SOLUTION
VON HERMANNSTADT

Product Overview

OFFICIAL PARTNERS:

PILZ THE SPIRIT OF SAFETY
LUTZE SYSTEMATIC TECHNOLOGY
Telco sensors
VeriSens® Baumer Passion for Sensors
NEURO CHECK Industrial Vision Systems
Auer Signal

About us

Solution von Hermannstadt was founded as an answer to the market's request for reliable partners that can offer a wide range of solutions for the industrial automation field. We strongly believe that the win-win propositions are the future of business.

Being an 100% transylvanian company, based in Sibiu (Hermannstadt), we pride ourselves in respecting the region's values of fairness and loyalty.

We are driven by our passion for innovation, quality and state of the art technologies.

Our company's activity is divided into 3 Divisions:

- SAFETY SOLUTION
- VISION SOLUTION
- SENSOR SOLUTION

ISO certifications: Quality Management System(QMS) ISO9001, Environmental Management System(EMS) ISO14001 and Occupational Health & Safety Management System(OHSMS) ISO45001.

For any other detailed information concerning our automation solutions or business inquiries, please contact us directly.

SOLUTION
VON HERMANNSTADT

Wir lieben Sensoren!

Safety solution

Overview of services

Services

- Risk Assessment
- Safety design
- Safety concept
- Safety implementation
- Safety validation
- CE marking
- Plant assessment
- Inspection of safeguarding devices (ESPE)

CMSE® - Certified Machinery Safety Expert

Training

With the title CMSE® - Certified Machinery Safety Expert you can demonstrate your competence for the whole lifecycle of machinery safety. Once you have passed the final examination you will receive a **certificate that is issued by TÜV NORD and is internationally recognized**.

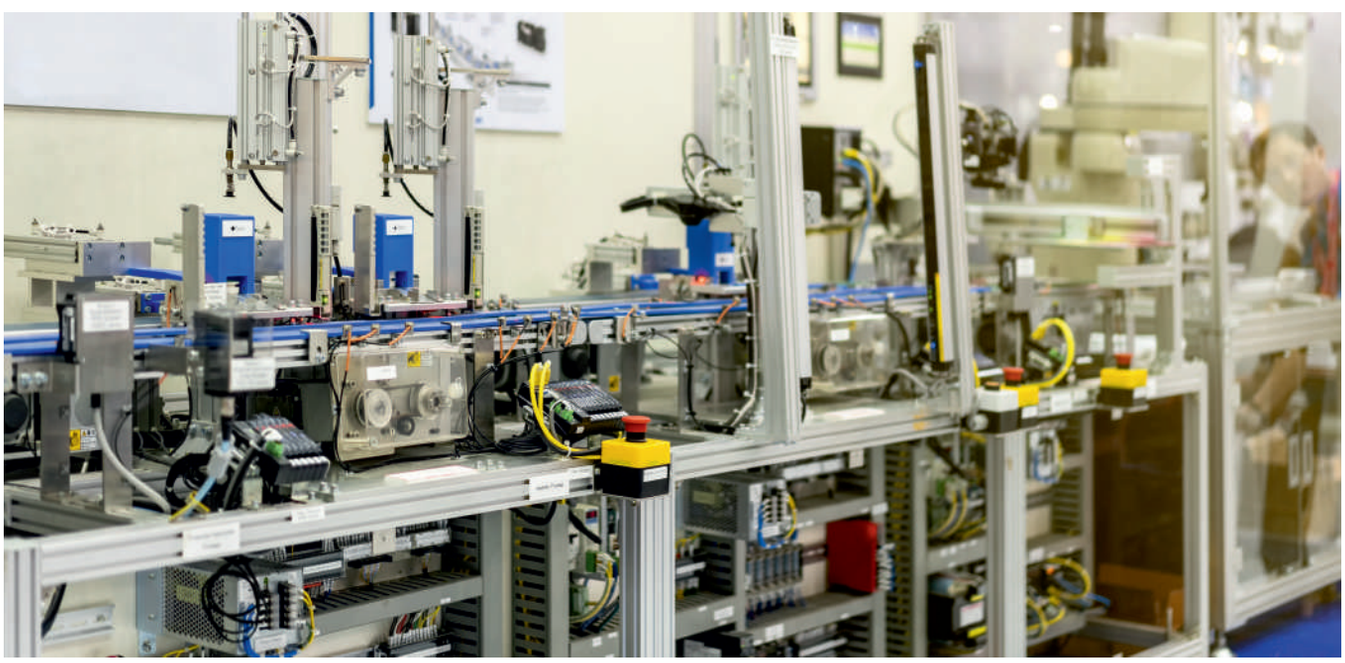
Inspection of electrosensitive equipment (ESPE) and Measuring stopping performance on power-operated work equipment

- Stop time and distance measurements
- Calculation of safety distances according to EN ISO 13855
- Velocity measurement
- Proper installation and safe function
- Proper incorporation into the machine control system
- Inspection of safety functions in the circuit diagram
- Inspection report is provided
- Quality seal is attached
- Overrun measurements (inspection of the safety distance specified by the manufacturer)

Services

Industrial automation

- Machine building
- Software programming
- Hardware integration
- Maintenance



Mechanical parts

Unique and small series parts, made of aluminum, high performance plastic and steel, according to designs, models or prototypes in dimensions up to 1016 x 508 x 635 mm

Vision solution

Wide range of vision application

- Presence check
- Position detection
- Size checking (angle, lengths, thicknesses, heights, inclination)
- Edge detection
- Item detection
- Position detection and checking
- Shape/size recognition
- Reading text/codes (OCR/OCV)
- Completeness checks
- Pick & place

Vision training module

- How to start a Verisens, get to know the user interface
- Device settings, how to connect, overview of software application suite, firmware update, set IP, set user, profi & admin accounts, set digital I/O, process interface
- Job settings, how to save, back-up, load, switch(test), create new jobs, job management
- Overview of all 21 features, when to use, what to use(test)
- Create jobs from scratch, program, configure I/O's, web interface, activate
- Procedure in approaching sensor (the steps for fast evaluation, where to look, how to check fast the overall system, what to do)
- Correct illumination, type of light, illumination issues(test)
- Connection to sensors in production line, explanations, how to improve, modify, upgrade the existing jobs.
- Work-shop with start-to-end application

Applications

- Robotics
- Quality Control
- Factory Automation
- Process Automation
- Traffic Monitoring
- Packaging Inspection
- Print Inspection
- Medical Engineering

Vision solution

NEURO CHECK
Industrial Vision Systems

NeuroCheck solutions for a wide variety of industries

NeuroCheck camera inspection systems are used worldwide by users in the automotive and component supply industry / mechanical engineering, electronics, cosmetics, medical technology, pharmacy, photovoltaics and robotics / 3D.

Turnkey system solutions from NeuroCheck work across all industries wherever the highest quality standards apply in the manufacturing industry.

Application Areas

- Presence Verification
- Deep Learning
- Print Inspection
- Color Recognition
- Identification
- Assembly Control
- Pattern Recognition
- Surface Inspection
- Robot Control
- Gauging

Diverse fields of application

In the manufacturing process, there are various tasks of **industrial image processing**. Inspection tasks based on the NeuroCheck software are solved in more than 11.000 machine vision systems and used in more than 21.000 applications worldwide in industries like automotive, electronics, mechanical engineering, medical, pharmaceutical, food and research and teaching sectors.

NeuroCheck » Application Software for Industrial Vision Systems

NeuroCheck is your one-stop shop for **image processing software**, hardware components and a comprehensive range of services. Since 1993, it has been NeuroCheck goal to make the use of digital image processing in industrial quality control as simple and natural as that of a word processor in daily office work.

End-users and OEM's who want to configure their own machine vision systems based on the NeuroCheck software can get all required components – like cameras, boards, lighting equipment, PC's Experience from more than 20.000 applications continuously contributes to the development of this universal visual inspection software. NeuroCheck is an allrounder for demanding inspection tasks in manufacturing processes.

Sensor solution PILZ

Safety light curtains for finger, hand and body protection

Benefits

- Highly robust for protection against shock, collision and vibration
- User-friendly diagnostics via LEDs to reduce downtimes
- Fast, simple assembly, installation and commissioning
- Simple configuration and commissioning with the PSENopt Configurator
- Three functionalities in one light barriers: muting, blanking and cascading
- Increased safety as there are no dead zones
- Flexible installation thanks to coding
- Securing several sides of a hazardous area with PSENopt II mirror columns

Safety features:

- Compliant and approved in accordance with EN/IEC 61508 and EN/IEC 61496-1 (Type 2 and 3) or EN/IEC 61496-1/-2 (Type 4)
- Can be used for applications up to PL d / PL e in accordance with EN ISO 13849-1 and SIL CL 2/ SIL CL 3 in accordance with EN/IEC 62061
- Safety for finger, hand and body protection
- Lengths of 150 mm to 1800 mm
- Complete solution with PDP67 (plug and pin compatible), PNOZmulti, PNOZx.2 8p, PNOZs3
- Integral functions: Feedback loop monitoring, reset, acknowledgement, diagnostics (PSENopt), muting and blanking (PSENopt Advanced) plus cascading (PSENopt Advanced, PSENopt slim))
- Absence of dead zones (PSENopt Advanced, PSENopt slim)

Safe rope pull switch PSENrope

Benefits

- Simple installation and convenient management
- Flexible to use even when protecting large systems
- Extremely rugged thanks to robust finish and strong metal or plastic housing
- Suitable for both indoor and outdoor use
- High level of safety because wiring space physically separated from mechanics
- Cost-effective thanks to the combination of emergency stop and pull-to-release

Safety features:

- Designed for applications up to: PL e of EN ISO 13849-1, SIL CL 3 of EN/IEC 62061
- Integrated E-STOP pushbutton
- Contacts: 2NC, 2 NO
- Protection type: IP67
- Ambient temperature: PSEN rs1.0: -30 ... + 80°C, PSEN rs2.0: -25 ... + 70°C

Sensor solution PILZ

Mechanical safety switch PSENmech

Benefits

- Flexibility and speed during installation
- Plant availability is high
- Up to 4 horizontal and vertical approach directions
- Built-in manipulation protection
- Long service life thanks to the robust design and high mechanical load capacity
- Suitable for a variety of applications due to the wide operating temperature range
- Short commissioning and downtimes
- Housing is insensitive to dirt and dust, and is waterproof
- Safe complete solution in conjunction with Pilz evaluation devices

Safety features:

- To monitor the position of movable guards in accordance with EN 60947-5-3
- Designed for applications up to PL e of EN ISO 13849-1, SIL CL 3 of EN/IEC 62061 (2 devices must be used to meet the highest requirements)
- Protection type: IP67 (PSEN me1), IP65 (PSEN me3/me4)
- Directions of actuation: 8 (PSEN me1/me4), 4 (PSEN me3)

Non-contact, magnetic safety switch PSENmag

Benefits

- Economy and long service life guaranteed – because mechanically non-wearing
- Space and time-saving installation
- User-friendly diagnostics via an additional signal contact and LED
- Insensitive to shock and vibration
- Can be used with heavy soiling and strict hygiene regulations
- High level of safety, even in potentially explosive areas
- Safe complete solution in conjunction with Pilz analysis units

Safety features:

- Magnetic action principle
- Designed for applications up to PL e of EN ISO 13849-1, SIL CL 3 of EN/IEC 62061
- Certificate for potentially explosive areas in accordance with ATEX Directive possible
- Switching distances from 3 to 8 mm
- Suitable for series connection
- Square or round design
- Protection type: IP65, IP67, IP6K9K
- with and without LED
- Also available as a fixed cable version

Sensor solution PILZ

Coded, non-contact safety switch PSENcode

Benefits

- Highest level of safety and plant availability
- Highest manipulation protection
- Versatile to use and flexible installation
- Insensitive to shock and vibration
- Space-saving installation due to the compact housing
- Clear LED display for rapid diagnostics
- Safe, complete solution when combined with Pilz control technology

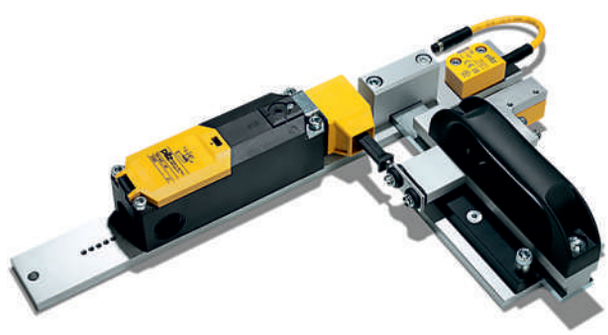
Safety features:

- Mode of operation: RFID transponder technology (non-magnetic action principle)
- Diagnostic interface: 3 LEDs
- Designs: narrow, compact or large
- Outputs: 2 safety outputs
- Inputs: 2 safety inputs
- Protection type: IP67 / IPK69K
- Coding of PSENcode for safety gate monitoring: coded, fully coded, uniquely fully coded
- Coding of PSENcode for position monitoring: coded

