

Industrial Motors
Commercial &
Appliance Motors
**Automation &
Systems**
Energy
Transmission &
Distribution
Coatings

WEG Smart Vision Sensor

**A camera for
everything. And
everything in one
camera.**



Driving efficiency and sustainability





Our purpose

To develop technologies that contribute to building a more efficient and sustainable world.

Mission

To grow continuously and sustainably while maintaining simplicity.

Vision

To be a global benchmark in motors, generators, transformers, and electrical drives, offering a comprehensive, integrated portfolio for electrification, automation, and digitalization.

Values

People and the environment

We value development, human rights, and sustainability within communities.

Participative management

We work as a team, promoting the exchange of ideas and transparent decision-making.

Governance

We ensure ethics, integrity, and transparency through governance at all levels.

Efficiency with simplicity

We simplify processes and strive for efficiency and excellence using fewer resources.

Innovation and flexibility

We invest in innovation and adapt to meet our customers' needs.

Leadership and culture

We develop people to promote our culture and implement our strategy with excellence.

Founded in 1961, WEG is a global company in the electromechanical equipment sector, operating in the capital goods industry with a focus on electric motors, gearboxes and drives, power generators and transformers, and products and systems for electrification, automation, and digitalization.

WEG stands out for its constant innovation, developing solutions aligned with major trends such as energy efficiency, renewable energy, and electric mobility.

With industrial operations in 17 countries and commercial presence in over 135 countries, the company employs more than 45,000 people worldwide.

Additionally, through the WEG Digital & Systems division, WEG offers intelligent, real-time monitoring for high-level operation and asset maintenance. In other words: innovative solutions that drive efficiency and sustainability, anytime, anywhere.



Industrial vision with AI – Simple, fast and reliable



Accurate code reading

The sensor locates the code automatically, reads it, and sends the information via available industrial protocols.



Automated inspection has never been this simple

With just one click, you set up your camera and start viewing the data.



Flexible installation

90° rotating connectors facilitate installation in hard-to-reach locations.



AI-powered image classification

Neural model training with up to 8 classes (including OK and NG) to identify patterns in the image.



SUMMARY

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Digital Solution Provider Program

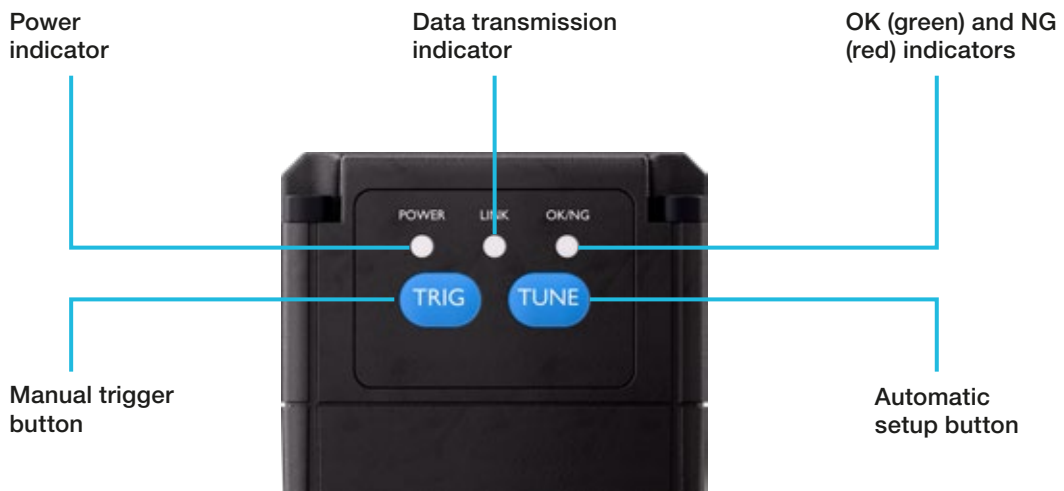
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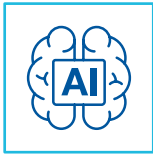
Product

WEG Smart Vision Sensor

The **WEG Smart VS** integrates an AI-powered classifier and advanced computer vision tools for industrial inspection. It offers multi-device operation and accessible configuration via a web browser (Web Client) or desktop application, enhanced by one-click setup for exposure, focus, and light. The sensor delivers 1.3 MP resolution (1280×1024) and features a 12 mm autofocus lens with integrated 3-in-1 white illumination (diffuse, direct, and polarized). Designed for shop-floor environments, it offers an IP65 protection rating, two inputs, and three outputs. UART/RS232 connections with support for major protocols: PROFINET, EtherNet/IP, Modbus-TCP (Server), TCP (Client/Server), UDP and FTP.



