

Product News

Autumn 2009



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FlexXpect

For value-added inspection
solutions

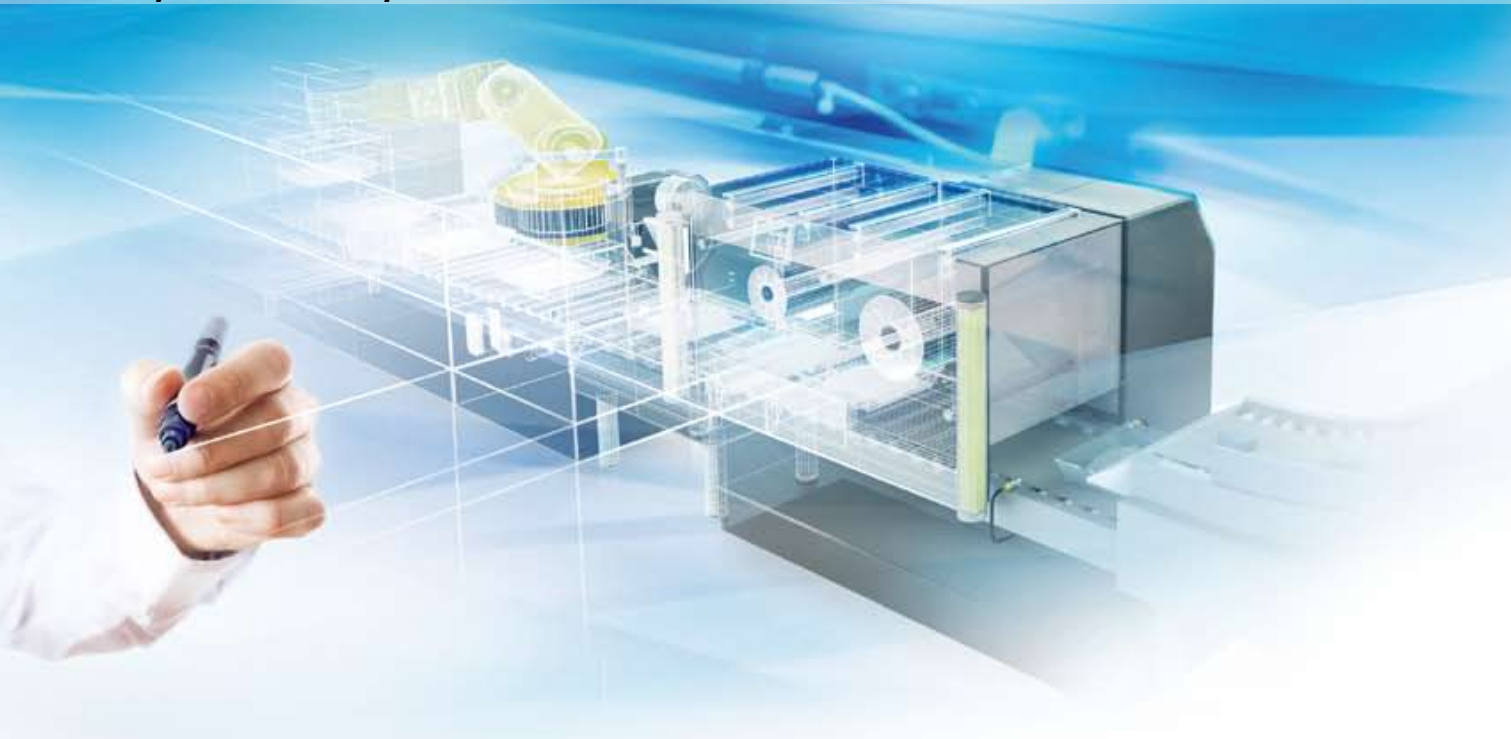
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E5GN

Same performance - smaller size

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From your first idea to your final machine!



Turning your ideas into machines.

Omron's specialist image is built mainly through our activities in front of customers. Products and concepts alone are never enough: we become a specialist through a subtle alchemy of products, solutions, people and an infrastructure geared up to serve the OEM sector.

The concept of Scalable Machine Automation is the basis for this. Our aim is to offer the right automation architecture for the right machine. Machine builders know what they want and have a clear idea about performance/cost ratio. We help them to identify quickly the core automation architecture – the final product selection can be tuned during the process.



Read more about Omron's Scalable Machine Automation in the special edition of our Technology & Trends Magazine

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**Features and benefits**

- New improved data log viewer
- Remote maintenance through web pages
- Improved graphics library
- Better graphics support
- Improved communications flexibility
- New .Net interface to allow full control of an application using .Net

V3 Power and Convenience

The latest major upgrade of our popular machine visualisation package comes with many new features. CX-Supervisor v3 is designed to save you time and effort while enhancing the experience of visualising your machine.