Safety bolt PSENbolt

Benefits

- Reduced development and installation expense
- Cost-effective solution comprising safety switch, handle and bolt
- Simple combination of up to 2 switches
- Long service life thanks to mechanical protection and rugged material
- Maximum protection against manipulation and defeat – thanks to RFID transport technology and coded safety switch PSENcode
- Locking pin protects the bolt from closing unintentionally



Safety features:

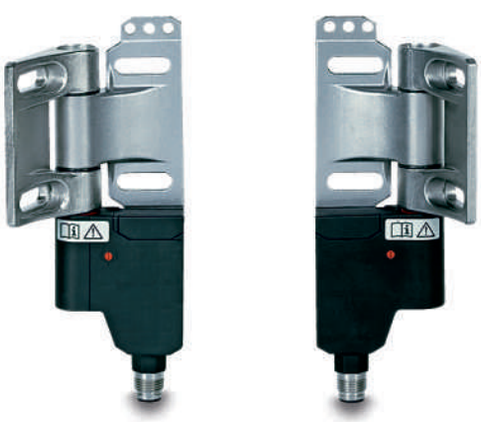
- Complete solution of door handle and safety switches
- Matched to the products PSENcode compact design and PSENmech
- Pre-emptive bolt
- Versions with escape release
- Fit padlocks to prevent mechanical locking of the door

Sensor solution PILZ

Safe hinge switch PSENhinge

Benefits

- Safe, complete solution for rotatable / hinged guards, comprising hinge and safety switch
- Can be used in conjunction with Pilz controllers for applications with high safety requirements
- Manipulation-proof and space-saving, as it is integrated directly within the guard
- Highest flexibility and ease of use in installation, connection and adjustment
- Low-maintenance thanks to robust design and resistance to dirt



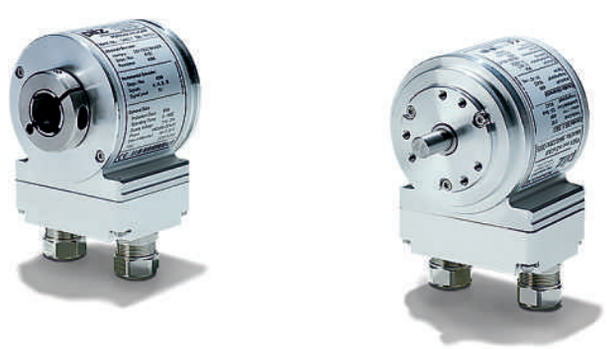
Safety features:

- Hinge switches for monitoring the position of movable guards in accordance with EN 60947-5-3
- Can be used in applications up to PL e of EN ISO 13849-1, SIL CL 3 of EN/IEC 62061 if two switches are used
- Switching point is free to set from 0° to 270° and is re-adjustable
- Contacts: 2 NC
- Protection type: IP67
- Plastic-bodied design

Rotary encoder PSENenco

Benefits

- Safe evaluation of speed and position
- The safe monitoring function is transferred to the user software
- High flexibility when monitoring limit values due to dynamic limit value monitoring in the user program
- Mechanical rotary cam arrangement is replaced by the safe electronic rotary cam arrangement PSS4000 (incl. rotary encoder PSENenco)



Safety features:

- Two encoders in one housing
- Diverse, 2-channel (1 x optical, 1 x magnetic)
- 2 SSI interfaces
- SIL CL 3 and PL e in the automation system PSS4000

Sensor solution PILZ

Safety gate system PSENsgate

Benefits

- Cost-optimized system – safety gate monitoring, safe guard locking and additional operator elements all in one product
- High safety with just one switch per safety gate for personal and plant protection
- Flexibility thanks to wide choice of operating and control elements as well as scope for connecting enabling switches
- Energy-efficient system for reduced power consumption
- Reduced installation and wiring effort due to integrated operator elements and the scope for series connection
- Safe, complete solution when combined with Pilz control technology

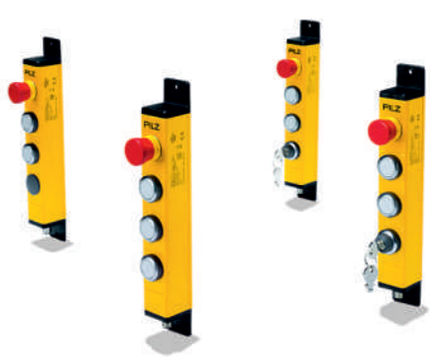
Safety features:

- Combination of safety gate monitoring, safe guard locking and broken bolt monitoring all in one system – including emergency stop devices and operator elements
- Highest protection against manipulation and defeat
- Suitable for left and right-hinged gates
- Integrated “cleaning setting”: specific opening of all guard locking devices together at end of shift
- Series connection in combination with PSENslock, PSENsgate, PSENcode and PSENini
- Designed for all applications up to PL e of EN ISO 13849-1, up to SIL 3 of EN/IEC 62061, Category 4 of EN 954-1

Pushbutton unit PITgatebox

Advantages

- Simple operating function meets premium quality and design
- Robust metal IP65 housing with high resistance to shock, vibration and collision
- Slimline housing for space-saving installation on standard 40 mm profile systems
- Fast, simple installation, no wiring, thanks to M12 12-pin connection and rotatable end caps
- Cost savings due to reduced wiring work
- Flexible installation thanks to integrated, rotatable mounting bracket
- Easy to exchange the control elements thanks to appropriate spare parts



Use and applications

- The pushbutton unit can be used to control machines (e.g. presses) and plants
- Versatile combinations with safety gate systems such as PSENmlock or PSENslock, e.g. on sliding and swing doors
- Fulfil other commands in mechanical engineering such as activating, stop or reset plant

Sensor solution PILZ

Safety gate system PSENslock

Benefits

- Complete one-stop solution – with Pilz control technology for guard monitoring
- Flexible to use and quick to install – thanks to flexible connections and four assembly directions
- Time and cost optimization thanks to series connection
- Maximum manipulation protection (coding) and process protection via magnetic guard locking
- Insensitive to dust and water (IP67) for use in the rugged everyday industrial environment
- User-friendly diagnostics by means of double-sided LEDs
- Long service life – as mechanically non-wearing
- Use of an energy-efficient magnet minimizes power consumption

Safety features:

- Safety gate system for monitoring the position of movable guards in accordance with EN 60947-5-3
- Suitable for applications up to PL e of EN ISO 13849-1 and SIL CL 3 of EN/IEC 62061 with magnetic guard locking for process protection tasks
- Series connection with PSENini, PSENcode and PSENslock
- Protection type IP67
- Vertical and lateral offset: +/-3 / +/-5 mm

Safety gate system PSENmlock

Benefits

- Safe guard locking and safe guard interlocking up to PL e / SIL 3 in a single product
- No inadvertent activation of the guard locking due to the integral restart interlock
- Flexibly mounted actuator ensures high tolerance compensation – even with sagging gates
- Long service life thanks to robust mechanics and housing
- Reduced power consumption in operation
- Reduced wiring work thanks to series connection
- Simple and comprehensive diagnostics in combination with the SDD
- Easy installation and low-maintenance solution with the remote escape release
- Additional operator and pushbutton elements in combination with the PITgatebox

Safety features:

- Meets all requirements of EN/ISO 14119
- Product types: basic version and series connection version
- Coding types: coded, fully coded, uniquely fully coded
- Safe holding force of 7500 N, integrated latching force of 30 N
- LEDs on 3 sides of the housing
- Protection type IP67
- Connection: M12, 8-pin, pigtail
- Operating temperature: 0 – 55°C
- Auxiliary release on 3 sides
- Escape release and remote escape release

Sensor solution PILZ

Safety laser scanner PSENscan

Benefits

- Large opening angle of 275 degrees
- Always the right operating range thanks to unit versions with protected field operating ranges of 3 and 5.5 metres
- Easily integrated into the application due to compact housing and free configuration of the protected fields and warning fields
- Simultaneous monitoring of up to 3 separate zones plus set-up of up to 70 switchable configurations
- Series connection of up to 4 scanners in accordance with the Master-Slave principle
- Integrated operator display for immediate information
- Exchangeable memory to transfer the configuration
- High availability as it is robust to dust
- Simple assembly and alignment of scanner with the appropriate accessories

Safety features:

- Compliant and approved in accordance with EN/IEC 61496-1 (Type 3), EN ISO 13849-1 (PL d) and IEC 61508 (SIL 2)
- Opening angle: 275 degrees
- Operating range: 3 / 5.5 m safety zone, 40 m warning zone
- Reaction time: 62 ms
- Protection type: IP65
- Simple configuration with the PSENscan Configurator
- Additional functions for the light, master and slave versions: Muting, EDM, Override
- Additional functions for the master and slave versions: Restart in accordance with EN ISO 61496-3 vertical applications

Safe camera system SafetyEYE

Benefits

- Safe monitoring of complex applications with minimal effort thanks to 3D monitoring function
- Suitable for high safety requirements with manipulation protection
- High level of flexibility when designing or redesigning applications
- Ergonomic workstations and efficient workflows because virtual detection zones afford free access to the process
- Rapid installation and simple commissioning using just a few user-friendly components
- Easy configuration and diagnostics of 3D warning and detection zones with the SafetyEYE Configurator

Safety features:

- Arm resolution up to an installation height of 4 metres
- Body protection
- Max. visible range approx. 72 m²
- Lighting from 300 lux required – depending on the background and environment
- Designed for applications up to Cat. 3 of EN ISO 13849-1:2008, SIL2 of IEC 61508, PL d of EN ISO 13849-1 and applications in accordance with DIN EN 61496
- Protection types: IP65 (sensing device), IP20 (analysis unit)
- Suitable for worldwide use

Sensor solution PILZ

Camera-based protection system PSENvip

Benefits

- Maximum safety in accordance with the safety standards EN 12622
- Innovative optical system with LED light for high availability and productivity (compared to laser-based systems)
- Robust protection systems – insensitive to reflections and external/diffused light, as well as vibration and temperature stratification (e.g. due to heated tools)
- Long service life of the LED light source means reduced maintenance work
- Easy initial adjustment and fast tool changes – thanks to innovative technology and software for reduced tooling times
- Commissioning and configuration via an integrated display (PSENvip) or web interface on the press brake controller (PSENvip 2)
- Very short shutdown time and short overrun distance of the press brake tool – thanks to integrated FAST functionality in the evaluation unit Fast Analysis Unit (PSENvip 2)

Safety features:

- Large protected field (19 x 38 mm) with three sensing areas
- Achievable distance between the transmitter and receiver of up to 10 m on PSENvip and up to 13 m on PSENvip 2
- Advance measuring field for detecting the plate
- Integrated camera chip uses proven SafetyEYE expertise
- LED light beam is safe to the human eye
- Complete integration into the environment thanks to the Fast Analysis Unit (in the PSS 4000) and configuration via the HMI of the press brake controller (PSENvip 2)

Safe radar LBK systems

Benefits

- Complete solution for safe protection zone monitoring in complex applications or with external influences in combination with PNOZmulti 2
- Insensitive to dust, rain, light, dirt, steam and shock
- Series connection of up to 6 sensors
- The Configurator is used to select the sensors and set up the protection zone
- Warning zone to signalize approaching objects
- Integral muting for the whole system or for individual sensors
- Restart interlock to prevent the machine restarting when there are people in the danger zone

Safety features:

- Sensor opening angle, wide protection zone: 110° horizontal, 30° vertical
- Sensor opening angle, narrow protection zone: 50° horizontal, 15° vertical
- Opening angle, narrow protection zone: 50° horizontal, 15° vertical
- Range of the sensor: 4 m
- Maximum protection zone (with 6 sensors): 15 m x 4 m
- Connection type: CANopen
- Reaction time: max. 100 ms
- For use in applications up to SIL CL 2, PL d, Category 2

Sensor solution PILZ

Safety Relays

PNOZsigma

- Monitoring of E-STOP, safety gates, light barriers (PNOZ s1, s2, s3, s4, s4.1)
- Two-hand monitoring (PNOZ s6, s6.1)
- Safe speed monitor (PNOZ s30)
- Time monitoring (PNOZ s5, s9)
- Safe voltage monitor (PNOZ s60)
- Safe brake control (PNOZ s50)
- Contact expansion modules (PNOZ s7, s7.1, s7.2, s8, s10, s11, s20, s22)

PNOZ X

- To monitor E-STOP, safety gates, light barriers (PNOZ 1, 2, 8, 10, 11, 15, V3, PST, X1-X10, X13)
- Two-hand monitoring (P2HZ)
- Pressure-sensitive mat monitoring (PNOZ 16)
- Standstill and voltage monitoring (PU3Z, PSWZ)
- Time monitoring (PZW, PZA, XV1, XV2, XV3)
- Muting controller (PMUT X1P)
- Contact expansion modules (PZE 9, PZE X4, PZE X5)

