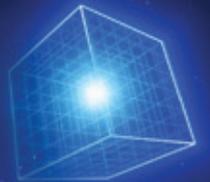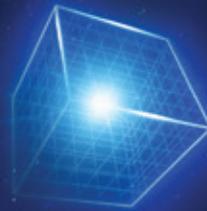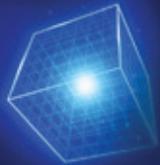# PROGRAM OVERVIEW

CONTRINEX

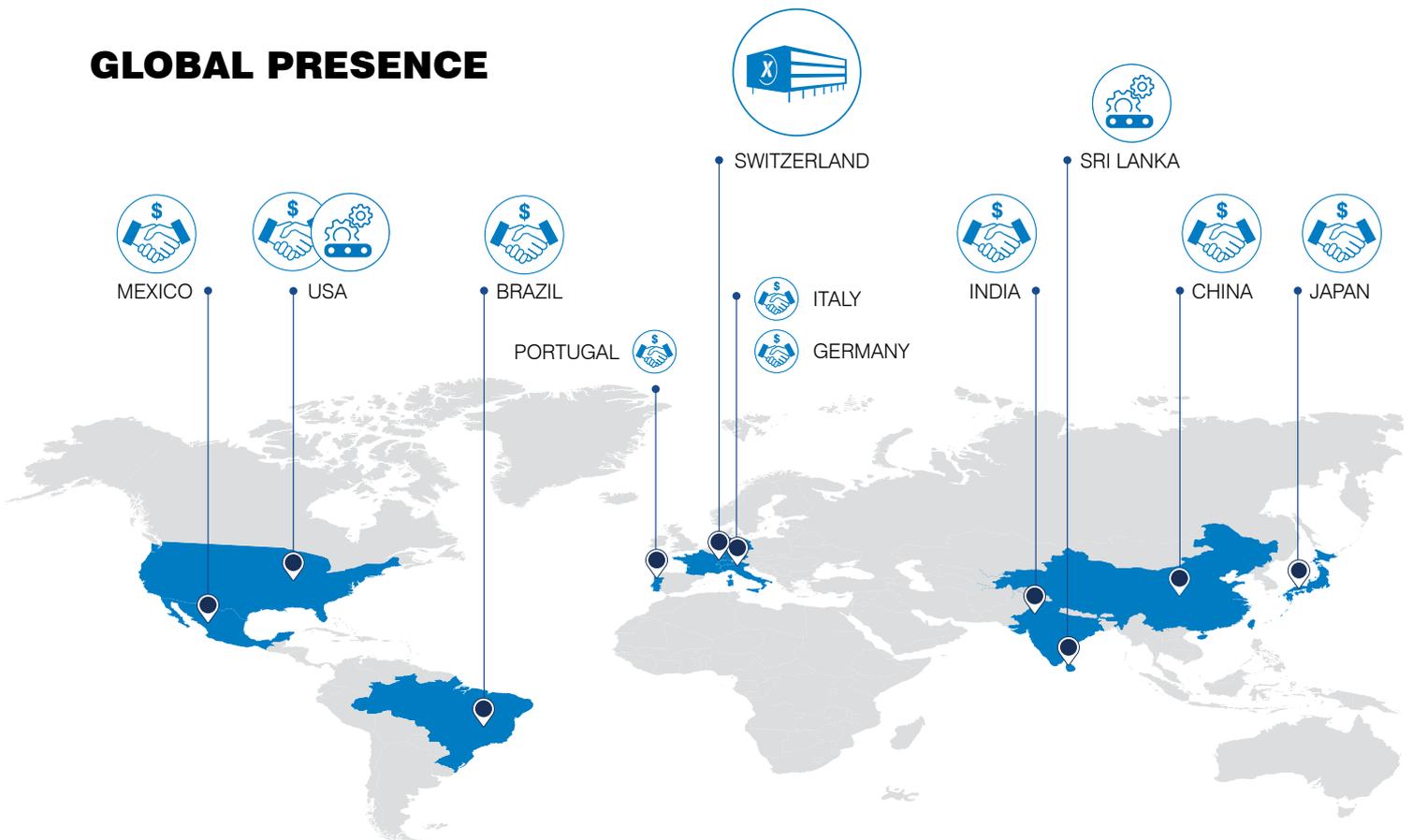# CONTRINEX
# A WORLD OF SENSORS

## AT A GLANCE

- Global Smart-Sensor technology leader for complex automation and Smart-Factory applications
- Over 50 years experience of intelligent-sensing and identification solutions using leading-edge inductive and photoelectric sensors and RFID systems in the most demanding applications, in the harshest environments and with the tightest space constraints
- Using real-time sensor data for IIoT and remote asset management, enabling customers to make faster and better decisions
- Represented in over 60 countries worldwide, headquartered in Switzerland
- Unrivalled portfolio of more than 8,000 products