Data Log Viewer

This has been completely re-written to enable advanced features that enable you to analyse the data from your machine at a glance. You can now overlay past data over new data and easily view your data using intuitive pan and zoom.

Web-based Remote Maintenance

Web-based Remote Maintenance allows a user to remotely and securely log in to view and edit points, monitor and acknowledge alarms and logs, and update the application, all with a standard web browser from anywhere in the world!

Graphics Library

This has been significantly improved to include new 'Smart Objects' familiar to users of CX-Designer. It also allows objects to include actions, animations and associated points. These points can easily be substituted, allowing you to make your own library of re-usable objects.

Integrated One Click Simulation

After its popularity in CX-One, you can now use Integrated One Click Simulation. This enables your application to be tested using a simulation of the PLC without having to deploy to a runtime machine – all with a single click.

Improved graphics

Your applications can now look even better! Graphics formats such as JPEG and GIF are supported, which allows you to choose the image you wish to use without having to change the format. In addition, there is an option to make part of an image transparent helping you to integrate with the rest of your graphics. Metafiles can easily be converted into CX-Supervisor objects and added to the graphics library complete with special animations and actions.

Support for FINS Gateway

This allows you to directly connect to your devices using FINS Gateway (now included with CX-Supervisor). The option to use FINS Gateway gives some advanced features which can benefit developers of larger, more complex systems.

Plus much more

Including 're-build all', improved application analysis and performance monitor, and a new 16 million colour palette control.



CJ2H-series PLCs**Features and benefits:**

The CJ2H Series now provides greater capacity, new communications capabilities, a new programming style, and a superior Support Software environment.

- High throughput, large capacity
- Built-in EtherNet/IP for easy data links
- Synchronous I/O bus for accurate timing
- Easy transition from any Omron C-series PLC

Our top performers are open for communication

While being fully backward compatible with the proven CJ1-series, the new CJ2H family has been tuned for speed and accuracy. Fundamental improvements in interrupt handling, I/O data refreshing and execution of complex functions not only give higher performance, but... With more control over timing accuracy, you can achieve more consistency in production quality at higher throughputs in any industrial production process.

New data tracing and debugging functions will get your machine up and running faster than before. And improved on-line editing that has minimal impact on control performance means that you can fine-tune your control system's performance on-the-fly.

Program upload/download and data access are speeded up by using USB or the built-in Ethernet interface. The EtherNet/IP functionality allows you to configure data links between controllers or with HMI or scada systems. As data links are tag-based, configuration of multi-CPU systems within a single project is more easily managed.

The full range of existing CJ1 I/O units can be used on CJ2H, and new high-speed units will be added that make full use of the new synchronous data transfer between units.

CP-series PLCs**Features and benefits:**

The CP1E supports many of the strong features that are presently offered by the CP1L.

- Same programming method & tool as the other Omron PLCs
- Same fast serial port, ideal to control inverters
- Same high speed outputs to control servo drives
- Standard USB port

Answering your needs - exactly

Omron is extending its successful line of Compact PLCs with new CP1E models. The CP1 family comprises three different series offering increasing degrees of sophistication: the CP1E, the CP1L, and the CP1H. This comprehensive line-up enables you complete flexibility to offer your customers a choice of automation sophistication in their machines. And that also means flexible pricing.

Simple motion functionality

The CP1 family offers fast serial ports, enabling simple motion positioning. MODBUS function blocks using those fast serial ports enable you to control and monitor up to 32 inverters. While the high-speed pulse outputs can easily control two axes servo-drives. Additionally, the high-speed pulse outputs can easily control up to four axes of servo-drives.

Some of these features are limited in quantity, making the CP1E the perfect choice for applications with low demands.



CJ1W-MCH72 - Trajexia controller for PLC



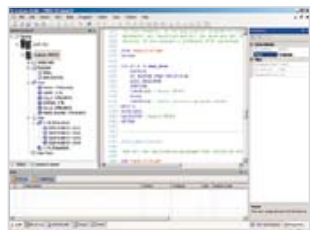

Trajexia in compact format

Trajexia expands with new PLC-based controller

Omron has expanded Trajexia product line with a new controller focusing on compactness and simplicity. Capable of controlling up to 30 physical axes, digital I/Os, encoder port and MECHATROLINK-II master connection are all included in a single unit.

Trajexia Studio software

The Trajexia Studio tool offers an easy and intuitive software environment that saves time programming and debugging your applications. It supports existing devices, as well as the new PLC version and future developments.