PNOZcompact

- To monitor E-STOP, safety gates, light barriers (PNOZ c1, c2)

PNOZelog

- To monitor E-STOP, safety gates, light barriers (PNOZ e1, e3, e5, e6, e7, e8)
- Two-hand monitoring (PNOZ e2.1, 2.2)
- Pressure-sensitive mat monitoring (PNOZ e4)

PNOZpower

- To monitor E-STOP, safety gates, light barriers (PNOZ p1)
- Contact expansion modules (PNOZ po3, po4)
- Line inspection device (PLID d1)

Monitoring Relays

Electronic monitoring relays PMDsigma

- Insulation monitor (PDM s20)
- True power monitor (PDM s10)

Electronic monitoring relays PMDsrange

- Standstill monitoring (S1SW)
- Voltage monitoring relay for monitoring 1-phase (ZUZ)
- Voltage monitoring relay for monitoring min. and max. voltage values (S1UM)
- Current monitoring relay for monitoring max. current values (S1IM)
- Voltage monitoring relay for monitoring overvoltage and undervoltage values (S3UM)
- min. and max. voltage values (S1UK)
- Thermistor monitoring relay as an overheat protection device for motors, generators etc. (S1MN, S1MS, S1MO)
- Fault voltage monitoring of welding transformers (PFU6)
- Earth fault monitoring relay in galvanically isolated DC and AC supplies (S1EN)
- True power monitoring for 1- and 3-phase mains suitable for frequency-controlled motors (S1WP)
- Phase sequence monitoring relay for detecting the phase sequence, phase failure, asymmetry of a 3-phase supply (S1PN)
- True power converter, measuring equipment for rated power or true power (P3WP3P)

Sensor solution PILZ

Configurable control systems PNOZmulti 2

Benefits

- Configurable control systems PNOZmulti 2
- Certified hardware and software for reliable operation
- Easy to configure thanks to user-friendly software tools
- Short time to market because inputs and outputs are freely configurable
- The appropriate modules for every requirement – flexible, simple, economical to expand
- Comprehensive diagnostic options mean short downtimes
- Fast commissioning thanks to simple wiring with plug-in terminals

Safety features:

- Base units carry the configuration on removable program memory devices such as chip card or USB stick
- Expansion modules for flexible, modular expansion according to the requirements of your application
- Configuration tool PNOZmulti Configurator: one tool from project design to maintenance
- Safe complete solutions in conjunction with sensor technology, operating and monitoring, control technology
- Connection to common fieldbus systems and communication interfaces
- Fieldbus modules for connection to higher level fieldbus systems
- Software tool PNOZmulti Configurator to create safety functions

Configurable compact control systems PNOZmulti Mini

Benefits

- Effective, from three safety functions
- Save time and costs in all engineering phases with the software tool PNOZmulti Configurator
- Maximum flexibility thanks to freely configurable inputs and outputs
- Saves lots of space in the control cabinet due to the compact design
- Rapid diagnostics thanks to customer text on the display

Safety features:

- System functions are defined by the PNOZmulti Configurator
- Depending on the wiring, safety categories up to PL e of EN ISO 13849-1 and SIL CL 3 of EN IEC 62061 are possible
- Four base units to choose from: stand-alone; -T stand-alone (extended temperature range); modular expandable; modular expandable with integrated multi-link interface
- Link modules and communication modules are available for modular expansion
- Relay contact expansions using contact expansion modules PNOZsigma
- Monitoring of E-STOP pushbuttons, operating mode selector switches, enable buttons, two-hand pushbuttons, safety gates, light curtains, light barriers, muting, safety mats

Sensor solution PILZ

Configurable safety systems PNOZmulti

Benefits

- PNOZmulti monitors your safety functions such as E-STOP, safety gates, light barriers, two-hand and many more.
- Ideal for covering applications of 4 safety functions and above
- Potential for savings in all engineering phases thanks to intuitive software tool
- Short downtimes thanks to easy diagnostics
- Certified worldwide

Safety features:

- Multiple base units for varying requirements: stand-alone or modular and expanded, for rugged industrial environments, with serial or ETH interface, special versions for press applications or burner management
- Output modules with semiconductor or relay outputs
- Safe speed monitors for motion monitoring
- Link modules used to connect PNOZmulti base units safely or to connect decentralised modules PDP
- Fieldbus modules for connection to higher level fieldbus systems
- Software tool PNOZmulti Configurator to create safety functions

Brake control devices PNOZ s50

Benefits

- Maximum safety up to PL e of EN ISO 13849-1 when two brakes are activated (holding brakes or safety brakes)
- Contactless technology with up to 4.5 A per safety brake enables short reaction times and a sustainable solution
- Wear-free braking
- High safety and low wear on the brake thanks to fast or slow shutdown of the power circuits
- Rapid diagnostics by means of display
- Manufacturer-independent brake control thanks to safe, digital inputs

Safety features:

- Simple menu navigation using a rotary knob
- Setting parameters and diagnostic messages shown on the display
- Safety relay with two 2-pin, safe electronic digital outputs for 24 V DC, each with 4.5 A
- Reduced cycle times through temporary overexcitation with subsequent voltage reduction

Sensor solution PILZ

PNOZmulti Configurator Software

Benefits

- Software with pre-assembled, certified blocks
- Easy, retrospective modifications and adjustments to the configuration
- Simple, comprehensive diagnostics mean short machine downtimes and high plant availability
- Worldwide safety standard for various automation environments and different communication systems
- Rapid commissioning and minimal amount of wiring work
- Intuitive operation: creating your safety circuit is refreshingly easy
- Freely configurable: you can set the parameters for all inputs and outputs conveniently with a few clicks in the software tool
- You link these by logical operators to form a safety circuit using drag-and-drop
- You select all function, logic and output elements on the workspace
- Safe: the software tool checks the created safety circuit for errors
- Protected: you can have the completed configuration certified, thereby protecting it from unwanted changes
- Flexible: you can edit, amend or expand uncertified circuit diagrams at any time
- Simple: for documentation just print out the circuit diagram configuration

PLC controllers - PSS 4000

Benefits

- Processing of safety and automation functions (feedback-free)
- Various hardware performance classes
- Can be used as a stand-alone controller or as part of a network
- Modular system structure for customised solutions
- Simple handling of complex functions using the software PAS4000
- Shorter project times thanks to hardware-independent programming
- Can be integrated in existing automation structures

Safety features:

- PSSuniversal module bus for the connection of up to 64 I/O modules
- Integral power supply
- Integrated switch function for SafetyNET p linear topology
- SD card to store the device project and configuration data
- Complies with international safety standards up to PL e
- Lift standards EN 81-1/2 and EN 50129
- Configurable using the graphics program editor PASmulti and/or programmable in PAS IL (instruction list), PAS LD (ladder diagram) and PAS STL (structured text) in accordance with EN/IEC 61131-3

Sensor solution PILZ

I/O systems PSSuniversal

Benefits

- Communication for control via common fieldbus protocols
- Functions for safety and automation are processed decentrally at field level
- Fast commissioning and simple configuration due to independent periphery test
- High flexibility due to modular system design

Safety features:

- Temperature-resistant modules
- Common industrial communication protocols
- Open system
- Real-time Ethernet SafetyNET p
- Digital and analogue processing
- Fast installation, fast module change (also during operation)

Software for PLC control systems and I/O systems – PAS4000 & PSSu

Benefits

- Simple programming and configuration of your automation functions
- Well-conceived user interface for intuitive operation
- Clearly structured project management through optimum usability
- Powerful and flexible software for efficient programming
- Always on the cutting edge, thanks to continuous development
- Possibility of hardware-independent programming
- Optimum overview of the control functions of your plant and machinery
- Available in several languages

Robotics by Pilz – open and compatible

Benefits

- Modules can be combined individually with one another – according to user requirements
- Manipulator, control and operating module form a DGUV-certified package according to EN ISO 10218-1
- STO and SBC safety functions and the safety functions for robot systems implemented by the safety controller ensure the highest levels of safety
- plug&play principle enables quick commissioning
- open interfaces such as ROS and CANopen ensure optimal compatibility
- high-quality components ensure durability and great robustness

Safety features:

- Pick&place applications in industry
- From assembly to quality control to machine loading
- Modular, partially automated small robot cells in industry
- Applications with automated guided vehicle systems (AGVS)
- Applications in university and R&D environments

Sensor solution PILZ

Control and signal devices

Benefits

- Reliable, high-quality products and maximum compatibility
- Can be integrated with all Pilz control systems
- Complies with all relevant standards and approvals
- Save costs thanks to simple, fast installation
- Long service life thanks to functional, rugged design
- Application range: EN/IEC 60947-5-1 and EN/IEC 60947-5-5

PMI operator devices / operator terminals – HMI with PMI

Benefits

- Reduced downtimes and increased cost effectiveness of your system
- Flexible complete solution for visualisation of the automation system PSS 4000, SafetyNET p, Pilz Motion Control (PMC) and PNOZmulti
- Wide range of application options due to numerous display sizes and feature options
- Sophisticated diagnostic and visualisation concept with the software PASvisu and PVIS
- “Made in Germany” – designed, developed, engineered, manufactured
- Optimum performance and thermal stability thanks to state-of-the-art low-power RISC processors
- Resistant to vibration, dust and splash water (front: IP65)
- Fast data transfer thanks to Ethernet interface
- Design, development and manufacture – Made in Germany

Sensor solution BAUMER

Industrial cameras & vision sensors

Modern image processing faces the challenge of successfully completing complex inspection tasks at top speed. Choosing to use Baumer vision components is the most important step on the way to a reliable solution.

Our high-performance product portfolio – from cameras to vision sensors – with sensor resolution from VGA up to 48 megapixel, always offer exactly the right components for a wide range of applications.

With our VeriSens vision sensors, complex process control tasks can be managed by utilizing image processing technology without a PC. Thanks to the intuitive configuration interface of the vision sensor integration is both easy and rapid.

Baumer cameras with CMOS or CCD sensors are the core of high-performance image processing solutions. Your investment in process automation is ensured – whether your goal is maximum speed or precise attention to detail. The portfolio contains robust industrial cameras providing up to 891 frames/s or resolutions up to 48 megapixel.

VeriSens vision sensors

VeriSens vision sensors offer a complete image processing system in the shape of a sensor. Their compact industry-suited housing integrates an image sensor, illumination or illumination connection, lenses or interchangeable lens connection, software, as well as Ethernet and digital interfaces. They can therefore be used as inline solutions to check various features of products for early recognition and ejection of faulty parts. They offer 23 different feature checks. Following a one-time configuration on the PC with the VeriSens Application Suite, the vision sensors reliably perform their inspection tasks around the clock.

Benefits

- The solution for diverse inspection tasks
  - Up to 23 high-performance feature checks
  - Up to 32 feature checks combinable per job
  - Up to 255 jobs can be stored on the vision sensor
- Reliable contour-based image processing in real time
  - Patented FEX image processor
- Exact image evaluation and dimensional checks even if the vision sensors are mounted at an angle
  - Real-time correction of distortion, shading, and perspective bias
- The fully integrated flash controller simplifies the system design, lowers costs, and saves integration time
  - VeriFlash flash controller
- Set up color inspections fast and intuitively
  - Intelligent 3D color assistant ColorFEX
- Reliable 360° part recognition without mechanical object alignment
  - FEXLoc part location
- Communication in real time
  - PROFINET and Ethernet/IP
- Secure communication and encrypted connection
  - SFTP and HTTPS
- Storage of defect images for evaluation at any time
  - FTP or SFTP client
- Simple and fast configuration within a few minutes without programming languages
  - VeriSens Application Suite with configurable web interface

Sensor solution BAUMER

VeriSens XF and XC series

- Up to 22 different feature checks
- Automatic object alignment
- Integrated illumination and lenses (8 mm, 10 mm, 12 mm, or 16 mm)
- PROFINET, Ethernet/IP, TCP/UDP (Ethernet), RS485

VeriSens CS series

- 6 different feature checks for presence and dimensions
- Automatic object alignment
- Integrated illumination and lenses (10 mm or 16 mm)

Easy conrol of Universal Robots VeriSens XF and XC

- Vision Guided Robotics effectively implemented
- Up to 21 different feature checks
- Integrated illumination and lenses (8 mm or 12 mm) or free choice of lenses (C-mount)
- URCap, PROFINET, EtherNet/IP, TCP/UDP (Ethernet)

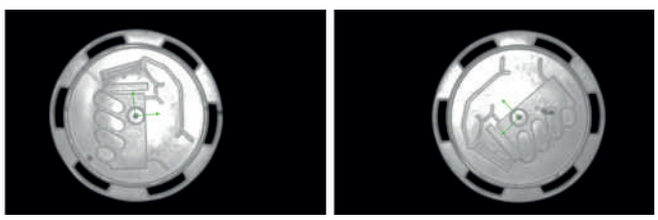
VeriSens ID series

- Image-based inspection of 1D/2D codes as well as plain text (OCR/OCV)
- Easy set up without font training
- Integrated illumination and lenses (10 mm, 12 mm, or 16 mm)
- PROFINET, Ethernet/IP, TCP/UDP (Ethernet), RS485

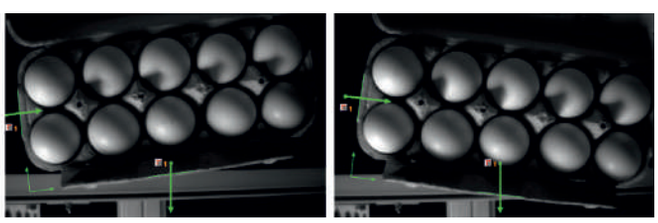
Sensor solution BAUMER

Part location

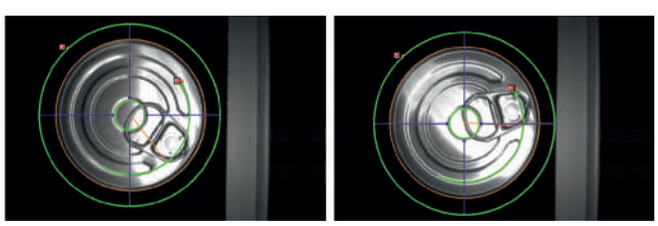
Part location on contours (FEXLoc)
Determines the location and rotational position of a part based on its contours. All subsequent feature checks are aligned according to the determined position.