Key benefits



No-Code tools

AI-powered classification, OCR, dimensional measurements, and configurable logic rules.



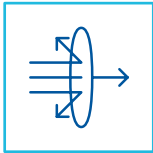
Quick setup

One-click setup for focus, exposure, and illumination.



Integrated illumination

3-channel white light (diffuse, direct, and polarized), eliminating the need for external peripherals.



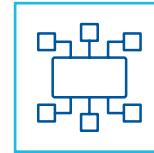
Polarized channel

Reduces reflections on metals, plastics, and glass, ensuring stability for binarization, OCR, and 2D reading.



Industrial reliability

IP65 rating, opto-isolated I/O, and EMC/ESD compliance.



Native integration

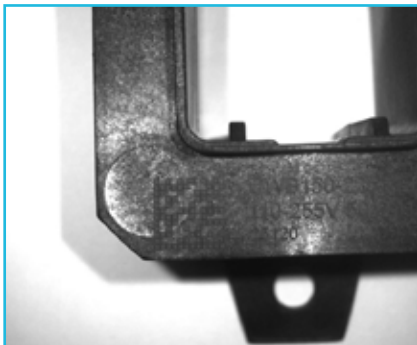
Industrial protocols (PROFINET, EtherNet/IP, Modbus-TCP, TCP, and UDP), discrete I/O, and RS232 for legacy systems.

Polarized lighting integrated into the camera

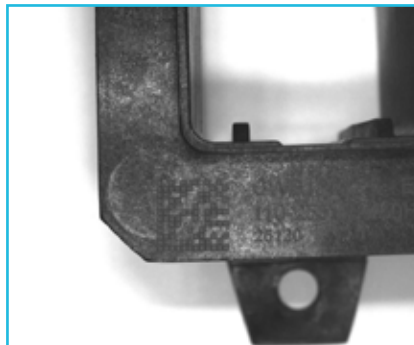
Emitters adjusted to send and receive light in a single direction—ideal for surfaces that cause reflections (polished metal, plastic packaging, and painted surfaces).

While direct and diffuse light adjust the angle and dispersion of the illumination, polarized light filters light waves into a single vibration plane, reducing reflections and glare on metallic or plastic surfaces.

- Reduces reflections and glare on reflective materials.
- Enhances surface details and textures.
- Delivers sharper images with better contrast.



Plastic part with direct light



Plastic part with diffuse light



Plastic part with polarized light

Applications and industries



Assembly and presence

Component validation, orientation, and position.



Traceability

Reading of DataMatrix, QR Code, and OCR on laser markings or labels.



Measurements and contours

Inspection of diameter, clearance, width, and other critical dimensions.



Critical surfaces

Inspection of metals, high-gloss plastics, and glass.



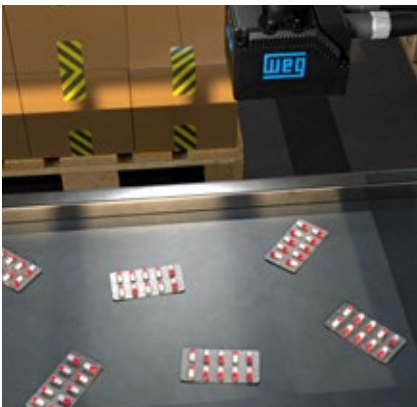
Packaging and food

Inspection of seals, caps, labels, batch numbers, and expiration dates.



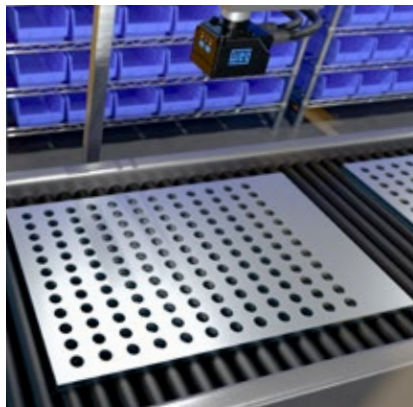
Automotive and metalworking

Inspection and traceability of machined parts, welds, and forming processes.



