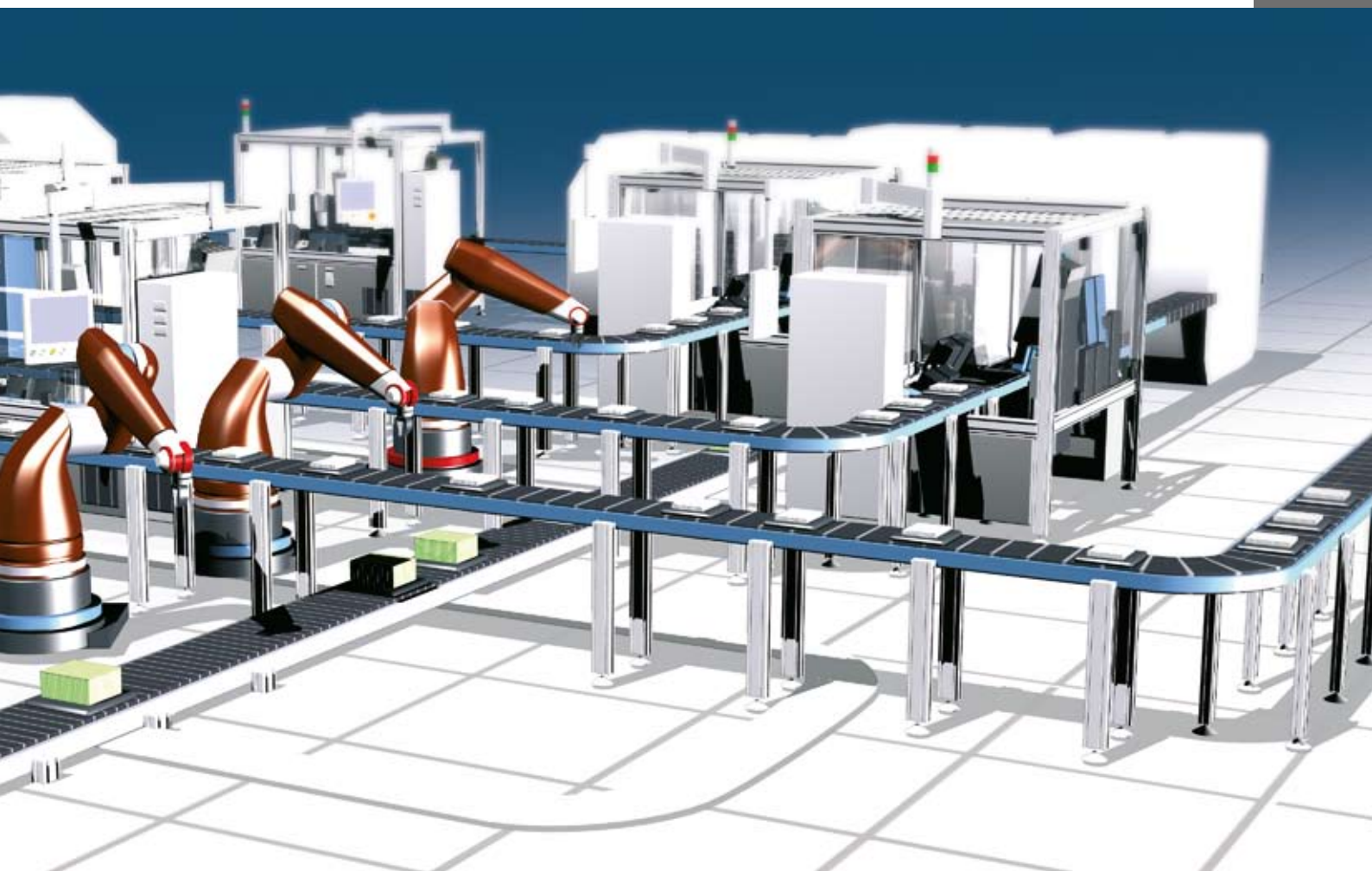
BALLUFF

sensors worldwide

Systems and Solution

... for Robotics, Material Flow, Handling and Assembly



Think Solutions – think Balluff

Economical and flexible sensor technology increases your productivity

Balluff's application expertise provides solutions for even the most difficult production problems. The Balluff product portfolio encompasses sensors using a variety of function principles, displacement sensing and identification systems, connectivity technology, and everything needed for handling automation tasks.
As an application specialist we see ourselves as an asset in the growth model of our customers. Balluff stands with you as a partner anywhere in the world.