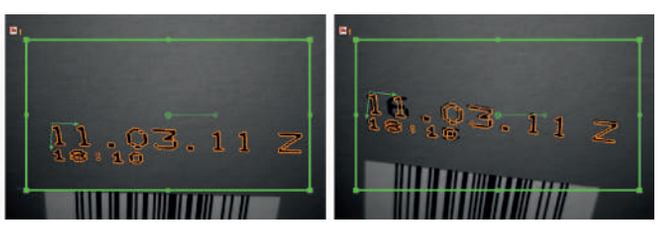
Part location on edges (FEXLoc)
Determines the location and rotational position of a part based on a single edge or two edges at a right angle to each other. All subsequent feature checks are aligned according to the determined position.



Part location on circle (FEXLoc)
Determines the location and rotational position of circular parts. All subsequent feature checks are aligned according to the determined position.



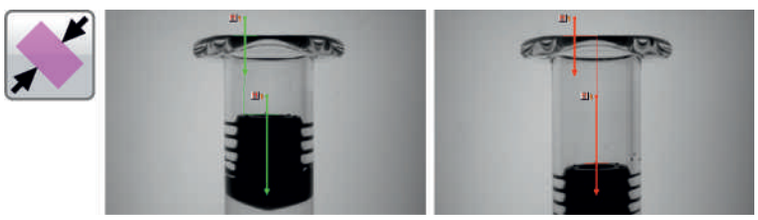
Part location on text line
Determines the location and rotational position of text within a field of view. The text can change. All subsequent feature checks are aligned according to the determined position.



Sensor solution BAUMER

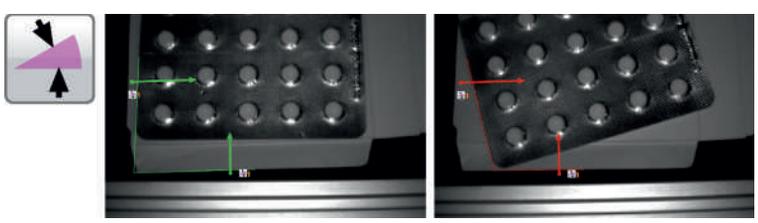
Geometry

Distance
Determines the distance between two edges.

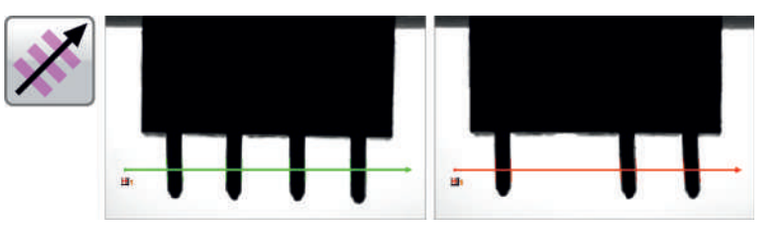


Circle
Determines the diameter, the location, and roundness compared to a reference circle.

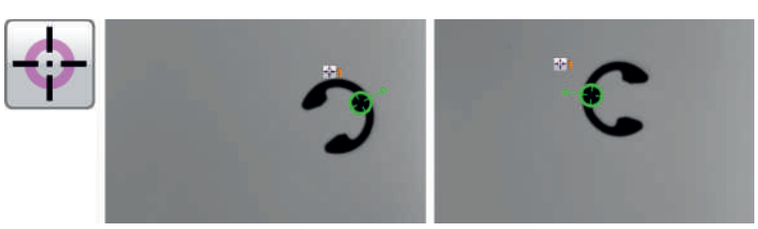
Angle
Determines the angle between two edges.



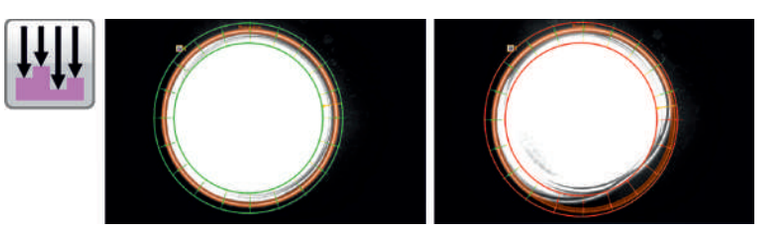
Counting edges
Determines the number of edges along a tracing ray.



Point position
Determines the coordinates of one point.



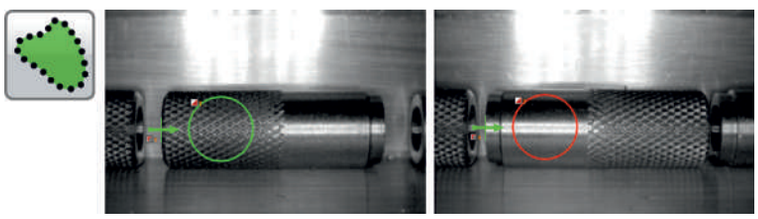
Edge characteristics
Compares the distances of edges along a tracing ray.



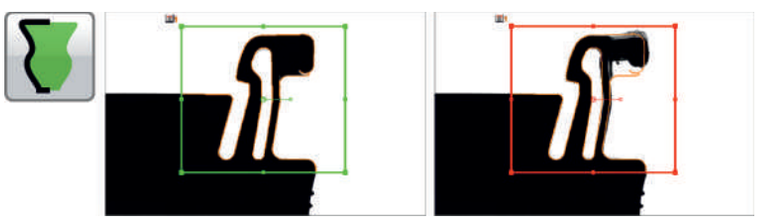
Sensor solution BAUMER

Feature comparison

Count contour points
Determines the number of contour points within a field of view.



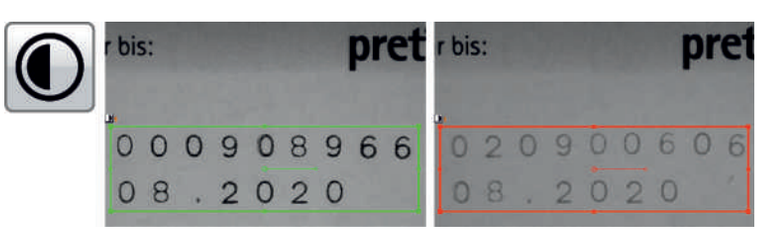
Contour comparison
Compares the contour of a taught-in part with the contour of the current part.



Color identification
Identifies the color within a field of view and its deviation from the reference color.

Brightness
Determines the average brightness in a field of view.

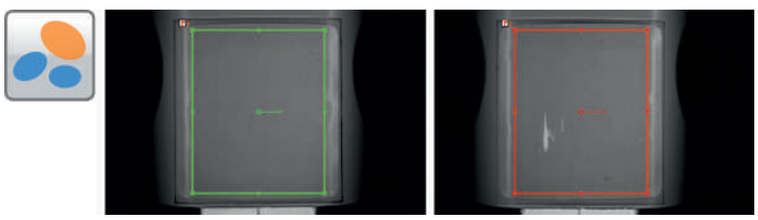
Contrast
Calculates the contrast in a field of view.



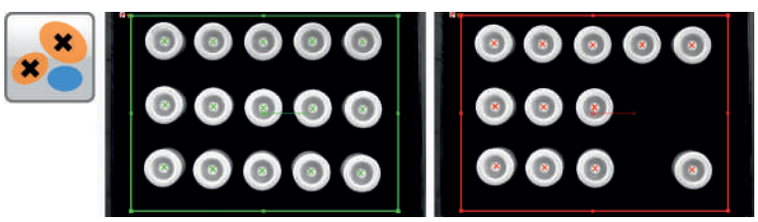
Sensor solution BAUMER

Feature comparison

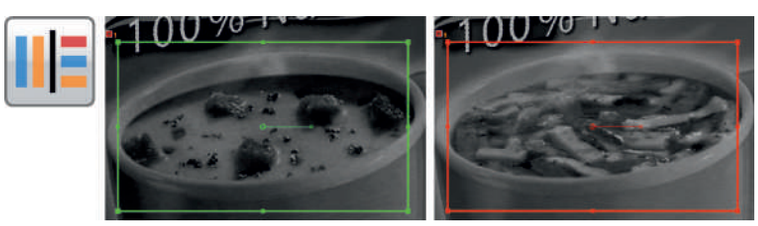
Area size
Identifies light or dark respectively color-defined areas in the image. Determines the total area or the largest continuous area.



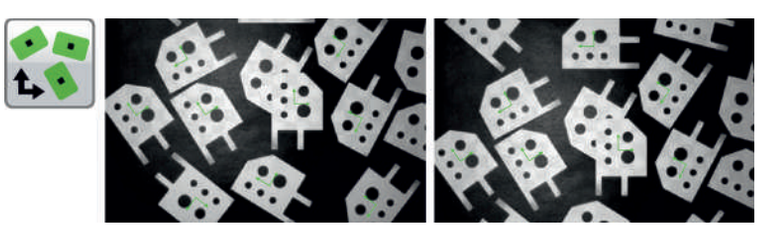
Count areas
Counts the continuous light or dark respectively color-defined areas visible in the image.



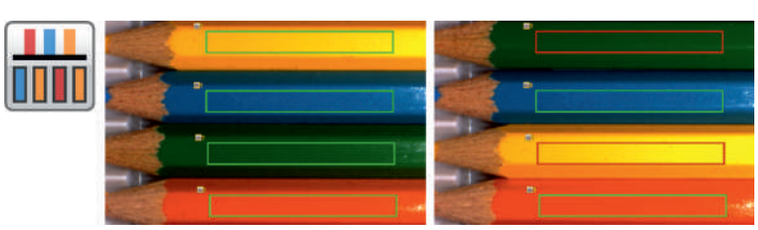
Pattern comparison
Compares the field of view with a taught-in pattern.



Finding object positions
Finds several objects based on a taught one.



Color positioning
Verifies the presence of defined colors within defined image sections.

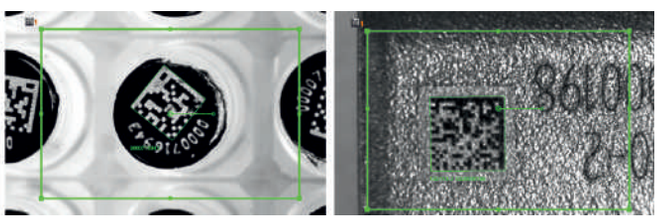


Sensor solution BAUMER

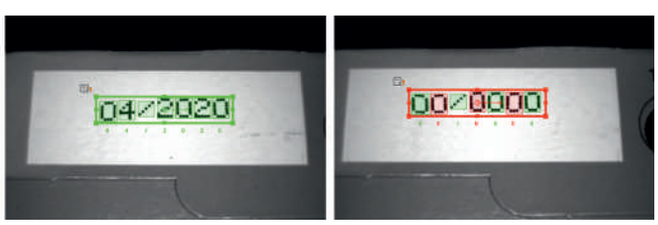
Identification

Barcode
Reads barcodes. Determines quality according to ISO / IEC 15416, results output via process interface, comparison to a set value possible.

Matrix code
Reads matrix codes (ECC 200, GS1, QR, PDF417) in any angle of rotation. Determines quality according to ISO / IEC 15415 or AIM DPM-1-2006, results output via process interface, comparison to a set value possible.



Text
Reads numbers and characters. Output of the read characters via process interface, comparison to a set value possible.



Sensor solution BAUMER

Industrial cameras

High frame rates, exceptional image quality and ease of integration – that's what our industrial cameras stand for. Their robust, industrial design is the basis for long-term stability and precise image analysis in your application. The portfolio includes CCD- and CMOS-based matrix cameras in color and monochrome versions with resolutions ranging from VGA to 48 megapixel. 20 years of expertise make us understand your requirements to provide the optimum product for your application.