Features and benefits:

Trajexia controller:

- Compact size
- Control of up to 30 servos or inverters
- Selectable cycle time from 0.5 ms to 4 ms
- Serial port for external encoder
- Embedded digital I/Os
- Same instructions set as 16 axes stand-alone controller

Trajexia Studio Software:

- Improved user graphical interface
- Multi device support
- Drag & drop functionality
- Offline programming and advanced download
- Program comparison tool
- Axis configuration wizard
- Advance editor features

G-Series MECHATROLINK-II servo drive



Features and benefits:

- Pocket-size servo
- Built-in MECHATROLINK-II motion bus
- High starting torque: 300% for 3 sec
- Positioning, speed or torque control
- Separate power and control power supply
- Fast and accurate positioning
- Incremental and absolute encoder available
- Cylindrical and flat servo motors
- Vibration suppression

Save space, save wiring, save time

With their built-in MECHATROLINK-II motion bus, just a single cable is needed to connect servos together. So you not only save on wiring and installation time, but also significantly reduce the chance of connection errors.

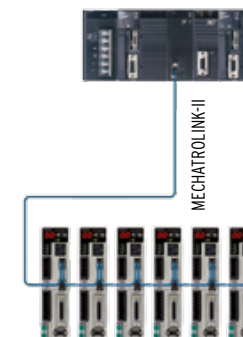
Complete and compact positioning system

In a minimum of space you can have a complete and powerful positioning system when combining the CJ1W-NCF71 unit and the G-Series servo. This configuration offers 16-axis positioning with linear and circular interpolation, as well as interrupt feeding. The NCF and the G-Series offer the ideal solution for applications where space is tight.

Easy tuning

Tuning is possible via the easy to use CX Drive software tool and takes just 1 minute to complete. The result is superb control, ensuring optimal operation of the servo and hence machine, with next to zero knowledge required from the user.

From multiple cables to only one cable



www.industrial.omron.eu/trajexia



www.industrial.omron.eu/g_series

Accurax G5 servo**Motion network and safety built-in****Extreme mechatronics...**

The new Accurax G5 servo drive family addresses customer demands for more performance, speed and integration. Whilst keeping a minimum footprint includes additional options built-in as standard, such as safety, communications, embedded indexer and external encoder.

New compact size

Both servo drive and servomotors have been optimized to reduce panel space and offer lighter servomotors. Example 200 W dimensions: 40x150x130, motor mass: 0.82 Kg.

Enhanced performance

Thanks to its improved design, G5 offers a frequency response five times better than W series, that combined with innovative algorithms results in quicker positioning and settling times close to zero.

Optimized servomotors design

Its new servo motors design offers just 0.5% cogging torque (torque vibration), a guarantee when precision is needed.

Servo motors conform to IP 67

G5 servomotors family offers IP67 protection along all motor power range, including rugged connectors on motor body and a wide range of preassembled flexible cables.

External encoder

No need for extra boards. G5 allows the connection of an external encoder when direct feedback from mechanics is required.

...meets Smart automation**Safety built-in**

G5 integrates safety as standard. The G5 servo drives comply with: Performance Level d (PL d) according to EN ISO 13849-1:2008, Safety function STO (Safe Torque Off) according to IEC 61800-5-2:2007, Safety Integrity Level 2 (SIL 2) according to EN 61508:2001 (Part 1 to 4) and Safety Category 3 (Cat. 3) according to EN 954-1:1996.

Networking Integration

G5 comes with MECHATROLINK-II interface onboard as motion bus; Analog/Pulse version is also available with all the same functionality.

One access point

CX-Drive programming tool allows access to the drives from one local or remote connection, making machine commissioning and maintenance easier and faster.

Features and benefits:

- MECHATROLINK-II and Analog/Pulse drive models
- Frequency response of 2kHz
- Safety conforming ISO13849-1 Performance Level D
- Low cogging torque servo motors
- IP67 protection level in all motors
- High accuracy provided by 20 bits encoder
- Side by side mounting of drives
- Advanced vibration suppression
- Full closed loop encoder built-in
- Double registration input provides application versatility
- Power range up to 5 kW



SmartStep 2 pulse control servo drive



Features and benefits:

- Ultra-compact size
- Auto-tuning
- Vibration suppression
- Adaptive resonance suppression filter
- Feedback pulse output
- Motor power range from 50 W to 750 W
- Electronic gear
- 10,000 steps per revolution
- Position control via pulse input 500 kpps

A new step in servodrive simplicity

The new SmartStep offers an ideal solution for point-to-point motion applications where simplicity is essential. SmartStep 2 keeps things simple whilst combining high performance in a cost-effective solution.