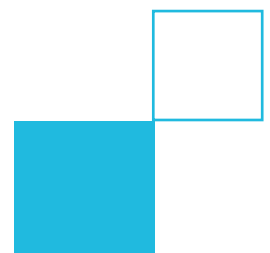
Pharmaceutical and cosmetics

Code reading on blister, vials, and packaging.



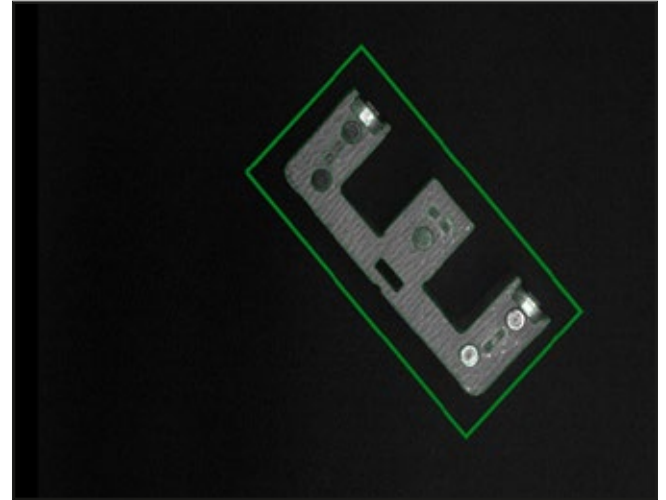
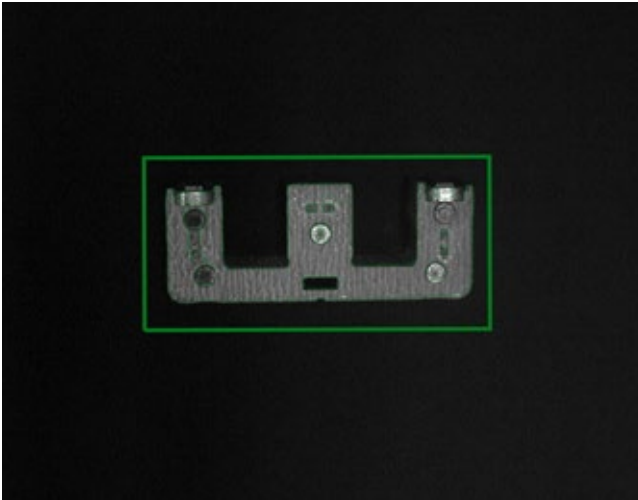
Electronics

Inspection of PCBs, SMD soldering, wire sequence, and glue volume.

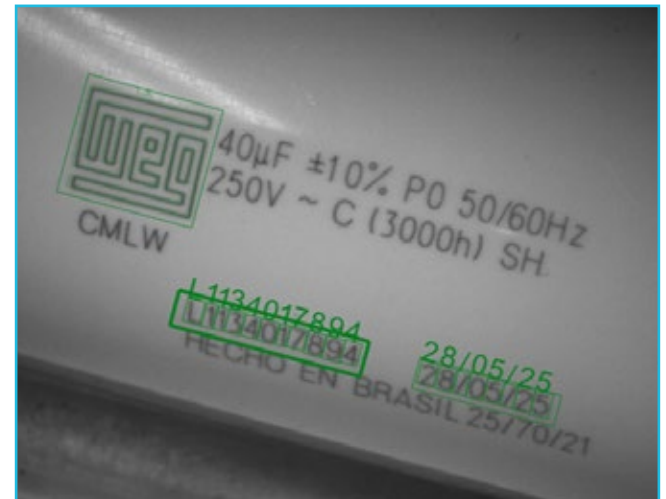


Application gallery

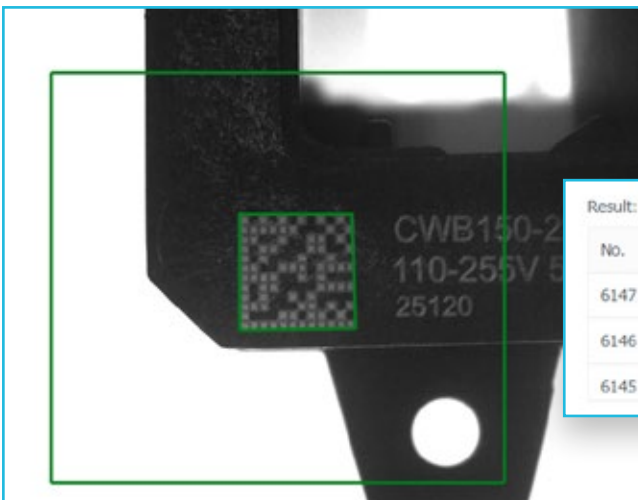
Position adjustment and traceability of metallic parts using polarized illumination.



