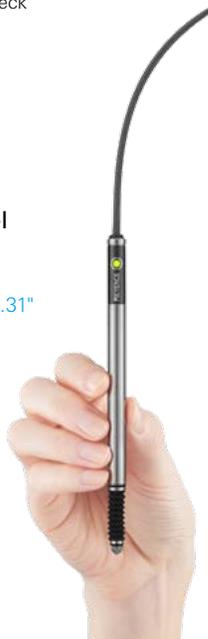
The GT2 Series is a digital contact sensor and is the first to employ a quartz glass scale shot system for high-accuracy measurement. Customers have the option of either a standard model or air push model.



Packing insertion check

Pencil Type Model

The new pencil type model combines a slim $\varnothing 8\text{ mm } \varnothing 0.31''$ body with high-accuracy measurements



CCD LASER SENSOR

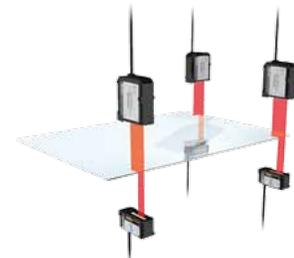
IG Series



The IG Series is a thru-beam CCD laser sensor that can perform a variety of measurements with high repeatability and stability. This sensor is also able to detect transparent targets.



Gap measurement between rollers



Edge control of a glass substrate

MARKING TECHNOLOGY

LASER MARKER

MD & ML Series

KEYENCE's 3-Axis laser markers are equipped with the most advanced optical components for laser marking. Nearly every shape can be easily programmed and accurately marked. 3D profiles and CAD data can be used to program any target profile.



MD-X Series **NEW**



Plane

Cylinder

Sphere

Circular Cone

Applications



[CONTRAST MARKING] MOLDED PACKAGES (BGA)



[HIGH-SPEED 2D CODE MARKING] METAL CASTING



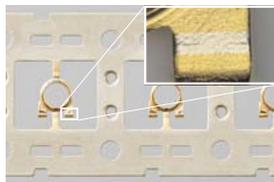
[3D MARKING] ANODISED HOUSINGS



[BLACK-ANNEALED MARKING] PRECISION TOOLS



[COATING REMOVAL] ON-BOARD INSTRUMENT PANEL SWITCHES



[THIN FILM PROCESSING] GOLD-PLATED CONNECTORS

INKJET PRINTER

MK-U Series **NEW**

A combination of intuitive maintenance and advanced quality control.



Easy Operation



Stable Operation



Easy Inspection



Minimized down time

Auto-Shower Cleaning **World's First**

Conventional automatic cleaning only cleans along the ink path. With KEYENCE's newly developed auto-shower function, the MK-U is able to clean the ink path, nozzle, electrode plates, and gutter all at once. This reduces the need for disassembly for maintenance, and enables stable printing by proactively sustaining print head components.



Conventional automatic cleaning



Auto-shower cleaning

INSPECTION & ANALYSIS

DIGITAL MICROSCOPE

VHX Series



The VHX Series Digital Microscope was designed to overcome the shortcomings of traditional optical microscopes - shallow depth-of-field, short working distance, lack of portability and versatility, sample limitations, etc. By integrating advanced zoom optics with a CMOS camera, 23" LCD monitor, LED light source, controller, fully-motorized stage, and analysis/reporting software, the VHX streamlines testing and improves the speed and efficiency of the inspection process. With a wide range of magnification, from 0.1x to 5000x, the VHX Series enables observation of macro-scale stereoscopic images as well as detailed, SEM level analysis. Many lighting techniques are also supported including bright and dark field, transmitted, polarized, and differential interference observation.

INSTANT MEASUREMENT SYSTEM

IM Series



The IM Series is a one step solution to conventional quality control inspection problems. With the press of a button, KEYENCE's patented pattern analysis tools provide traceable 2D analysis of any part placed on the measurement stage. With an industry leading 100 nm resolution, the IM Series provides unprecedented solid state measurement in a low cost, green, and space saving package.

LASER SCANNING MICROSCOPE

VK-X Series

Automatically analyzes and differentiates 3D surfaces based on nanometer-level profile and roughness data. Non-contact system works on any material and requires no sample prep.



3D MEASURING MACROSCOPE

VR Series

Our one-shot 3D measuring macroscope uses a new technology to: capture 3D data over a wide area with just the click of a button, eliminate measurement variation between users, and provide a variety of measurements such as profiling, volume, and roughness.



FLUORESCENCE MICROSCOPE

BZ-X Series

This fully integrated microscope is capable of performing fluorescence, bright field, and phase-contrast imaging - without the need for a darkroom.



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TO LEARN MORE

www.keyence.com

KEYENCE

CALL
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FREE

TO CONTACT YOUR LOCAL OFFICE
1-888-KEYENCE
1 - 8 8 8 - 5 3 9 - 3 6 2 3

www.keyence.com



SAFETY INFORMATION

Please read the instruction manual carefully in order to safely operate any KEYENCE product.

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