The demands placed on industrial companies are constantly increasing. Clear corporate goals include:

- Consistently high quality at low cost
- High, fast availability of products in the marketplace
- Efficient production processes with high equipment up-time
- Standardization of machines and components
- IT-integration of the machines

All this is guaranteed by automated solutions with an instinctive touch – Sensors from Balluff. Our experts will advise and assist you in optimizing the production and quality of your equipment and machines.

Automated Systems and Assembly Lines

Highest up-time and flexibility

BVS Vision Sensor

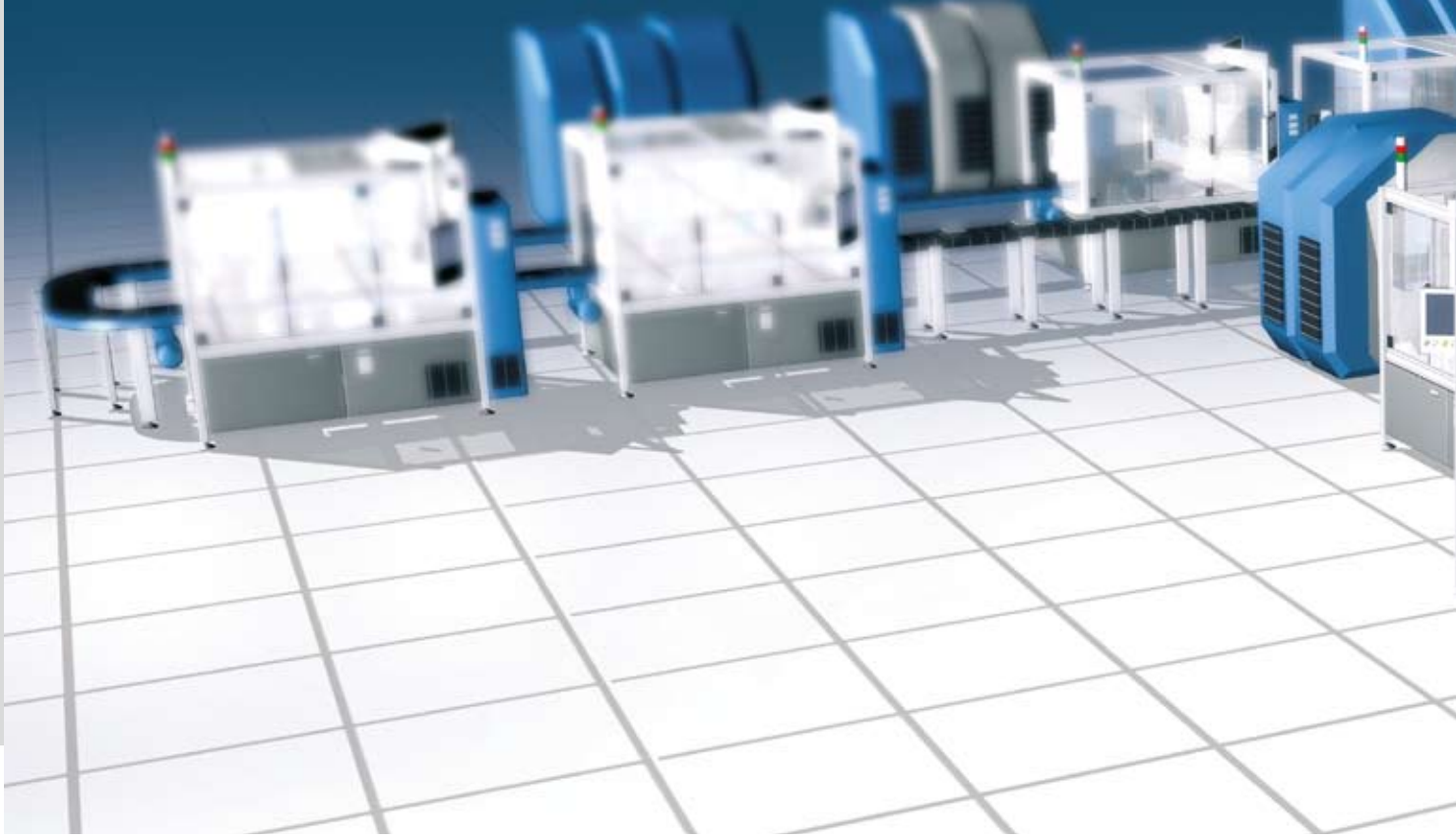
BIS Industrial RFID Systems

IO-Link System Components

BVS Vision Sensor – the rugged multi-talent in the compact housing
The new BVS Vision Sensor is a true jack of all trades. The rugged sensor the size of a credit card combines a variety of functions in one housing, providing inspection capabilities which used to require the interaction of individual, highly specialized sensors. As a particularly economical solution, it is the ideal choice when different details need to be automatically scanned as part of a 100% quality inspection at the end of a production chain.