CX series

- Up to 24 MP and 318 fps
- Sony Pregius, Pregius S, STARVIS, and Polarsens, onsemi PYTHON
- Global and rolling shutter sensors
- GigE Vision, USB3 Vision
- 29 × 29 mm, 36 × 36 mm, 40 × 40 mm

LX series

- Up to 65 MP and 1622 fps
- Sony Pregius, Sony Pregius S, Gpixel GMAX, ON Semiconductor PYTHON, ams CMV
- Global shutter sensors
- GigE Vision, 10 GigE Vision, Camera Link
- 60 × 60 mm

AX series

- Up to 5 MP and 77 fps
- Sony global shutter sensors
- NVIDIA Jetson AI modules
- M12 Ethernet, RS232
- 70 × 70 mm

QX series

- 12 MP and 335 fps
- ams (CMOSIS)
- Global shutter sensors
- 10 GigE Vision
- 70 × 70 mm

Sensor solution BAUMER

LX VisualApplets cameras

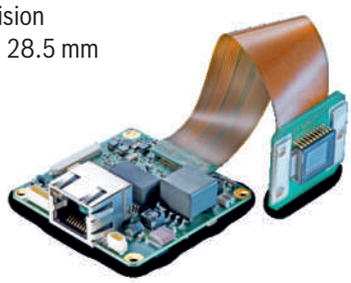
- Up to 25 MP and 338 fps
- ams (CMOSIS), ON Semiconductor PYTHON
- Global shutter sensors
- GigE Vision
- 60 × 60 mm

CX series, LX series, VisiLine series

- Up to 12 MP and 216 fps
- Sony Pregius, ON Semiconductor PYTHON
- Global shutter sensors
- GigE Vision, 10 GigE Vision
- 40 × 40 mm, 46 × 46 mm, 60 × 60 mm

MX series

- Up to 4 MP and 376 fps
- Sony, ams (CMOSIS)
- Global shutter sensors
- GigE Vision
- 28.5 × 28.5 mm



Long-term availability of proven cameras

-
- VisiLine series
- HX series
- TX series

Custom cameras

- Modification of standard products
- Tailor-made OEM imaging solutions
- Embedded vision development
- Software and system integration

Sensor solution BAUMER

Smart Profile Sensors – OX200

Simply intelligent checking and controlling

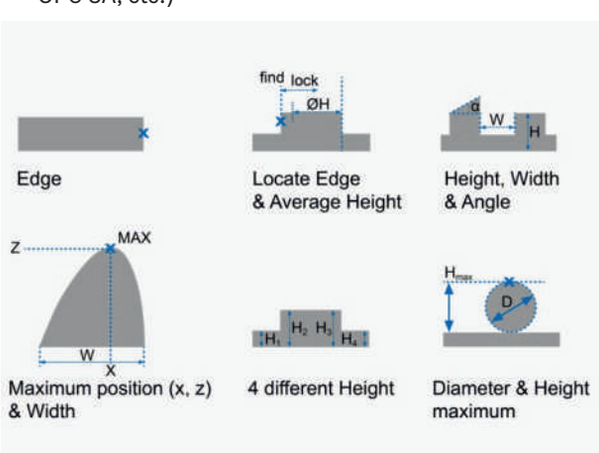
- Compact 2D multi-tool profile measuring device for various profile analysis
- Integrated high-performance measurement functions
- Best-in-class usability and live analysis via web interface
- Powerful profile sensor with freely available SDK

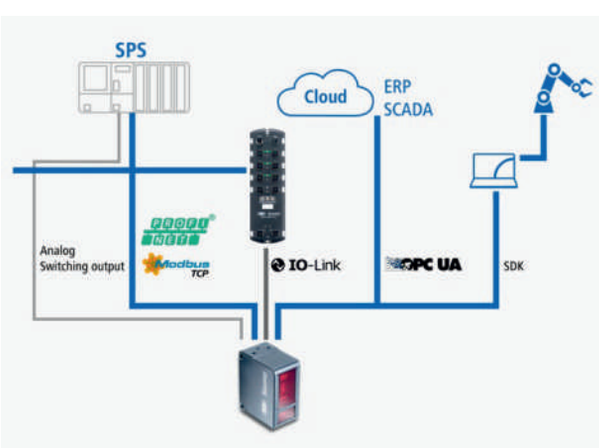
Multi-tool profile sensors OXM200

- Smart measurement functions and integrated image processing
- Linking of measurement tools for multifaceted analysis
- Free configuration of up to 7 measured values in the intuitive web interface
- Live analysis and monitoring
- Large selection of interfaces and protocols (PROFINET, OPC UA, etc.)

Profile sensor for image processing OXP200

- Calibrated 2D scatter plot
- Parameterization of the sensor via an intuitive web interface or SDK with sample code
- Integrated encoder input





Sensor solution LÜTZE

LÜTZE is your professional partner for consulting and delivery of high-quality industrial cables for automated manufacturing in numerous applications. Our specialized knowledge of flexible cables and cable assembly supports your installation every bit as much as does our product range: shielded or unshielded, for power, control or data.
LÜTZE delivers your need for cables for automated manufacturing and many other applications - worldwide!
The LÜTZE cable portfolio including numerous cables both from the European and North American cable product offerings is also available in the EPLAN Data Portal

High Flexing C-Track Cables

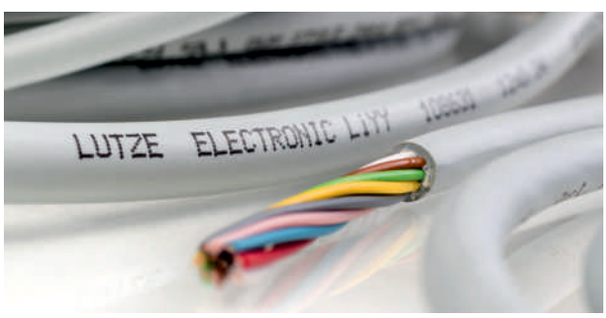
LÜTZE SUPERFLEX® stands for quality-conscious engineering and superior product quality for mechanical and plant engineering industry. It is often the cabling that causes premature breakdowns and unscheduled downtime of complete production lines! Bending radius, travel distance, speed and acceleration have resulted in an early death for some C-track cables.

Control Cables in LÜTZE SUPERFLEX® Quality

Flexible and highly flexible control cables for varied industrial applications. LÜTZE control cables are suited to machine and production systems, industrial air conditioning technology, as well as conveyor systems and many other applications.

Electronic Cables – optimized for automated manufacturing

LÜTZE offers a wide range of flexible and highly flexing electronic cables with color-coded coded, conductors, both unshielded and shielded as well as twisted pairs. LÜTZE ELECTRONIC cables are the optimum solution for endless industrial applications.



Actuator-Sensor-Cables for the industrial environment

LÜTZE offers highly flexible actuator-sensor cables colour-coded in conformity with EN 60947-5-2 with a black PUR jacket for industrial environments. These cables are suited to field wiring as well as mechanical proccessing. LÜTZE offers consulting, project planning and assembly from experienced specialists. LÜTZE also supports you with pre-assembled cables from the actuator sensor area as well as network technology.

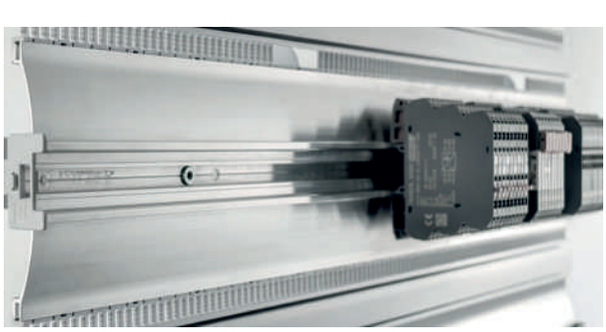
Sensor solution LÜTZE

Panel Pass Through Connector

In order to program and parameterize a system, the controls and computers in the control cabinet have to be accessed via standardized interfaces, such as RJ45 and USB. Users therefore have to open the switch cabinet door for service. To prevent an injury and ensure safety when the switch cabinet door is open, LÜTZE provides Panel Pass Throughs for the control cabinet for M8, M12, RJ45 and USB. With the pluggable Plug-and-Play standard interfaces, the connections between all control and data cables and the control cabinet are guaranteed.

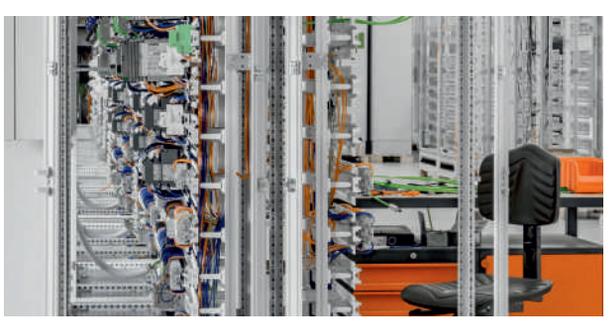
Cabinet cooling with AirSTREAM system

The components that used to design control cabinets are becoming more and more compact even though their switching capacity is increasing. This also means that the thermal loss rate is higher. Heat also builds up in the standard cable ducts. Hotspots are created. Standard climate control features in control cabinets are often not able to dissipate these hotspots and cool air does not get to where it is needed. The consequences could result in frequent failures and machine downtimes.



Control cabinet wiring

AirSTREAM wiring system works according to a new design principle and stands out thanks to construction and operation benefits!
AirSTREAM is the core piece of the control cabinet
The high-strength aluminium frames of the AirSTREAM for state-of-the-art control cabinet installation and wiring are very compact because they integrate the wiring trunking into the frame itself. Similar to the original LSC system, the wiring in the AirSTREAM is installed comfortably from the front.
Dispensing with cable trunking allows the compact installation of several components within narrow dimensional constraints. Also, cooling air always circulates the parts and reliably discharges generated heat.



Sensor solution LÜTZE

Bus Cables and Network Cables

Flexible and highly flexing BUS cables for data transfer in industrial BUS systems and networks. LÜTZE provides BUS and network cables for the most common systems worldwide and according to the industrial ETHERNET standards. LÜTZE offers not just an extensive portfolio of bus cables and network cables, but also handles the complete assembly of all cables for you, with all variants of connectors.

Motor, Servo and Feedback Cables

LÜTZE supplies flexible and highly flexing motor connection and energy supply cables as well as system-specific servo and feedback cables and low-capacitance cables for efficient power transfer. LÜTZE servo cables are suitable for all types of drives, however they are particularly effective for motors with frequency convertors. The high dielectric strength of the insulation material and the low dielectric coefficient are advantages offered by the LÜTZE servo cables on the electrical side. Mechanically the servo cables score through outstanding glide properties, strength and temperature-neutral flexibility. This is ideal for use in C-tracks and in harsh operating conditions.

LÜTZE's cable assemblies are used in almost all industries, but most notably in the areas of machine engineering, energy technology, and electromechanics. LÜTZE has more than 20 years' experience here, and works closely with its international sales companies and representatives for the largely global customers.

Servo drive assemblies

LÜTZE offers pre-assembled cables 100 % compatible with common servo-drive systems according to the following standards
Allen-Bradley* 2090 standard
Bosch Rexroth* standard
SIEMENS* 6FX standard
As a special service LÜTZE offers each cable assembly in 0.5 m increments - with a minimum order of one piece!
Customized options
On request, we customize servo assemblies according to your specifications and requirements, we will gladly assist you with the project planning and documentation.
*registered trademarks

Sensor solution LÜTZE

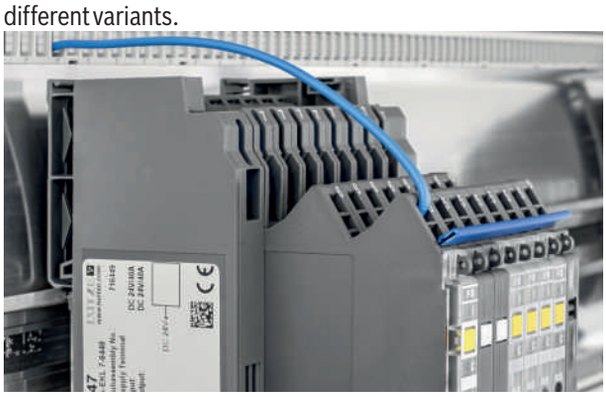
Components and solutions for Industry 4.0
The LÜTZE Control range is rounded off with switches, media converters and bus couplers for industrial network infrastructure and numerous functional components, as well as with the modular electronics housing system LCOS for installation of all kinds of electronics

Industrial power supplies for all requirements

With its 1, 2 or 3-phase power supplies from the Compact series, LÜTZE offers outputs ranging from 30 W to 2,400 W, and output voltages of DC 12 V, DC 24 V, DC 48 V and DC 72 V. The devices are therefore suitable for a variety of industrial applications.