OCR reading on capacitors with position adjustment via logo detection and polarized illumination.



DataMatrix reading on metallic parts with polarized illumination.

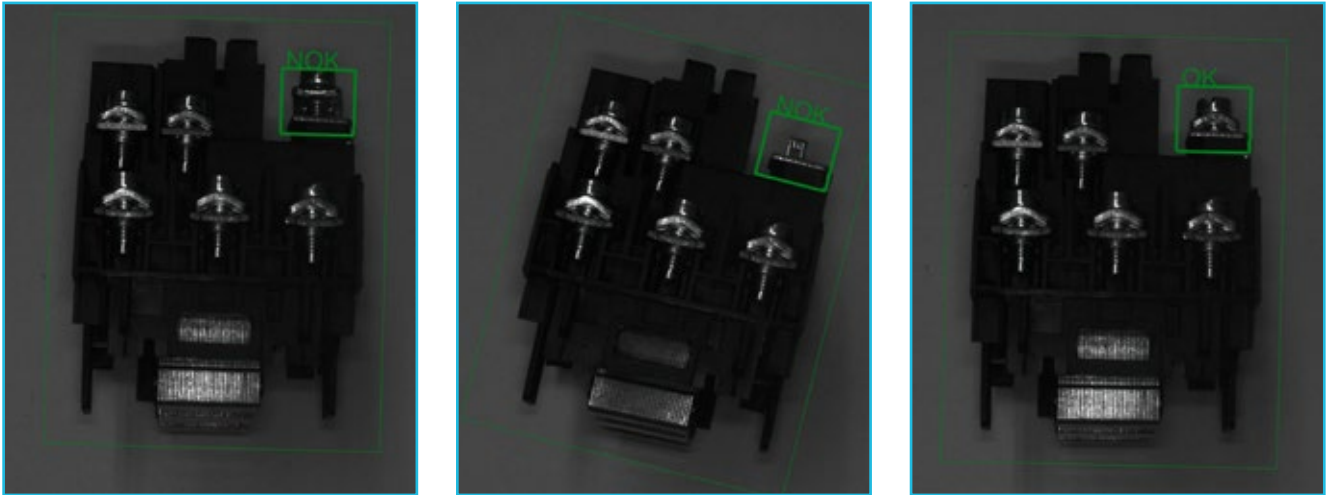


Read values

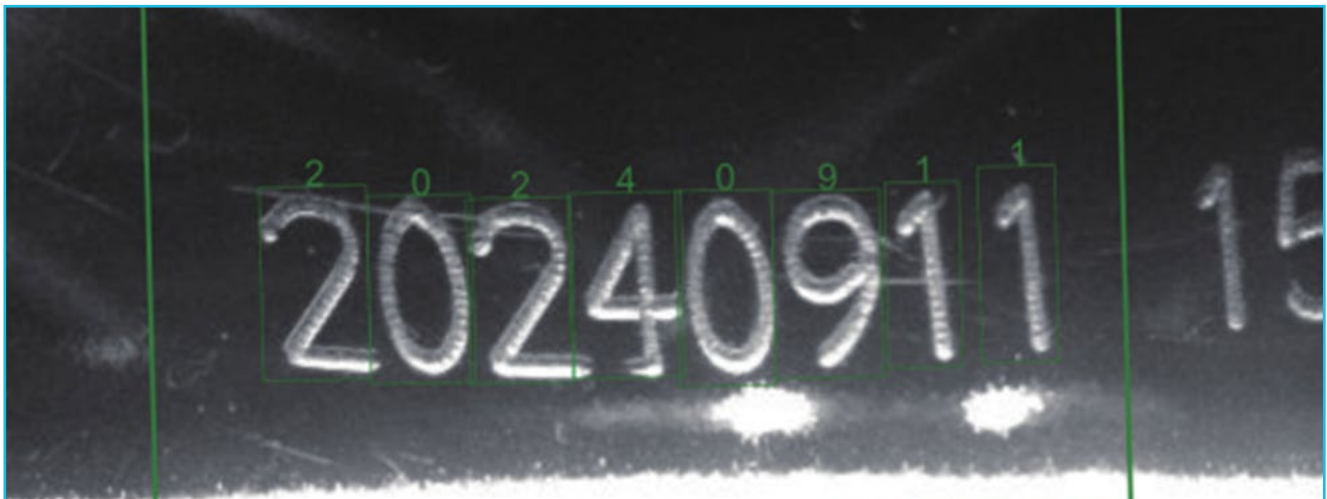
Result: OK		Successful Quantity: 1	
No.	CodeType	ppm	Data
6147	DM	18.0417	15976965
6146	DM	18.0417	15976965
6145	DM	18.1254	15976965