Compact Size

SmartStep 2 has a completely new compact design that gives a 50% space saving compared with the previous model. It also has new features and functionality to help make your machines more efficient and cost-effective.

CX-Drive software tool support

SmartStep 2 is fully supported with a wide range of features making the servo drive set-up easier and faster than ever:

- Auto-tuning
- Parameter editing and monitoring
- Speed and position diagrams
- I/O status and alarms
- Real-time data trace



www.industrial.omron.eu/smartstep2

JX compact inverter



Features and benefits:

- Ratings up to 7.5 kW
- RS485 Modbus built-in
- Side-by-side mounting
- EMC filter built-in
- PID function
- Micro-surge voltage suppression
- Automatic energy saving
- Emergency shut-off
- Second motor setting
- Auto carrier-frequency reduction
- PTC thermistor input
- Cooling fan switch control

Compact and complete inverter

With the RFI filter built-in and the communications integrated as standard, the JX provides a compact and complete solution to a whole range of simple applications.

Easy network integration

The RS485 Modbus is built into the RJ45 port in the inverter front, making it very easy to add inverters into the network without any extra option boards. Therefore, saving costs and space.

Space and cost saving

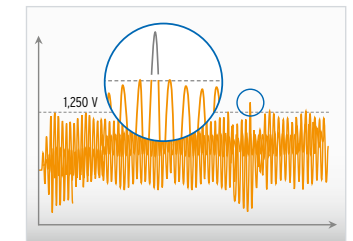
The new JX has a built-in EMC filter that saves on costs and space compared with the standard external filter solution.

1 ph: EN61800-3 cat. C1

3 ph: EN61800-3 cat. C2

Maximise motor life

Advanced PWM control is used to suppress micro-surge voltages that sometimes cause malfunction in 400V motors. The motor is thus protected and its life is prolonged.



Micro-surge Voltage Suppression

Spikes in the terminal voltage are suppressed even when the wiring distance from the inverter to the motor is long



www.industrial.omron.eu/jx

Born to drive machines

Harmonized motor and machine control

Specifically created for your application, the MX2 was developed to harmonise advanced motor and machine control. Thanks to its fast CPU's and advanced algorithms the MX2 provides smooth control down to zero speed, plus precise operation for fast cyclic operations and torque control capability in open loop.

100% control...

High starting torque and torque control capability in open loop mode give you full control of your machine dynamics and performance. Options for all of the major field-bus systems and a 24VDC external supply keep you in full control of your machine operation.

...0% risk!

Safety is embedded in the MX2, according to ISO 13849-1, Cat 3, with two safety inputs and an External Device Monitoring (EDM) output.

Speed synchronisation

Speed synchronization can be achieved without external hardware and via standard parameter settings. The MX2 will act as a speed follower to an external pulse generator/encoder signal up to 32 KHz.

Positioning functionality

Specially developed application functionality enables the MX2 to solve simple positioning tasks with a pulse counter without the need for an external controller. Up to 8 positions, plus home, can be selected by the user. Furthermore, the MX2 can be switched between speed and position mode.



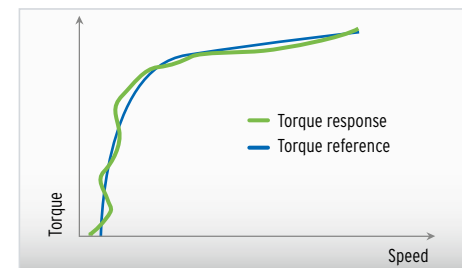
Features and benefits:

- Up to 15 kW
- 200% starting torque
- Torque control in open loop
- Double rating VT 120%/1min and CT 150%/1min.
- Speed range up to 1000Hz
- IM & PM Motor control
- One parameter auto-tuning
- Safety conforming ISO13849-1 Category3 performance level PLD
- Logic programming
- Positioning
- Integrated at OMRON machine Automation solution



Free to program

- Intuitive and user friendly flow chart programming
- Integrated in CX-Drive configuration tool
- Up to 1000 lines in a program
- 5 tasks can run in parallel



Torque master

The MX2 delivers 200% starting torque near stand-still (0.5 Hz) and can operate in torque control in open loop mode. This allows the MX2 to be used in applications where closed loop AC vector drives were previously used.



Easy network integration

Built-in RS485 (115 Kbaud) communications and the possibility for integration in standard industrial networks, such as Dnet, Profibus, CANopen, CompoNet, ML-II or EtherCat makes the MX2 exceptionally easy to integrate.