The right Industrial RFID System for every user
Modern automation technology without automatic identification of the workpiece or workpiece holder has become unthinkable. Material and information flow are inseparable in computer controlled production. The consistent coupling of these two flow elements is required today for flexibility and cost effectiveness in automation. Series BIS Identification Systems ensure a reliable exchange of information between material flow and data processing, including all areas of production where materials need to be moved and identified.

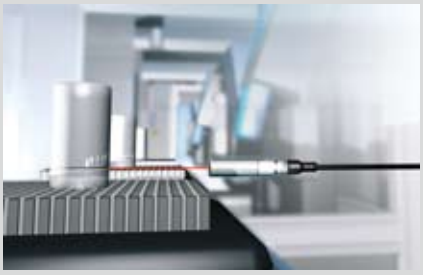
IO-Link – Breakthrough in communication
IO-Link covers three essential requirements of automation technology:
The ability to configure from the controller, the desire for more detailed and meaningful diagnostics, and all of this through an electrically and mechanically uniform interface. The last point represents enormous potential when you consider the variety of interfaces for analog and digital signals, which may not be at all similar except for their functions. IO-Link is the first comprehensive and generally valid approach.



BOS Laser Diffuse sensor with background suppression

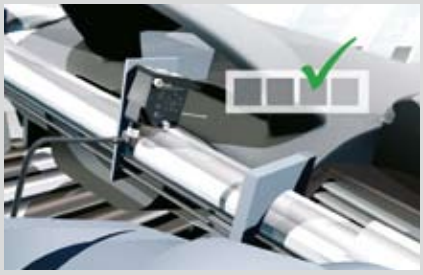
BFS Photoelectric Color Sensors

BOD Photoelectric Distance Sensors



BOS 18M Laser Diffuse sensor with background suppression – Detect small parts reliably and ensure quality

Laser diffuse sensors with background suppression are simply the solution to the problem. Precise detection of even the smallest parts virtually regardless of color – the BOS 18M has practically no limitations. The ideal sensor for quality assurance and positioning in fast assembly and handling processes.



BFS Photoelectric Color Sensor

The series BFS color sensors open up a wide vista of applications in automating assembly, handling and packaging processes. Simplify and speed up automated processes with the versatile, economical and precise color sensors from Balluff, for detecting color nuances of non-metallic components, color markings for sorting, or for quality assurance.

BOD Photoelectric Distance Sensors

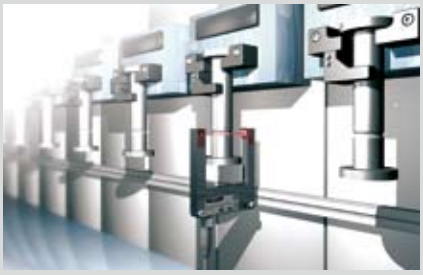
User-friendly, intelligent and versatile. Especially designed for a variety of requirements, including positioning, material bottleneck control or expanded background suppression applications. Photoelectric distance sensors provide an output signal proportional to the object distance, virtually independent of the reflectivity and color of the object.

BFB Fiber Optic Base Units and BFO Fiber Optic Cables

BGL and BWL Slot and Angle Sensors

Inductive and Photoelectric Sensors

BFB Fiber Optic Base Units and BFO Fiber Optic Cables
Fiber optic sensors are always the first choice when there is insufficient mounting space for standard sensors. The processor (also called fiber amplifier) and the sensor heads (fiber optics) are separate and can therefore be installed even in hard-to-access locations. The flexibility of the plastic fiber optics opens up a virtually unlimited spectrum of applications.



BGL and BWL Slot and Angle Sensors
Slot and angle sensors have become indispensable in assembly and handling technology as simple and economical solutions.
Tedious installation and adjustment are eliminated by placing the emitter and receiver in a single housing. These process-capable through-beam systems with red or laser light have established themselves for applications in material flow control, feed equipment, for precise detail checking and in quality assurance.

BES and BOS Inductive and Photoelectric Standard Sensors
Indispensable as the "eyes" of automation, there are practically no limits to the uses for standard sensors. Photoelectric laser sensors are particularly valuable when it comes to precise detection of small parts in feeding, positioning and sorting for assembly and handling applications.