Application gallery

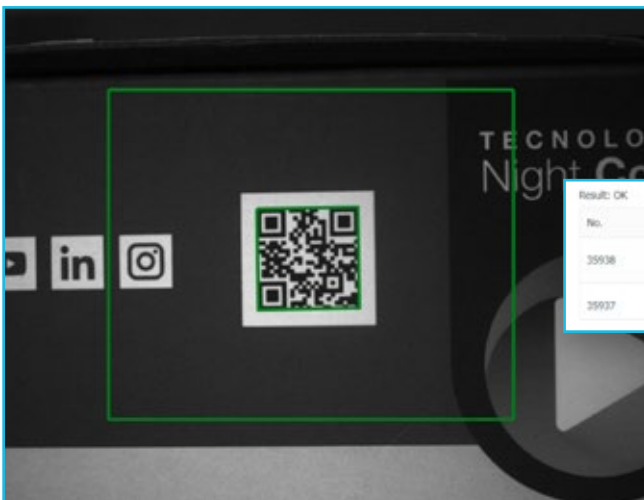
Assembly inspection with AI-powered classification and automatic position adjustment via part pattern detection.



OCR reading on laser-marked metallic parts.



QR Code reading with polarized illumination.



Read values

Result: OK		Successful Quantity: 1				
No.	CodeType	ppm	Data	Length	Version	
35938	QR	7.71602	https://www.weg.net/wcam	24	2	
35937	QR	7.74066	https://www.weg.net/wcam	24	2	

Application gallery

Barcode reading with polarized illumination.



Read values

Result: OK		Successful Quantity: 1	
No.	CodeType	ppm	Data
2079(1)	CODE128B	4.5	S1231123030412019 3
2078(1)	CODE128B	4.5	S1231123030412019 3

Static component counting via part pattern detection.