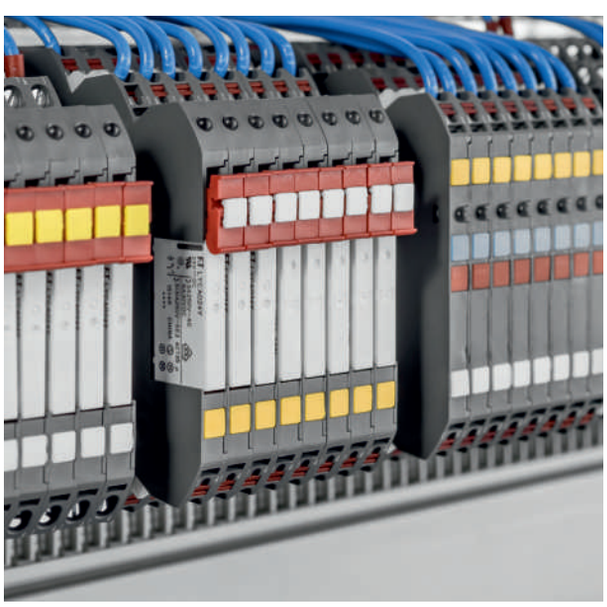
Intelligent Current Control with LOCC Box

The electronic overload and short circuit monitoring LOCC-Box meets the requirements for selective shutdown with high cable impedance and integration into the existing communication level. It stands for a new generation of Industry 4.0 technology.
LOCC-Box is available as 1- and 2-channel versions on 8.1 mm overall width with up to 50 setting options in one module. The connection is made via bridges instead of wiring. The LOCC-Box also has a particularly compact system configuration with different variants.



Relays and solid-state relays

Relays, solid state relays, and isolating converters of the LCIS system series can realize tasks up to isolation voltages of 4kV.
LÜTZE offers electronic relays for numerous applications ranging in temperatures from -40 °C to 75 °C, and coupling and switching loads up to 250 V/16 A. Screw and tension spring connections are also available along with push-in connections as standard options.
LCIS relays have UL, CSA and GL approvals for global use.
The innovative, electronic LCIS housing offers a simplified installation option through isolated bridges, which are available with various numbers of terminations.



Sensor solution LÜTZE

Bus system and Industrial Ethernet Cables

LÜTZE assembled Industrial Ethernet cables and connectors are able to withstand the respective system requirements for all electronic and mechanical parameters. LÜTZE Cable Assemblies are according to all system requirements. You can rely on the fact that all components are subjected to a 100% electrical test and naturally comply with all standard network specifications.

Plug connector for all applications

There are many connector options, it is a difficult field of electrical engineering. Whether fitting plugs or sockets, - the connection and disconnection of electrical contacts requires much more knowledge than simply knowing about the male and female ends. LÜTZE offers you a comprehensive assortment of all common plug connectors in the following areas:
Valve Suppressors, also with special function
M8 or M12 plugs, preassembled or self-assembly, shielded or unshielded
Data connector RJ45
Wall ducts

Actuator Sensor in the automation technology

The field sensor actuator networks are presently experiencing a major boom especially because of the digital transformation and the internet of things. Whether only in automation or in other fields, these networks are always composed of numerous sensor or actuator nodes. Using these, diverse observations and influences resulting therefrom can be dealt with. Every node is equipped with sensors or actuators, microcontrollers and communication components, to capture values, transfer them and also to react thereupon according to target goals.

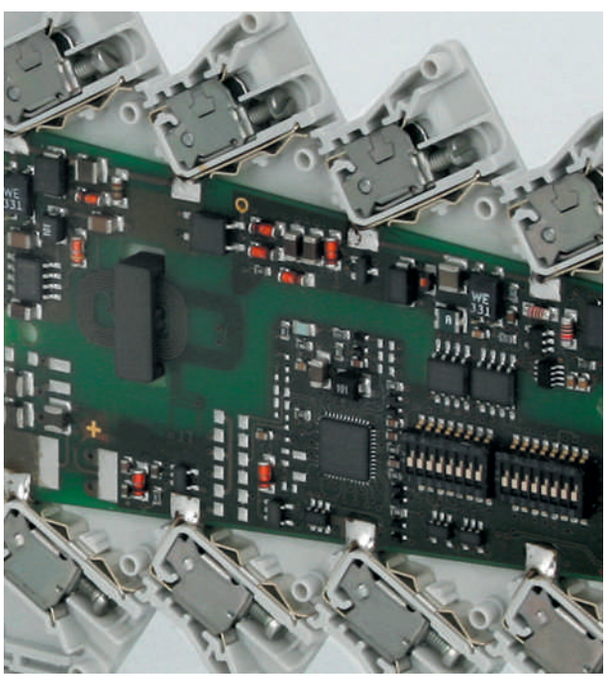
Suppression Technology

Suitable protection for contactors, valves and motors
As a specialist in suppressors, LÜTZE offers suitable overvoltage protections in various housing models for contactors, valves and motors or other inductors. Special functions or designs are available on request.

Sensor solution LÜTZE

Signal converter and temperature converter

LÜTZE converters are used in many industrial applications to reliably perform a variety of tasks, such as converting signals, recording temperatures or other critical measurements, and boost or separating signals.
The LÜTZE LCIS relays have an extremely low heat dissipation and power loss. These innovative and functional electronics are also suited for hard to reach and remote locations, such as wind turbines. LÜTZE signal converters have a wide temperature range of -40°C to +75 °C.



Industrial Ethernet: Infrastructure solutions from a single source

LÜTZE delivers switches and media converters for your network infrastructure - Plug & Play and without configuration. Uncrossed wiring also possible thanks to MDI/MDI-X function. Aluminium housing, -40 °C /+75 °C and fibre-optic cables delivered as standard!

Sensor solution TELCO

Photoelectric and multiplexed amplifiers **operating in conjunction** with Telco's high performance remote photoelectric sensors. Wide variety of sensor housing designs/materials and sensing characteristics. Extensive range of amplifier types are available with various features and functions. Available in 1, 2, 3, 4 and 8 channel models and up to 30 channels in bus configuration.

Remote Sensors

High performance remote sensors available with wide variety of housing designs and materials, and sensing characteristics. Available with sensor monitor LED indicators. Cable or plug connection. Remote sensors used in conjunction with Telco's amplifier range. Sensing range of up to 70 m in thru beam mode. Available with Atex approval.

Features & benefits

- Operation mode and max sensing range:
  Thru-beam: Dependent on amplifier (up to 70m)
  Diffuse proximity: Dependent on amplifier (up to 5m)
- Optional sensor monitor LED
- Wide variety of housings
- High tolerance to hostile environments
- Cable or plug connections
- Available with optional ATEX approval
- (II 3 G Ex nA IIC T6 Gc and II 3D Ex tc IIIC T100 ºC Dc)

Photoelectric Amplifier

Photoelectric 1-channel amplifier available with manual or automatic sensitivity adjustment. Transistor or relay output. AC or DC supply voltage. Numerous features including time delay, test input and alarm output. Sensing range of up to 70 m in thru beam mode.

Sensor solution TELCO

Pa01

Features

- Operation mode and max sensing range:
  Thru-beam: 0-45 m
  Diffuse proximity: 0-3,5 m
- 230 V ac, 115 V ac or 24 V ac/dc supply voltage
- Automatic and/or manual sensitivity adjustment
- Sensor LED-drive
- Adjustable on/off time delay
- 1 relay or 1 transistor output
- STF – Signal Tracking Feature
- Switch selectable light or dark function
- Switch selectable long or short range
- Power, output and signal status indicators
- Test input
- 11-pole DIN socket connection

Pa10

Features

- Operation mode and max sensing range:
  Thru-beam: 0-60 m
  Diffuse proximity: 0-4 m
- 230 V ac, 115 V ac, 24 V ac or 24 V dc supply voltage
- Manual sensitivity adjustment
- 1 relay or 1 transistor output
- Switch selectable light or dark function
- Switch selectable long or short range
- Power and output indicators
- 11-pole DIN socket connection

Pa11

Features

- Operation mode and max sensing range:
  Thru-beam: 0-70 m
  Diffuse proximity: 0-5 m
- 230 V ac, 115 V ac, 24 V ac or 24 V dc supply voltage
- Manual sensitivity adjustment
- Sensor LED-drive
- Automatic sensor test
- Adjustable on/off time delay
- 1 relay and transistor output or 2 transistor outputs
- Switch selectable light or dark function
- Switch selectable long or short range
- Power, output, sensor test and signal level indicators
- 11-pole DIN socket connection

Pa15

Features

- Operation mode and max sensing range:
  Thru-beam: 0-70 m
  Diffuse proximity: 0-5 m
- 24 V ac/dc supply voltage Manual sensitivity adjustment
- Sensor LED-drive
- Automatic sensor test
- Adjustable on/off time delay
- 1 relay or 1 transistor output
- Switch selectable light or dark function
- Switch selectable long or short range
- Test input
- Power, output, sensor test and signal level indicators
- Alarm output
- DIN rail mounting

Sensor solution TELCO

High performance self-contained photoelectric sensors. Available in **thru beam, diffuse proximity, retro-reflective, polarized retro-reflective, fiber sensor and background suppression** operation modes. Wide variety of housing designs and sensing characteristics. Up to 70 m in thru beam mode. Available with AC or DC supply voltage. Transistor, solid-state or relay output.

SPACEMASTER™ SM3000

Features

- Operation mode and max sensing range:
  Thru-beam: 1-15 m
- Cable or plug connection
- Sensitivity adjustment via control input
- Wide variety of housings
- Power and output indicator
- High voltage tolerance to hostile environments
- 10-30 V dc supply voltage
- 3 wire, NPN or PNP transistor output
- Test input
- UL325 approved series optionally available (see datasheet for SM 3000 U series in Downloads)
- Available with optional ATEX approval
- (II 3 G Ex nA IIC T6 Gc and II 3D Ex tc IIIC T100 ºC Dc)

SPACEMASTER™ SM3000/CAT2

Features

- Operation mode and max sensing range:
  Thru beam: 1-10 m
- Cable or plug connection
- Sensitivity adjustment via control input
- Power and output indicator
- 10-30 V dc supply voltage
- 3 wire, NPN or PNP transistor output
- Narrow optical beam
- TUV approved as safety device (AOPD) for power operated doors and gates acc. EN12978

SPACEMASTER™ SM6000

Features

- Operation mode and max sensing range:
  Thru-beam: 1-6 m
- Cable or plug connection
- Sensitivity adjustment via control input
- Wide variety of housings
- Power and output indicators
- High tolerance to hostile environments
- 10-32 V dc supply voltage
- 3 wire, NPN or PNP output or 4 wire, NPN/PNP opto isolated output
- 5 or 0,5 ms response time
- Low current consumption
- Test input
- Available with optional ATEX approval
- (II 3 G Ex nA IIC T6 Gc and II 3D Ex tc IIIC T100 ºC Dc)

Sensor solution TELCO

SPACEMASTER™ SM7000

Features

- Operation mode and max sensing range:
  - Thru-beam: 0-20 m
  - Diffuse proximity: 0-1 m
  - Retro reflective: 0-3 m
  - Fiber: Dependent on the fiber optic
- Cable or Plug connection
- Sensitivity adjustment via potentiometer
- Switch selectable light or dark function
- Power and output indicators
- High tolerance to hostile environments
- 10-30 V dc supply voltage
- 4 wire, NPN/PNP transistor output or 4 wire, ambivalent PNP/PNP transistor output
- Test input

SPACEMASTER™ SM8000

Features

- Operation mode and max sensing range:
  - Thru-beam: 0-20 m
  - Diffuse proximity: 0-1 m
  - Retro reflective: 0-3 m
  - Fiber: Dependent on fiber optic
- Cable or plug connection
- Sensitivity adjustment via potentiometer
- Switch selectable light or dark function
- Power and output indicators
- High tolerance to hostile environments
- 10-30 V dc or 20-250 V ac supply voltage
- 3 wire, NPN or PNP transistor output or 2 wire, SCR output
- Test input
- Available with optional ATEX approval
- (II 3 G Ex nA IIC T6 Gc and II 3D Ex tc IIIC T100 ºC Dc)

SPACEMASTER™ SM9000

Features

- Operation mode and max range:
  - Thru-beam: 0-70 m
- Cable or plug connection
- Sensitivity adjustment via control input
- Power and output indicators
- High tolerance to hostile environments
- 10-30 V dc supply voltage
- Available outputs:
- NPN transistor output
- PNP transistor output
- Solid state output
- Test input
- High excess gain
- IP 69K rating
- Optical cross talk elimination of 4 independent sensor channels selectable via wire connection
- Available with optional ATEX approval
- (II 3 G Ex nA IIC T6 Gc and II 3D Ex tc IIIC T100 ºC Dc) or
- UL Hazloc compliant (Class II, Division 2, Groups F and G)