RX Inverter**Features and benefits:**

- Up to 132 kW
- Built-in EMC filter
- Sensor-less and vector closed-loop control
- High starting torque in open loop (200% at 0.3 Hz)
- Full torque at 0 Hz in closed loop
- Built-in logic programmability
- Built-in application functionality

Customised to your machine

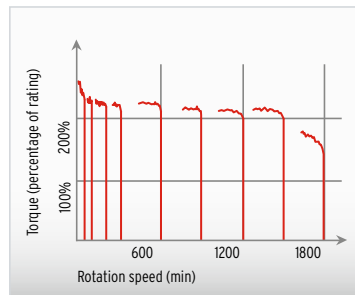
Omron realises that you need quality and reliability, plus the ability to easily and quickly customise your inverter to the application in hand. And with the RX, you have the perfect tool for the job.

Positioning functionality

Simple positioning is handled by the inverter itself without the need for an external motion controller. Functions include pulse trace position control mode, homing and position teaching.

Focused on application

The inverter is pre-programmed with special application functionality, e.g. brake control, by-pass motor control, orientation stop, interruption filling and switching from speed to positioning control, etc.

**Sensor-less vector control at 0 Hz domain**

With the benefit of a patented 0 Hz domain open-loop control mode, the RX can develop 150% torque at 0 Hz, allowing zero speed load holding. Moreover, an improved sensor-less vector control algorithm enables the RX to develop more than 20% starting torque at 0.3 Hz.

SX 690V Inverters**Features and benefits:**

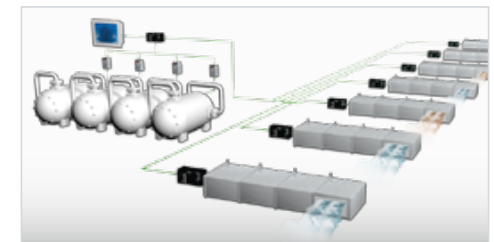
- From 90 kW to 1,000 kW
- Compact size
- Protection from damage and downtime
- Flux vector and variable torque drives
- Double rating
- Standard drive IP54
- Fully customizable (water cooling, etc.)
- Built-in filter - C3 class
- Pre-maintenance functionality
- Simplified maintenance thanks to a minimum of easily accessible mechanical parts
- High functionality LCD
- Logic programming feature

Expanding motor control capabilities

The new SX 690V inverter helps you to optimize the operation of critical assets, such as cranes, crushers, pumps, fans, compressors or blowers. Your process is protected from damage and downtime, and you benefit from reduced installation, energy and maintenance costs.

Fully customizable

Our new solution offers a wide range of options to choose from to fit your application, including: protection class, cooling method, safety, external I/O, or encoder, among others.



Electric motors, as used to drive winches, pumps, cranes and thrusters, all require control of the motor speed. A frequency inverter combines a dependable drive with excellent starting torque and accurate speed control.



F3ET and F3EM light curtains



Features and benefits F3ET:

- Optical synchronization for reliable operation without additional wiring
- Robust aluminium housing
- NPN/PNP and light on/dark on selectable
- Detection range from 15 cm to 2.1 m

Features and benefits F3EM:

- Analogue output for simple height detection
- Serial output with single beam evaluation for profile measurement
- Measuring range from 15 cm to 2.1 m

The simple way to detect challenging object shapes and heights

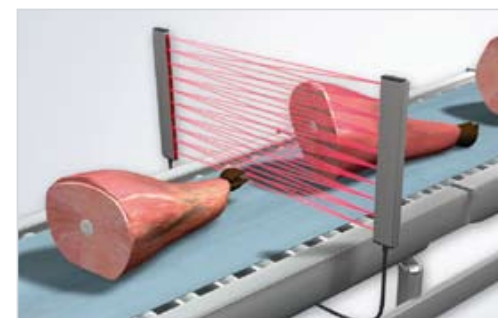
Objects with varying heights or holes can create multiple signals when using single beam sensors. Light curtains and area sensors offer the ideal solution by providing reliable object detection even for unevenly shaped objects. Omron's light curtain platform concept simplifies the installation and machine design, providing the same housing and mounting concept for safety and non-safety light curtains.

F3ET Light curtain in robust aluminium housing

The F3ET light curtain provides reliable area monitoring in a robust housing and allows fast and simple installation without special requirements thanks to M12, 5-pin connectors and optical synchronization between emitter and receiver.

F3EM Measuring light curtain in robust aluminium housing

The F3EM light curtain provides simple overall height detection (analogue output models) and single-beam evaluation for profile measurements (serial output models) and is easy to install and set up.



Simplifying the installation requirements for object detection in areas, height measurement and user protection (safety light curtains).