Read values

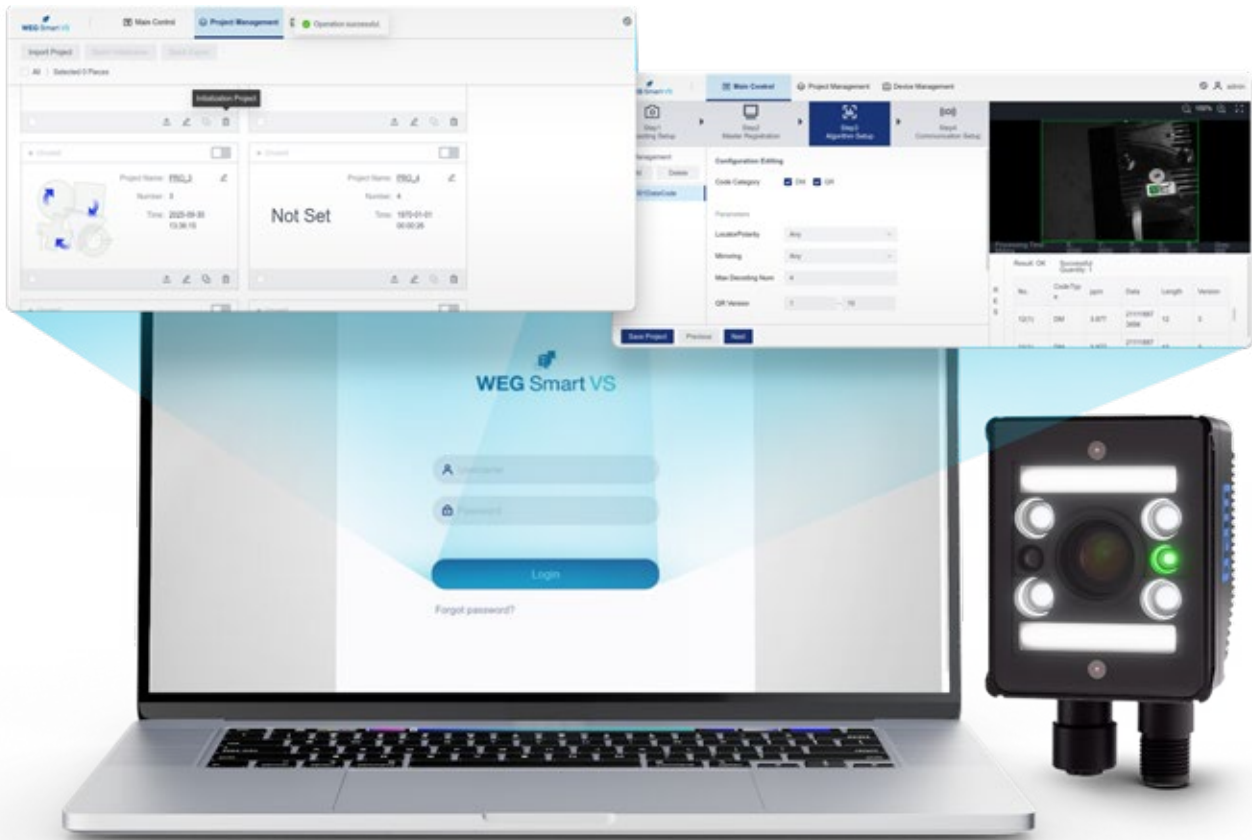
Number: 3				
No.	Score	X	Y	Angle
1269(3)	60	559.75	831.67	-0.77
1269(2)	76	1007.14	481.64	41.25
1269(1)	96	717.97	228.20	-17.31



Read values

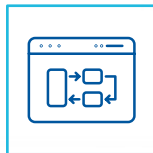
Number: 2				
No.	Score	X	Y	Angle
1617(2)	91	774.12	441.97	-13.75
1617(1)	94	528.52	239.79	20.08
1616(2)	91	774.18	441.93	-13.78

Software & Integration



Unified interface

Fast configuration via sensor software, accessible on Windows desktop or directly through a web browser—no additional plug-ins required.



Project-oriented workflow

Switch between recipes with ease, featuring local configuration storage and simplified export.



Collaborative operation

Multiple networked sensors can be supervised in real time with centralized visualization.



Data management and traceability


Automatic capture of OK/NG images, batch export, and history logs for auditing and process analysis.