Sensor solution TELCO

SPACEMASTER™ SM7000R

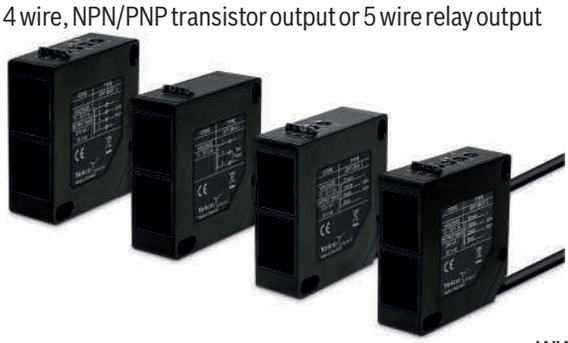
Features

- Operation mode and max sensing range:
  Diffuse proximity: 0-35 cm
- Cable or Plug connection
- Visible red light source
- Sensitivity adjustment via potentiometer
- Switch selectable light or dark function
- Power and output indicators
- High tolerance to hostile environments
- 10-30 V dc supply voltage
- 4 wire, NPN/PNP transistor output
- Available with optional ATEX approval

SPACEPAK™ SP2000

Features

- Operation mode and max sensing range:
  Thru-beam: 0-45 m
  Diffuse proximity: 0-5 m
  Retro reflective: 0-12 m
  Polarized retro reflective: 0-10 m
  Background suppression: 0-2 m
- Compact rectangular housing (50 x 50 mm)
- Cable or rotatable plug connection
- Sensitivity adjustment via potentiometer
- Switch selectable light or dark function
- Adjustable on/off time delay
- Power, output and signal level indicators
- 10-30 V dc or 12-240 V ac/dc supply voltage
- 4 wire, NPN/PNP transistor output or 5 wire relay output



Self-Contained Light Curtains

Self-contained light curtains available in lengths from 85 to 280 cm. Sensing range of up to 12 meters. 46 or 92 mm beam spacing. Parallel or crossed scanning infrared beams. Wide variety of aluminum profile designs.

SPACEGUARD™ SG1

Features

- 0-4 m sensing range
- 34 to 194 cross scanning beams
- Active height of 650 mm to 1800 mm
- Detector length 850 mm to 2100 mm
- Flexible cable connection
- Automatic sensitivity adjustment
- Slim line (10x28 mm), leading edge (37,5x13 mm) or water-resistant slim line (12x30 mm) detector
- Power, output and signal status indicators
- 12-36 V dc supply voltage
- 5 wire, solid state relay output
- Test input
- Time-out function via wire connection
- Static and dynamic applications
- Compliant with elevator safety code EN 81-20

Sensor solution TELCO

SPACEGUARD™ SG2

Features

0-4 m sensing range
94 cross scanning beams
Active height of 1800 mm
Detector length 2000 mm or 2100 mm
Flexible cable connection
Automatic sensitivity adjustment
Slim line (10x28 mm) detector housing
Power, output and signal status indicators
12-36 V dc supply voltage
Blanking function of up to 10 channels
5 wire, solid state relay output
Test input
Light/dark function via wire connection
Compliant with elevator safety code EN 81-20

SPACEGUARD™ SG10

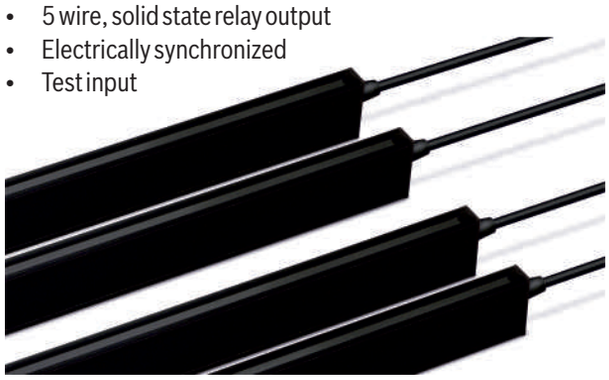
Features

- 1-10 m sensing range
- 34 to 274 cross scanning beams
- Active height of 650 mm to 2535 mm
- Detector length of 850 mm to 2800 mm
- Cable or plug connection
- Automatic sensitivity adjustment
- Water-resistant, slim line (12x30 mm) detector housing
- Power, output and signal status indicators
- 12-36 V dc supply voltage
- 5 wire, solid state relay output
- Test input
- Light/dark function via wire connection
- UL325 approved series optionally available (see datasheet for SG 10 U series in Downloads)
- Available with optional Atex approval upon request
- (II3G Ex nA IIC T6 Gc and II3D Ex tc IIIC T80º Dc)

SPACEGUARD™ SG10 M/S

Features

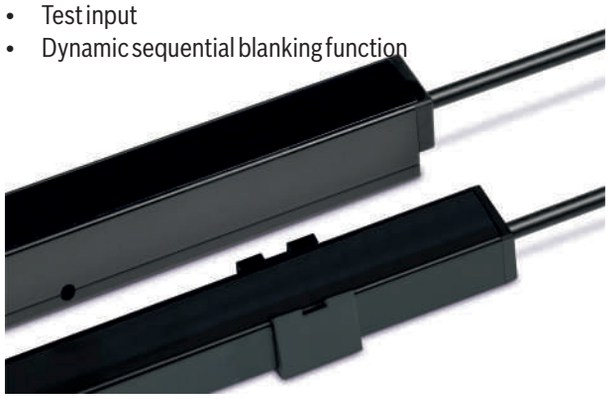
- 1-10 meter sensing range
- 34 to 274 cross scanning beams
- Active height of 650 mm to 2535 mm
- Length of 850 mm to 2800 mm
- Automatic sensitivity adjustment
- Water-resistant, slim line (12x30 mm) housing
- Power, output and signal status indicators
- 12-36 V dc supply voltage
- Master/Slave synchronization and multiplexing
- 5 wire, solid state relay output
- Electrically synchronized
- Test input



SPACEGUARD™ SG13

Features

- 1-10 meter sensing range
- 16 to 56 parallel scanning beams
- Active height of 720 mm to 2520 mm
- Length of 868 to 2668 mm
- 3 different channel placement models
- Cable or plug connection
- Automatic sensitivity adjustment
- Compact aluminum IP67 housings
- Power, output and system status indicators
- 12-30 V dc supply voltage
- 5 wire solid state relay output
- Test input
- Dynamic sequential blanking function



Sensor solution TELCO

SPACEGUARD™ SG14

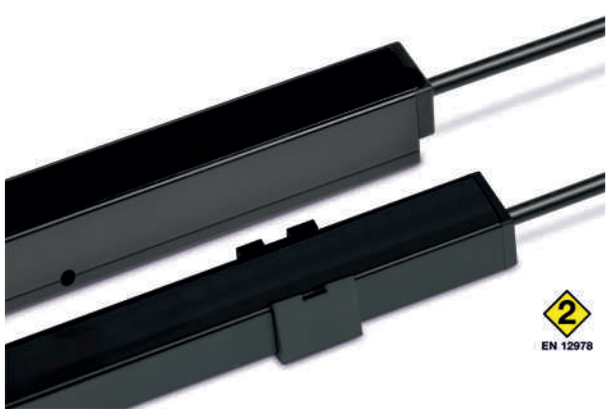
Features

- 1-10 metre sensing range
- 16 to 56 parallel beams
- Active height of 695 mm to 2535 mm
- Detector length of 850 mm to 2800 mm
- Cable or plug connection
- Automatic sensitivity adjustment
- Water-resistant slim line (12x30 mm) or leading edge (38.4x14 mm) detector housing
- Power, output and signal status indicators
- 12-36 V dc supply voltage
- Dynamic sequential blanking function
- 5 wire, solid state relay output
- Test input
- UL325 approved series optionally available (see datasheet for SG 14 U series in Downloads)
- Available with optional Atex approval upon request
- (II3G Ex nA IIC T6 Gc and II3D Ex tc IIIC T80º Dc)

SPACEGUARD™ SG15

Features

- 1-12 meter sensing range
- 16 to 56 parallel scanning beams
- Active height of 1800 mm to 2520 mm
- Length of 1948 mm to 2668 mm
- 3 different channel placement models
- Cable or plug connection
- Automatic sensitivity adjustment
- Compact aluminum IP67 housings
- Power, output and system status indicators
- 12-30 V dc supply voltage
- 5 wire solid state relay output
- Test inputs
- EN 12978 compliant
- TÜV approved as E-device acc. EN 12453



Sensor solution TELCO

Remote light curtains

Remote light curtains available in lengths from 57 cm to 210 cm (longer lengths available upon request). Sensing range of up to 5 meters. 28 or 56 mm beam spacing. Parallel scanning infrared beams. Slim line and leading edge aluminum profile design.

SPACEGUARD™ SG11

Features

- 5 m sensing range
- 16 to 64 parallel beams
- 28 or 56 mm beam spacing
- Active height of 425 mm to 1770 mm
- Detector length of 570 mm to 2105 mm
- Flexible cable
- Plug connection to controller
- Slim line (10x28 mm) or leading edge (37,5x13 mm) detector housing
- Power indicator
- Static and dynamic applications
- Compliant with elevator safety code EN 81-20

SPACEGUARD™ SGC11

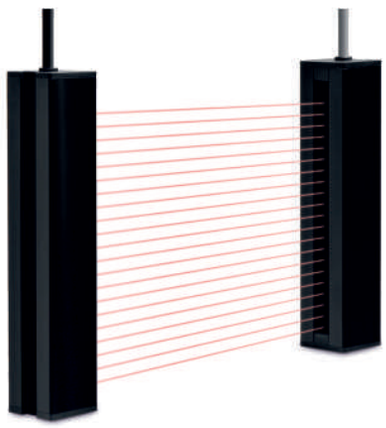
Features

- 5 m sensing range
- 230 V ac, 115 V ac or 24 V ac – all with 24 V dc supply voltage
- Manual and automatic sensitivity adjustment
- Automatic detector test
- 1 relay and/or 1 transistor output
- Switch selectable light or dark function
- Switch selectable long or short range
- Switch selectable buzzer
- Selectable time-out function
- Power, output, alarm, time-out and detector failure indicators
- Alarm and time-out output
- Plug connection to detectors

Sensor solution TELCO

Measuring light curtains

Multi beam, self-contained high-performance measuring light curtains. Available in lengths from 300 to 1980 mm. Sensing range up to 10 meters. Sturdy aluminum, IP67 profile. Available with channel spacing of 5, 10 or 20 mm. DC supply voltage with analogue outputs (0-10V / 4-20mA) and up to 4 digital outputs. RS-485 serial communication. Fully programmable configuration and monitoring with Telco PC software.



SPACESCAN™ SS02

Features

- 0-10 meter sensing range
- 12 to 384 channels (parallel beams)
- Available with channel spacing of 5, 10 or 20 mm
- Active length of 225 mm to 1920 mm
- Housing length of 300 mm to 1980 mm
- Plug connection
- 18-30 V dc supply voltage
- Power, output and system status indicators
- 33x36 mm aluminum housing with T-slot mounting
- High tolerance to hostile environments
- RS-485 serial communication
- Up to 4 digital outputs with software configurable functions
- Analogue output 4-20 mA and 0-10 V with software and control wire configurable function
- PC software for programmable configuration and monitoring
- UL Hazloc compliant models optionally available
- (Class II, Division 2, Groups F and G)

Sensor solution TELCO

Industrial light curtains

Multi beam, self-contained industrial light curtains in thru beam or diffuse proximity operation mode. Available in lengths from 160 to 1980 mm. Offers sensing ranges of up to 10 meters in thru beam mode. Sturdy aluminum, IP67 profiles. Available with channel spacing of 5, 10 or 20 mm. Parallel or cross scanning beam, selectable. Offers DC supply voltage and solid-state relay output.

SPACESCAN™ SS01

Features

- 0-10 meter sensing range
- 4 to 384 channels (parallel beams)
- 10 to 1150 cross scanning beams
- Active length of 65 mm to 1920 mm
- Housing length of 160 mm to 1980 mm
- Plug connection
- Automatic sensitivity adjustment
- Parallel or cross beams via wire connection
- Blanking function
- 33x36 mm aluminum housing with T-slot
- mounting
- High tolerance to hostile environments
- Power, output and system status indicators
- 12-30 V dc supply voltage
- Solid state relay output
- High switching frequency
- UL Hazloc compliant models optionally available
- (Class II, Division 2, Groups F and G)

SPACEGUARD™ SGP30

Features

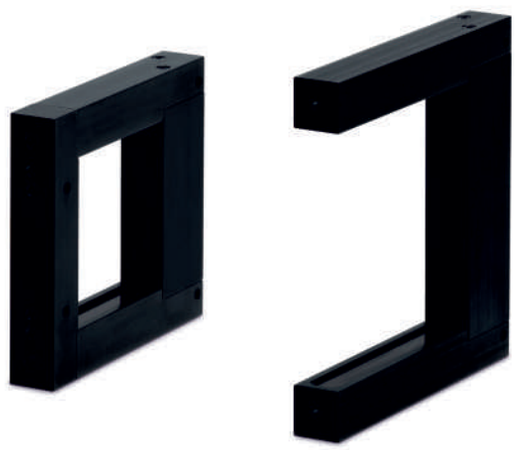
- Diffuse proximity operation mode
- 0-1,3 meter sensing range
- 8 to 40 proximity channels
- Active height of 330 mm to 1800 mm
- Length of 510 mm to 1980 mm
- Plug connection
- Sensitivity adjustment via potentiometer
- Blanking function
- Water-resistant (23,4x30,9 mm) detector housing
- High tolerance to hostile environments
- Power, output and system status indicators
- 12-30 V dc supply voltage
- 5 wire, solid state relay output

Sensor solution TELCO

Optical Fork and Optical Frame sensors

Optical fork sensors available with fork size ranging from 2 mm to 220 mm. Housed in sturdy, IP67 aluminum housing. Available with infrared, visible red or high-power infrared light source. Offers high operation frequency of up to 5000 Hz. Includes DC supply voltage and transistor output. Sensitivity adjustable via potentiometer.