Simplicity, reliability and flexibility for your food packaging machines

Enhanced hygiene and an increasing variety of packaging materials and shapes require easy-to-clean yet flexible packaging machine designs. The high design re-usability and maximum efficiency during production are key competitive advantages. And Omron has the sensor range to match.

The E3Z compact photoelectric sensor family and E3X fiber platform offer the most comprehensive line of sensors for food packaging with the same housing and connection concept. Designing and adapting machines to different customer requirements has never been easier.

1. Transparent object detection

E3ZM-B all transparent-media sensor

In addition to the models optimized for PET detection, Omron's E3ZM-B family of photoelectric sensors has been extended with models optimized for the detection of all transparent media.



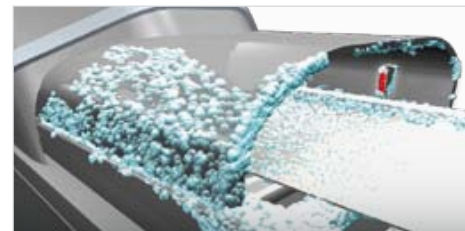
E3ZM-B with models optimized for PET detection and general transparent media detection.

2. Often cleaned environment

E39-R50 Reflector with enhanced detergent resistance

The E39-R50 and the smaller sized E39-R51 extend the portfolio of reflectors for harsh environments providing enhanced detergent resistance with cost effectiveness.

For our complete portfolio of sensors for the food packaging industry please contact your OMRON representative.



Hygiene and frequent cleaning

3. Print mark detection

Solution for challenging mark or colour detection

Detecting print marks on objects with complex designs or where the contrast between print mark and background is low, can be challenging for easy-to-use standard mark sensors like E3ZM-V. The new E32-L15 long-distance fiber head together with the E3X-DAC colour amplifier, provides stable detection and easy adaptation to application specific requirements when the detection conditions become challenging.

The new 'register-mark mode' in addition to the RGB ratio and light intensity comparison, further enhances the detection capability of the E3X-DAC-S colour and mark detection amplifier to enable detection of the full range of differently coloured, black, grey or white marks or objects.



E32-L15 Long distance fiber head and 'register mark mode' of E3X-DAC-S for challenging mark or colour detection



E3X-DA-S Fiber optic amplifier



High functionality fiber amplifier

...when small differences have big impacts

Detecting challenging objects reliably in production environments is often difficult. The usable signal differences are either small, very short, or more advanced signal processing functionalities are required. Furthermore, disturbing influences in daily operations can lead to instability.

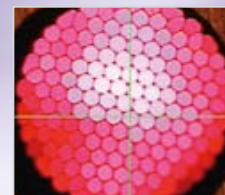
With the development of a new light coupling and emitting technology, the new E3X-DA-S fiber amplifier generation allows turning, removal and re-insertion of the fibers without influencing detection stability. What's more, the improved light coupling also allows a more accurate and stable differentiation of two light levels.

For instance, detecting transparent bottles, vials or ampoules prior to filling or coating and then checking them if the process was successful, can be realized within this sensor. And it works reliably even in high speed production lines where fast as well as long term signal level variations occur.

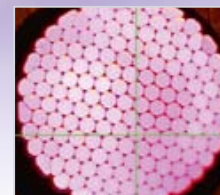
The next generation

Features and benefits:

- Power tuning function to adjust the received light to a maximum, minimum, or pre-defined value
- Auto power and threshold adjustment functions for highest operational stability
- Two outputs for window monitoring, or two level detections (e.g. object + object state change)



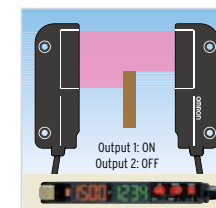
Light distribution in multicore-fibers of conventional fiber amplifiers



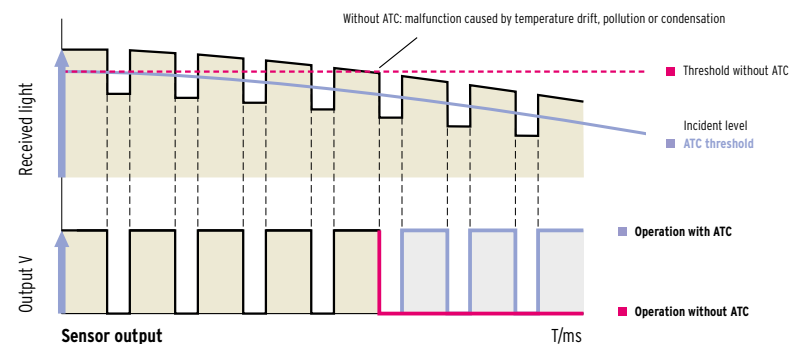
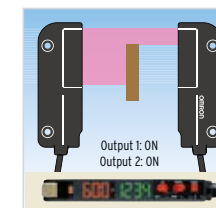
Light distribution in the new E3X-DA-S amplifier generation



Differential edge function for the detection of fast height changes



Twin output for the detection of two light levels



Auto-threshold-control (ATC) for higher signal stability compensating for power reduction caused by temperature drift, dust or condensation

FlexXpect vision platform



For value-added inspection solutions

The new FlexXpect vision platform delivers application and industry specific inspection solutions. Starting with the powerful Xpectia system, value-added functionality is afforded to meet the most dedicated application requirements. FlexXpect offers an open and programmable platform that can be further customized to meet individual needs.