Enterprise reliability

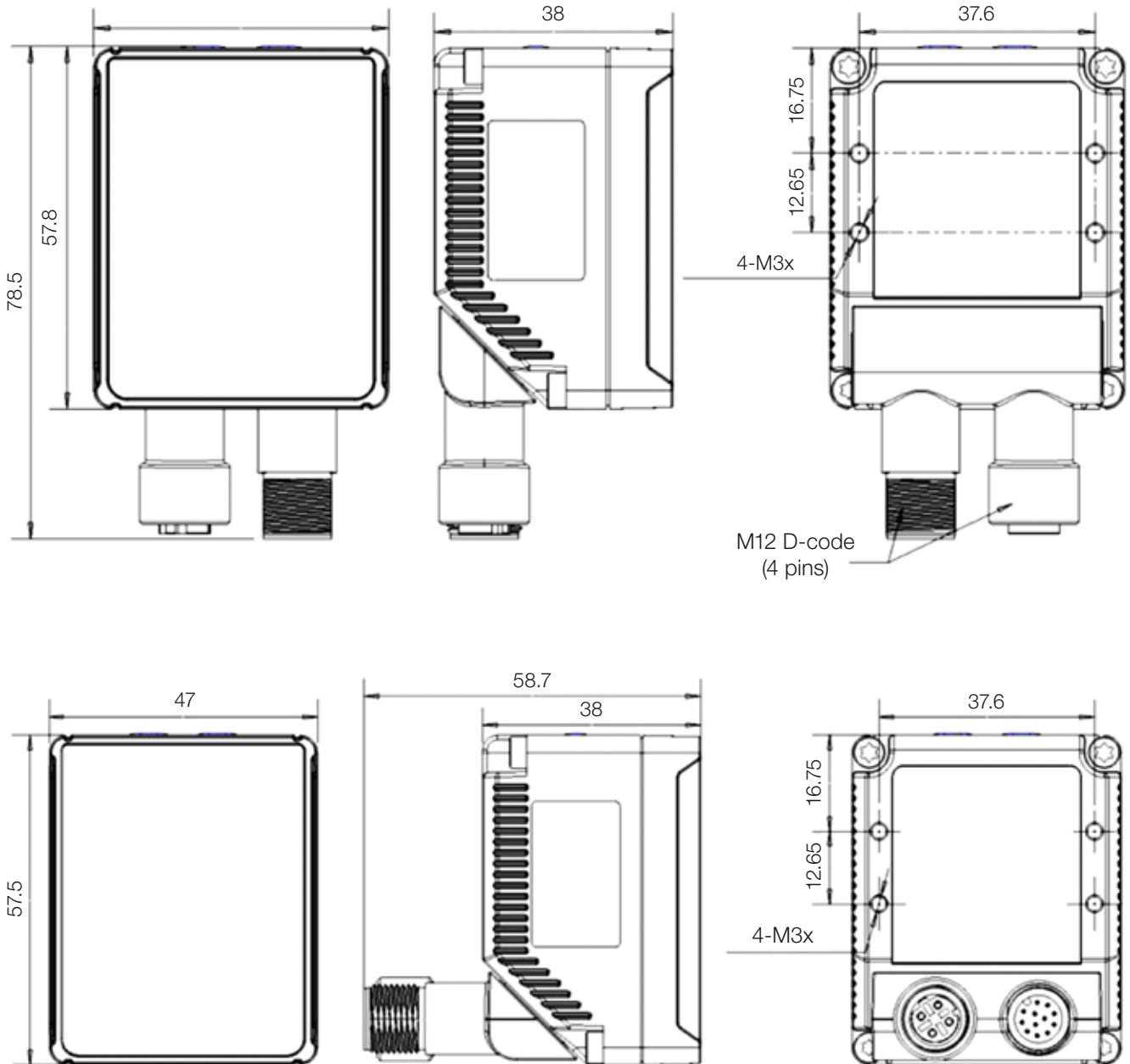
User-based permission control, detailed operation and maintenance logs.

Technical data

WEG model	WSVS-I1.3-07-WDP1T1-A1
Sensor / resolution	1.3 MP (1,280x1,024)
Maximum frame rate	Up to 60 fps (effective frame rate depends on exposure, light mode, and trigger)
Lens	12 mm (M12); autofocus
Integrated illumination	White — 3 channels: diffuse, polarized, direct (selectable via software)
Working distance	50–500 mm
Network interface	100 M Ethernet (M12 D-code, 4-pin)
Discrete I/O	2 inputs and 3 outputs (opto-isolated)
Serial	UART/RS232
Protocols	PROFINET, EtherNet/IP, Modbus-TCP (Server), TCP (Client/Server), UDP, FTP
Protection rating	IP65
Power supply	+9 to +24 Vdc (<1% ripple)
Environment	Operation: up to 50 °C, 20–80% RH (non-condensing); Storage: -30 to +80 °C
Laser aimer	Red dot laser for fine adjustments
OK/NG indication	Green/red LED (OK/NG) 
Certifications	CE / RoHS

Dimensions & Connections

Compact design featuring rotating M12 connectors, ideal for installation in tight spaces.



Note: the dimensions are in millimeters (mm).

Industrial connections

M12 D-code port (4-pin)

100 Mb Ethernet for stable communication.

M12 A-code port (12-pin)

Power supply, opto-isolated I/O (2 inputs and 3 outputs), and RS232 interface for compatibility with legacy systems.

Field versatility

Cable rotation allows for dynamic adjustment after installation, reducing cabling effort and increasing durability.

Why choose the WEG Vision Sensor?