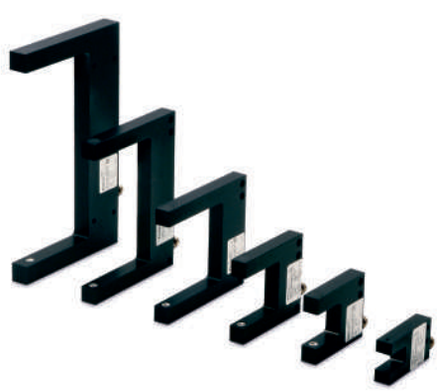
Optical frame sensors available with frame size ranging from 50 mm to 250 mm. Housed in sturdy, IP67 aluminum housing. Offers high operation frequency of 5000 Hz and high resolution from 0,5 mm. Includes DC supply voltage and transistor output. Sensitivity adjustable via potentiometer. Dynamic or static detection principle.



OFS

Features

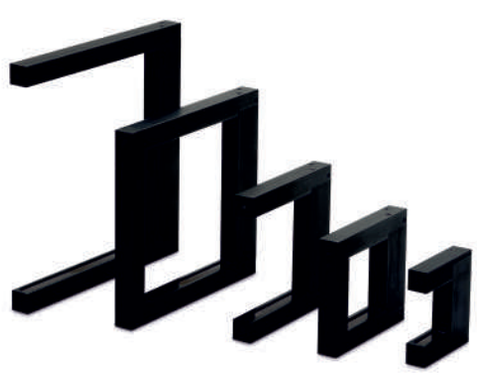
- 2 mm to 220 mm fork width
- Aluminum housing
- Plug connection
- Infrared or visible red-light source
- High power version available
- Sensitivity adjustment via potentiometer
- Switch selectable light or dark function
- Output indicator
- High tolerance to hostile environments
- 10-35 V dc supply voltage
- 3 wire, NPN or PNP output
- High switching frequency



OAS

Features

- 50 mm to 250 mm frame width
- Aluminum housing with or without cross bar
- Plug connection
- Infrared light source
- Sensitivity adjustment via potentiometer
- Pulse stretching adjustment via potentiometer
- Dynamic or static detection principle
- Output indicator
- High tolerance to hostile environments
- 24 V dc supply voltage
- 3 wire, PNP output
- Fast response time
- High resolution from 0,5 mm



Sensor solution TELCO

Inductive sensors

Wide variety of dimensions

- Ø3, M4, Ø4, M5, 5x5, Ø6.5, M8,
- 8x8, M12, M18, M30, 16x28, 40x40 mm

Features

- Robust metal body
- High sensing distances
- Polarity reversal and short-circuit protected
- LED status indication
- miniature sensors
- high performance sensors
- metal-face sensors
- high-pressure proof sensors
- high-temperature proof sensors
- sensors with analog output
- NAMUR Sensors
- 2-wire DC sensors (10... 55 VDC)
- 2-wire AC sensors (20... 250 VAC)
- weld-field-immune sensors
- metal-selective sensors
- ring-sensors

Capacitive sensors

Wide variety of dimensions

- M8, M12, M18, 30x50x7, M30, 40x40

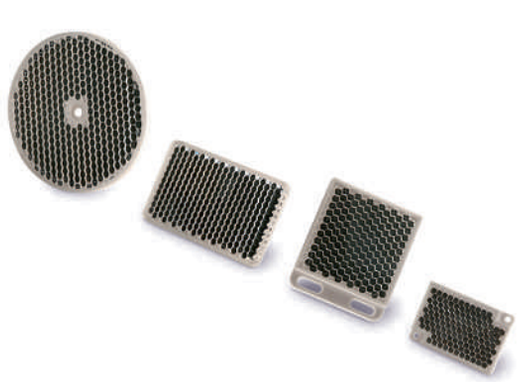
Features

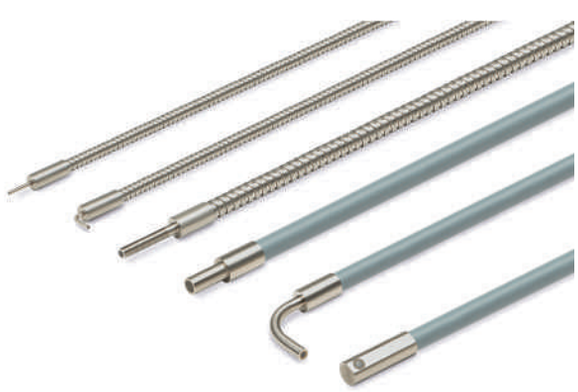
- Robust metal body
- High sensing distances
- Polarity reversal and short-circuit protected
- LED status indication
- high performance sensors
- high-temperature proof sensors
- chemical resistant sensors
- ring-sensors

Sensor solution TELCO

Accessories

Mounting brackets, apertures, reflectors, glass fiber optics, socket, connectors, cables





Sensor solution AUER Signal

Signal lights for effective signalling

Auer signal lights are used in a variety of applications. Through extensive development, extensive product and long-term tests, we can ensure safe and long-lasting operation even under harsh environmental conditions. This means that you will find a wide range of signal lights in our product portfolio, which is offered with different degrees of protection and functions. Auer LED strobe lights, flashing beacons and steady beacons are available both as panel mount device and surface mount device.

Individuality down to the last detail
The fulfilment of the customer request demonstrates that everything is possible. With Auer Signal's standard product portfolio, we offer a variety of different signal lights for different applications of use. The beacons within a product series often differ in size, colour and voltage variants. Is there still no suitable signal light for your application? No problem. Send us a request and we will implement it together with you. We are your partner for special requirements.

Signal lights on doors and gates
A typical application of signal lights can be found on industrial doors, roller shutters or barriers. The device indicates whether it is safe to pass the gate or the barrier. As with all signal devices, safety is the number one priority. For the use on doors and gates, we recommend the signal lights of the T+U series. They are characterised by the particularly high impact strength of IK09 and are therefore vandal-proof and tamper-proof.
Use in extreme conditions

Serie Q - the Bright

Leading the way for LED beacons
The largest and most extensive beacon series in 4 sizes ranging from 94 mm - 228 mm. For a frontal and lateral signalling effect: no LED beacon beams brighter.

One step ahead thanks to a high-tech lens design

Safety thanks to an innovative lens design
Auer innovative lens design enables a perfect signalling effect in all directions. Especially complex lens patterns in combination with a diffuser lens ensure an optimum frontal and lateral signalling effect.

Series N - The Performer

Multi strobe and multi colour beacons
LED multi colour beacon and LED steady/flashing/strobe and multi strobe beacons. With its high-power LEDs, the series is also suitable for use in extreme light conditions.

Sensor solution AUER Signal

Audible signals: sirens and horns

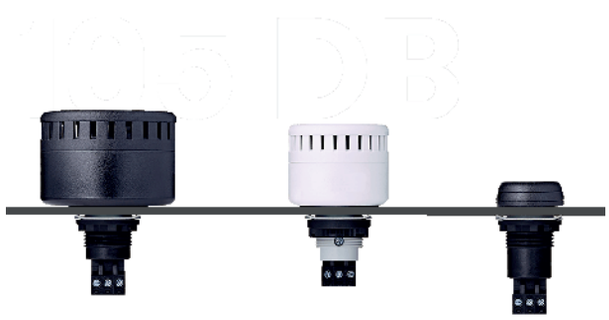
The areas of application of audible signaling devices are highly versatile. Multi-tone alarm sounders, piezo buzzers, alarm horns and bells are used in a variety of industries. Application examples can be found in mechanical engineering, automation, special vehicles and cranes. Especially when there is no permanent visual contact between workers and the signaling device, audible signals are used. They are generally used to signal faults or dangerous situations acoustically. The signal is given by one tone, several tones or a certain tone sequence.
Powerful signaling equipment for a better signalization
Auer Signal offers state-of-the-art signaling devices, which are developed and manufactured in Vienna. In our wide range of audible signal devices, you can find models for all applications. This gives you the ability to choose the right model for your needs from our powerful, robust and durable sirens. Our top models achieve a sound pressure of up to 127 dB, are impact resistant (IK09) and suitable for use in extreme conditions (IP66).

ASX - The Mighty

The loudest multi-tone alarm sounder
The sounder with sound pressure of 127 dB.
The loudest siren currently available.

M22 - the loudest Installable

The loudest panel mount buzzer
The loudest M22 panel mount buzzer currently available - with the latest piezo technology and available in three sizes.



KLH & KDH - the little Loud

Small, loud & universal
Well-designed and robust electromechanical signal horns with the distinctive, classic horn tone with an attractive price-performance ratio.

BEL - The Classic

The long-standing classic
Mechanical, distinctive bell tone in a timeless design. Built to last.

Sensor solution AUER Signal

Audible / Visual alarm

Combine the power of two signaling devices for more control and safety: With the combined visual-audible signaling devices from Auer Signal you get the light signal of a strobe-, flashing- or continuous warning lights with a multitone siren, sounder or buzzer in one device.
Our visual-audible signals are the result of many years of research and development. The products are manufactured using state-of-the-art production processes and are perfectly synchronized to reproduce a coordinated light and sound signal.
Combined visual-audible signaling devices from Auer Signal are highly valued for their high quality and reliability and are used worldwide in various industries such as mechanical engineering, production automation, automotive plants, warehouses as well as in cabinets and electronic control panels.

Series A + Q - the Mighty and the Bright

High-power combination
The loudest multi-tone alarm sounder combined with the latest LED beacon technology. Perfect for industrial applications, in process technology and for use in the navy.

Series K: the well-designed, robust all-rounder

The all-rounder
Well-designed and robust combination of an electromechanical signal horn with signal beacon or strobe beacon and an attractive price-performance ratio.

Clever combinations save money

Save money with a comparable output
Thanks to a wide range of intelligent beacon and siren/buzzer combinations, you can save up to 40%.

A complete product range in 3 sizes

The ultimate M22 signalling equipment series
The most extensive M22 panel mount signalling equipment series. Available in three sizes with the loudest panel mount buzzer available on the market.

Sensor solution AUER Signal

Tower lights / Tower stack ights

We offer two different types of tower lights: compact or modular tower lights. Choose the modular tower light when you want to be as flexible as possible and the compact tower lights when want a ready-to-use pre-assembled product. Both types can exactly suits the needs of your company. Our tower lights are available with diameter ranging from 30mm up to 70mm. Configure your individually tower lights of Modul-Perfect, Modul-Compete, Eco-Modul, Half-Dome, Modul-Compact or Modul-Signal or choose from pre-assembled signal towers instead.

An engineering masterpiece

Auer modular signal towers are produced with unrivalled precision; the signal modules boast the lowest tolerance levels. Developed and built for many years of problem-free use in the industry.

Globally unique: Eco-Modul 40

The smallest modular signal tower
With a diameter of 40 mm, our Eco-Modul 40 series is the smallest modular signal tower series available anywhere in the world. It is the only member of the Eco-Modul series to be equipped with an LED multi strobe or multi colour strobe.

Signal towers in all sizes

Auer produces signal towers for every application and in every common size: Ø 30 mm, Ø 40 mm, Ø 50 mm, Ø 60 mm and Ø 70 mm.

Modul-Compact - The Readymade

For large quantities
The pre-assembled, pre-wired and ready-to-use LED signal tower is manufactured according to customer requirements. Ideal if large quantities are required with a very attractive price-performance ratio.

Half-Dome - The Design Tower

Design and flexibility
Visual-audible LED design signal tower in a semi-circular design for wall mounting. Provides consistently optimal signalling due to 180 degree beam angle. Flexibility thanks to freely selectable colour combinations.

Every mounting type is possible

A diverse array of mounting types
We have the right mounting solution, regardless of where the signal tower is to be mounted. Auer quick mounting system saves electrical installation work and makes mounting extremely easy.

Solution Von Hermannstadt SRL

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