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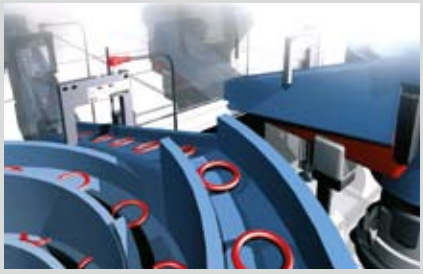
Users of automation components in assembly and handling place the highest demands on quality and flexibility. Differing ambient conditions, such as high temperatures or hygiene regulations need to be taken into consideration. Balluff sensor systems are of course up to these demands, making them an integral part of any automation solution.

Assembly Systems and Feed Technology
Precision and quality

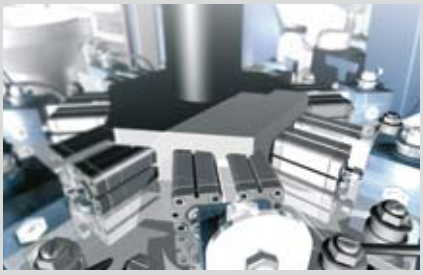
BGL Slot Sensors

Remote Inductive Transmission Systems

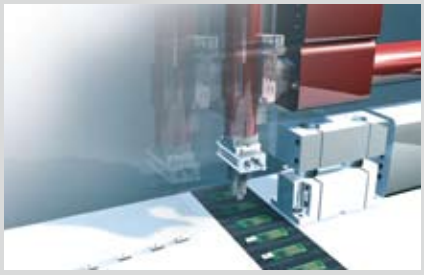
BML Magnetic Linear Encoder Systems



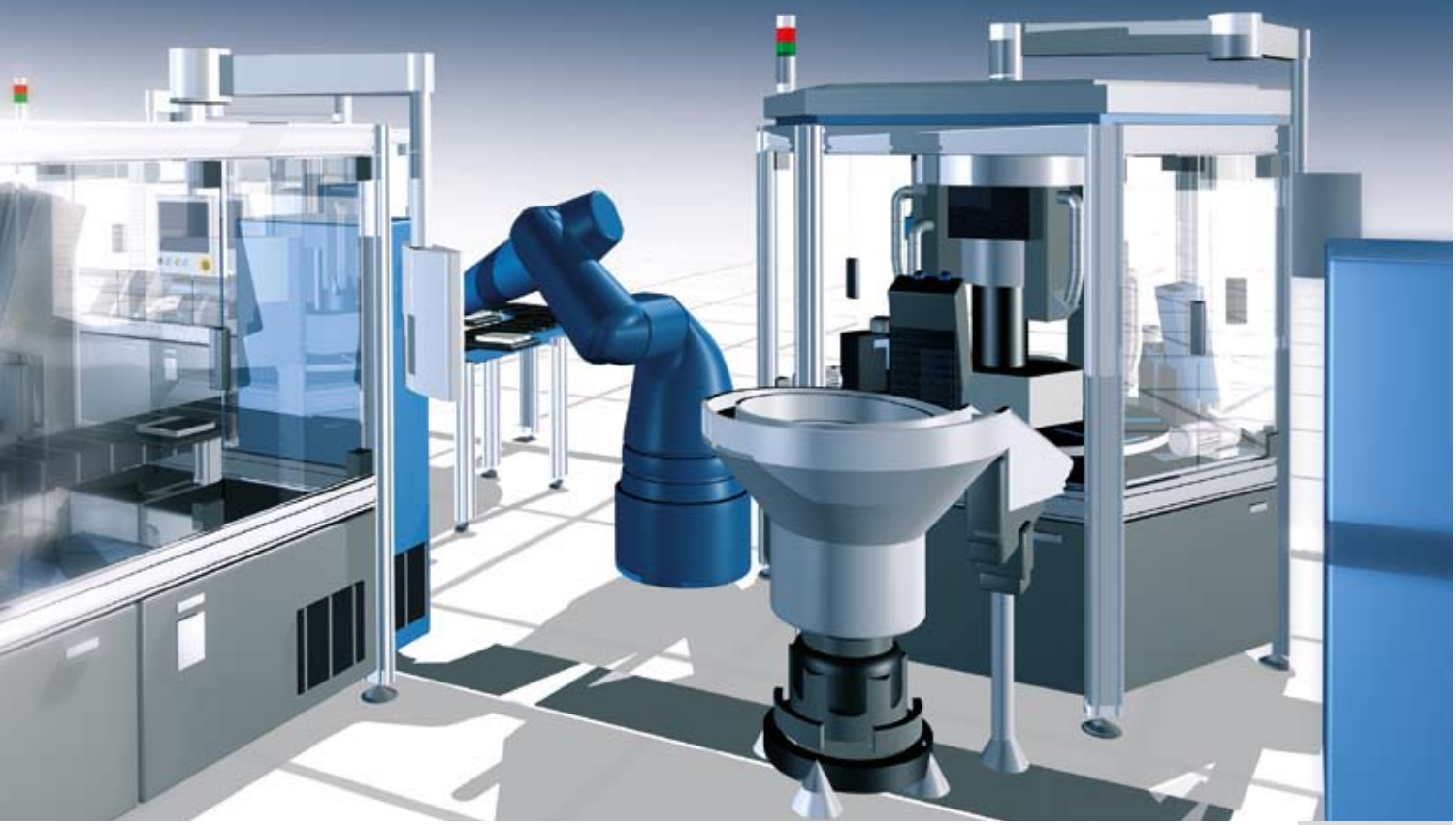
BGL Slot Sensors – simple, reliable and precise
Slot sensors are especially common in vibration feeders and in parts isolating, in areas where small parts need to be detected with precision even a high speed.
The simple installation and operation of the slot sensors – emitter and receiver are integrated in one housing – result in an economical and reliable sensor solution.