At WEG, we develop solutions that truly make a difference—promoting efficiency and sustainability. If your business seeks agility in inspections, consistent quality, and reliable operation, the WEG Vision Sensor is the right choice. It delivers **accuracy, automation, and valuable insights for strategic decision-making** – providing a higher return on investment than manual processes. See why it pays off:



Future-proof technology

Solutions that aligned with the latest technological trends, always ready for the future.



No-code applications

Modern, programming-free tools designed to meet diverse demands.



Data security

Comprehensive protection for user and developer operations, ensuring maximum security.



Proven expertise

Thousands of success stories back the innovation and expertise of our solutions.



Agnostic solution

Advanced features and flexibility to create connected solutions, regardless of the platform.



Specialized technical support

Human-centered technical support throughout the process—no automated responses.



1-year warranty

Warranty coverage for one year from the date of delivery.



Worry-free routine

Delegate repetitive tasks with WEG Smart VS, freeing up your time for what truly matters.



Fast payback

Achieve a quick return on investment while avoiding rework and losses in your process.

Still wondering if the WEG Smart VS is worth it?

A quick comparison shows why it is the right choice:

MANUAL INSPECTION

Production inspectors face eye fatigue and loss of concentration due to repetition, increasing the risk of errors, customer dissatisfaction, and financial losses for the company.



AUTOMATED INSPECTION

The WEG Smart VS inspects every unit with precision and quality, controlling variables such as size, color, and quantity, while providing previously invisible data about the production line.



**DIGITAL
SOLUTION
PROVIDER**

As a **WEG Digital Solution Provider** partner, you develop and deliver differentiated product and service options to customers, market the entire **WEG Digital Solutions** portfolio, receive our full support, and add value to your product and service offerings.



Exclusive benefits for WEG Digital Solution Providers:



Exclusive discounts

Special pricing on the acquisition of the WEG Digital portfolio for resale, including connectivity products and Industry 4.0 software



Participation in special events

Access to exclusive online seminars and webinars focused on digital solutions



Bonuses

Earn productivity-based bonus revenue by achieving performance targets



Digital skills development

Access exclusive WEG training modules and courses, including e-learning programs and sessions at the WEG Customer Training Center



Promotions and marketing

Partner visibility on WEG's website, including applications, success stories, business referrals, and co-development of new opportunities



Dedicated support channels

Receive specialized technical support via phone or chat

Visit our website and become a partner:



Global presence

is essential, as much
as understanding
your needs.



Global Presence

With more than 49,000 employees worldwide, WEG is one of the largest electric motors, electronic equipments and systems manufacturers. We are constantly expanding our portfolio of products and services with expertise and market knowledge. We create integrated and customized solutions ranging from innovative products to complete after-sales service.

WEG's know-how guarantees our **WEG Smart Vision Sensor** are the right choice for your application and business, assuring safety, efficiency and reliability.



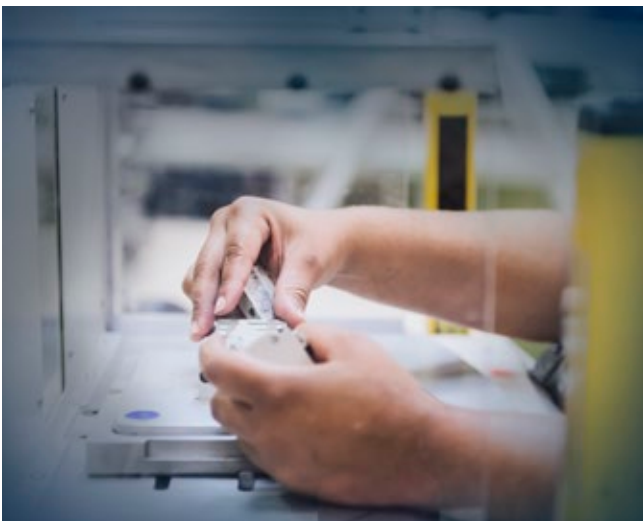
Availability is to have a global support network



Partnership is to create solutions that suits your needs



Competitive edge is to unite technology and innovation



Learn More

High performance and reliable products to improve your production process.



Excellence is to provide a whole solution in industrial automation that improves our customers productivity.

Visit: www.weg.net

 youtube.com/wegvideos

The scope of WEG Group solutions is not limited to products and solutions presented in this catalogue.

To see our portfolio, contact us.

For WEG's worldwide operations visit our website



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The values shown are subject to change without prior notice.
The information contained is reference values.