Features and benefits:

FlexXpect-Pharma

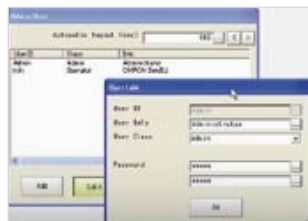
- User access administration, audit trail,...
- Coder reading (1D/2D)
- OCR/OCV

FlexXpect-Glue Bead

- Thickness
- Gap
- Correct path

FlexXpect-Labeling

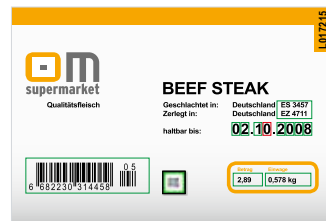
- Unwrap and stitch up to 4 camera images
- OCR/OCV
- Data-matrix and barcode
- Classification of print quality



FlexXpect-Pharma:
(FDA 21CFR Part 11 compliant)



FlexXpect-Glue Bead:
Simple inspection of complete parts by automatic path calculation



FlexXpect-Labeling

Xpectia-FZ3



Features and benefits:

- True colour system: 16 million colours
- High resolution cameras: 5 million pixels
- 2D and 3D inspections
- Touch-screen for easy operation
- Industrial-PC platform

Performance in touch with simplicity

The Xpectia high-end vision system is now available with value added processing algorithms and a 5 MPixel camera. The ultra-compact micro cameras allow installations with space constraints. Value-added image processing is assured for mastering even the most challenging tasks.

For instance: Panorama – the stitching (synthesizing) of images in which a larger field of view can be achieved by integrating several camera views into one, and HDR (high dynamic range), which minimises the effect of under and over exposure within the same image.

1. Panorama: stitching (synthesizing) of images



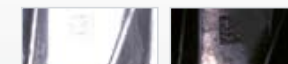
The borders of each image are analyzed for unique characteristics.



These characteristics are used to generate a seamless single image.



2. HDR: compensation of diverse lighting effects



The surface of the workpiece is accurately reproduced with a sharp contrast.



ZG2 series sensors



Features and benefits:

- Intuitive – easy to use
- Live – LCD monitor for display and setup
- Versatile – 18 tools
- Accurate – 5µm resolution
- Wide profiles – up to 70 mm
- Stable measurements on challenging surfaces

Easy profile measurement

The new ZG2 smart sensor makes easy profile measurement possible thanks to its built-in LCD monitor offering an easy to use and intuitive user interface supporting efficient installation and setting up. Immediate live feedback of the measurement result is provided in real time. Advanced measurement tasks can be configured in 3 steps, saving operation and setting-up time. The fine tuning of settings can be achieved in seconds.



3D glue bead inspection with ZG2 profile sensor. High accuracy combined with ease of use.



Precise gap measurement in automotive industry

 www.industrial.omron.eu/zg_series

ZFV Easy Vision sensor



New model for multiple inspections

The successful Easy Vision series of sensors has been complemented with the new ZFV-C55/50 controllers. This now opens up the possibility to carry out multiple inspections simultaneously.

 www.industrial.omron.eu/zfv

ZFX Advanced Vision Sensor



Code reading and quality inspection combined

The innovative ZFX now offers barcode / datamatrix code reading and powerful inspection possibilities in a single platform. The new controller versions ZFX-C15(25)-CD are ideal for labelling, packaging, pharmaceutical and other applications.