Remote Inductive Transmission Systems and BES Inductive Sensors – economical signal transmission with no cable
Whether cycled or continuously moved – rotary index tables are standard components in assembly systems. Fast cycle times require precise positioning, for example using BES inductive sensors. With housing diameters from 3...30 mm, there are no limitations to where these can be used. Remote sensors detect the position and transmit the sensor signals over an air gap. This increases the degree of freedom for your handling systems and increases the useful life of your electrical connections.



"Pick and Place"-Module with BML Magnetic Linear Encoder System
Precise positioning and high repeat accuracy at high speeds are what pick-and-place modules require. The BML incremental magnetic tape linear encoder system provides you with an economical and reliable solution. The magnetic operating principle ensures process reliability even when contamination from oil or dust is present.



Robotics and Peripherals

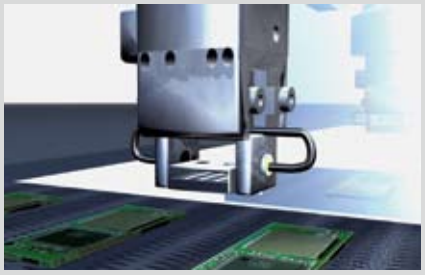
Reliable and economical

Expanded functionality and new fields of application
Greater market demands, global competition and an increasing level of automation open up new fields of application for robotics. These guarantee high flexibility and solve problems reliably, precisely and around the clock. Equipped with sensors and image processing systems, they automatically adapt to changes in their environment, making them highly flexible.

SuperShorties

BMF Magnetic Field Sensors

Magneto-inductive Position Sensors



Die "shortest" path to inductive object detection
The inductive SuperShorties are ideal for integrated installation in compact assemblies such as linear slides, valves and actuators. Their light weight and extremely small size makes them ideal for high-dynamic applications and extremely rapid acceleration rates, such as in pick-and-place.
The complete circuitry is integrated in a housing just 6mm long, making simple installation and integration of the sensors possible.

BMF sensors for pneumatic cylinders – fast installation, easy handling
BMF magnetic field sensors can be used as-is, with no special mounting designs needed. They can detect the gripper position precisely by sensing the position of the permanent magnet. BMF sensors are installed directly in the cylinder slot, where they can be adjusted and locked in place in seconds. With a large number of form factors as well as mounting and holding accessories offered, the designer can cover virtually any size, thereby drastically reducing parts inventory.

Micro-BIL Magneto-inductive Position Sensor – analog position feedback for miniature grippers
The Micro-BIL with a measuring range of 0...10 mm is currently the smallest sensor of its kind on the market.
Its housing is dimensioned so that it fits exactly in the widely used T-slot of pneumatic cylinders. This opens up completely new application possibilities for miniature grippers. Thanks to its absolute, analog output signal, the sensor allows you to control and check the opening angle of these actuators steplessly.

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Objekt-
erkennung

Weg- und
Abstands-
messung

Industrial
Identification

Industrial
Networking

Zubehör

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