Features and benefits:

- Live – LCD display for setup and live feedback
- Versatile – 8 inspection tools (incl. search, char, edge, area, colour, etc.)
- Fast – cycle time down to 4 ms
- Multiple – up to 8 simultaneous inspections

Features and benefits:

- Built-in LCD touch screen for easy setup and immediate feedback
- Up to 20 image processing tools, 128 inspections per image
- Auto-adjustment functions for easy image setup
- 1 or 2 cameras, colour or monochrome
- Combination of code reading (barcode and data-matrix) and powerful inspection items

 www.industrial.omron.eu/zfx

F3S-TGR-CL safety light curtains



Features and benefits:

- One housing for body, hand and finger protection in Type 2 and 4
- Operating distance:
 - Body protection: 50 m
 - Hand protection: 14 m
 - Finger protection: 7 m
- Integrated selector switches:
 - Muting (T-, L- and X)
 - Pre-reset and EDM
 - Blanking and beam coding
 - Control for cyclic operation
- Integrated muting lamp
- EN ISO 13849-1 ready

Total consistency across-the-board

All new Omron F3S-TGR-CL safety light curtains provide comprehensive body-, hand- and finger-protection, making them suitable for a widest possible range of applications in packaging and general industry.

F3S-TGR-CL systems are plug-in and use by having a family concept in housing, wiring, setup and accessories in all resolutions and safety categories. Engineered for efficiency, the curtains provide full functionality at a basic cost level and are supplied with a full set of mounting accessories.

All muting-modes and integrated muting lamp on board:



T-Shape muting



L-Shape muting



X-Shape muting

E5GN Temperature controller

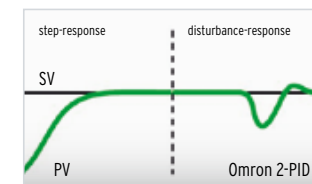
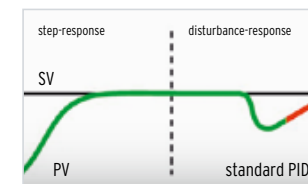
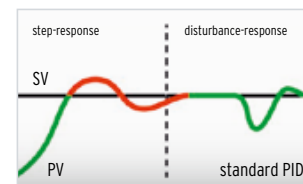


Features and benefits:

- Unique 2-PID system for precise control
- High-intensity LCD offers excellent visibility in all lighting conditions
- Optimal status recognition via 3-colour change PV display
- Clear diagnostics and extended process/heater alarm strategies
- Easy set-up and operation via front keys or intuitive CX-Thermo software
- Highest application security thanks to password protection/customizable menus
- Logic operations to perform simple PLC-like functions

Same performance - smaller size

Acknowledged as the best temperature controllers available today for general applications, the E5_N single-loop digital temperature controller series needs no introduction. Now the series has been completely updated with the E5GN, which offers the same reliable performance in a smaller package of only 24x48mm (1/32 DIN). Despite its compact size, the E5GN offers an 11-segment dual display with PV color change and is ideal for mini-machine automation with its logic operations.



2-PID control uses a powerful algorithm that enables the instrument to be tuned for optimum disturbance and step response.



www.industrial.omron.eu/safetysensors



www.industrial.omron.eu/e5gn

MK-S(X) industrial power relay**Features and benefits:**

- Suitable for DC-switching
- DC load switching up to 10 A; 220 VDC (resistive load)
- AC load models are capable of switching up to 15 A; 250 VAC (resistive load)
- SPST-NO/SPST-NC contact form enables contact welding detection
- Lockable test button for easy testing

Power with a capital P

Similar in appearance to Omron's successful MK(S) relay that has proven its exceptionally reliability since its introduction almost 50 years ago, the MK-S(X) is specially designed for switching high power. DC power relays are commonly used within the power industry, where application of the MK-S(X) is focused.



DCS for power plant (central control, monitoring & protection system)



High voltage circuit break switch


www.industrial.omron.eu/mk-sx
G3PW Power Controller**Precise temperature control in optimal form**

The G3PW Power Controller is a thyristor-type single-phase power controller that enables precise temperature control. It accepts a continuous proportional output of 4 to 20 mA or 1 to 5 V from a temperature controller to execute phase control or optimum cycle control. Just as with a solid state relay (SSR), on/off control can be executed by inputting a time-proportional output or on/off output (i.e., voltage signals) from a temperature controller. Initial settings and adjustments can be made via front panel keys. The 7-segment display on the front panel can also be used to monitor e.g. the input value (%), output value (%), phase angle (%), and load current (A) (constant-current models only.).

Standard models and constant-current models are available. The latter provide current detection functions (constant current, current limit, overcurrent detection, and heater burnout detection) and serial communications (including connections to the EJ1 Modular Temperature Controller). Heater burnout detection is based on the heater resistance rather than on the load current, making detection more accurate.

Features and benefits:

- Precise heater burn-out detection
- Set value and present value monitoring/indication
- Phase control or optimum cycle control
- RS-485 communications to set manipulated variables and monitor load current
- Total run-time monitoring
- Output modes for phase control: proportional to phase angle (same as GP3X), voltage, square voltage, and constant current control
- Application with various loads: constant and variable load resistance


www.industrial.omron.eu/g3pw

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