*Contrinex Headquarters, Switzerland*

## GLOBAL PRESENCE



SWITZERLAND

SRI LANKA

MEXICO

USA

BRAZIL

PORTUGAL

ITALY

GERMANY

INDIA

CHINA

JAPAN

## Shop 24/7
**www.contrinex.com**

**FAST DELIVERY**

**WORLDWIDE SHIPING**

**EASY TO FIND PRODUCTS & ACCESSORIES**

# CONTRINEX PRODUCT RANGES

# SMART
# MEASUREMENT
## SENSORS
# INDUCTIVE

## KEY ADVANTAGES

- High-resolution measurement
- Multiple detection modes in a single sensor
- Two configurable sensor outputs
- Extensive options for user configuration
- Predictive maintenance capabilities

# SMART MEASUREMENT SENSORS

# INDUCTIVE

## Measure monitor configure predict

**High-Resolution Measurement**

**T Teachable**

OSS1 · SIO / IO-Link · OSS2 · SIO
**Dual Outputs**

**Predictive Maintenance**

## KEY ADVANTAGES

- High-resolution Smart Digital Measurement Sensors (DMS) deliver continuous target-distance data
- Multiple detection modes in a single sensor
- IO-Link data enables configurability and diagnostics, supporting seamless integration into IIoT applications
- Extensive options for user configuration ensure exceptional versatility
- IO-Link smart profile with analog or digital dual output simplifies control-system integration and retrofit of existing installations
- Condition-based alarms allow predictive maintenance
- Full-inox versions offer increased protection with exceptional sensing ranges on aluminum, brass and copper targets

SMART MEASUREMENT SENSORS

# DIRECT AND INDIRECT MEASUREMENTS

**Distance / Displacement**

**Force measurement**

**Lateral position**

**Vibration measurement**

**Feature detection**

**Step counting**

**Angular measurement**

**Temperature monitoring in the sensor**

**Inclined plane lateral positioning**

# SMART SPINDLE POSITION SENSORS

## KEY ADVANTAGES

- Measures drawbar position
- Single sensor positional control system
- Digital teach of drawbar position
- Available with 2 outputs
- Easy configuration with PocketCodr
- ⊗ **IO**-Link
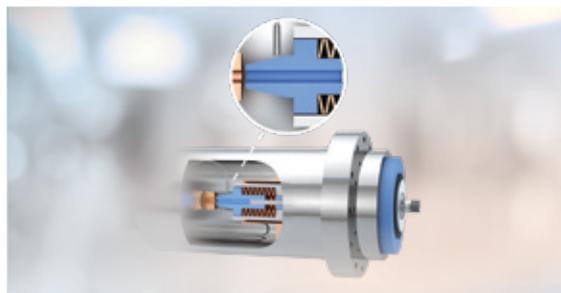


| Part Reference | Housing Size mm | Operating Distance | Output |
|---|---|---|---|
| IDWE-M8MP-NMS-A0 | M8 | 4 mm | IO-Link/SIO & SIO/input |
| IDWE-M05MP-NMS-A0 - COMING SOON | M5 | 2.5 mm | IO-Link/SIO |

| Part Reference | Housing Size mm | Displace-ment Range | Output |
|---|---|---|---|
| DMS: IDWE-C1525PP-NMK-AN - COMING SOON | 35 x 35 x 31 mm | 0 to 20 mm | IO-Link/SIO |
| AMS: IAWE-C1525PP-NMK-A2 - COMING SOON | 35 x 35 x 31mm | 0 to 20 mm | IO-Link/SIO & 0 to 10V |

# SMART CYLINDER POSITION SENSORS

## KEY ADVANTAGES

- Measure piston-position
- Digital teach of end position
- Cycle counter with alarm
- Report over-temperature events
- Extremely robust
- Very high operating and peak pressures (500 bar, 1000 bar peak)
- Easy configuration with PocketCodr
- ⊗ **IO**-Link



| Part Reference | Housing Size mm | Operating Distance | Operating Pressure | Enclosure Rating | Output |
|---|---|---|---|---|---|
| IDWE-P12MC-NMS-A0-100 | M12 | 2 mm | ≤ 500 bar* | IP 68 | IO-Link/SIO & SIO/input |
| IDWE-P12MC-NMS-A0-101 | M12 | 2 mm | ≤ 500 bar* | IP 68 | IO-Link/SIO & SIO/input |
| IDWE-M12MM-NMS-A0 | M12 | 6 mm | ≤ 60 bar | IP 68/69K | IO-Link/SIO & SIO/input |
| IDWE-M18MM-NMS-A0 | M18 | 10 mm | ≤ 80 bar | IP 68/69K | IO-Link/SIO & SIO/input |
| IDWE-P20MC-NMS-A0 | M14 | 3 mm | ≤ 500 bar* | IP 68 | IO-Link/SIO & SIO/input |

*1000 bar peak

# SMART NUT DETECTION SENSORS

## KEY ADVANTAGES

- Reliable detection of missing nut
- Easy configuration with PocketCodr
- Built-in delay and timer functions
- One-piece stainless steel housing
- ◉ **IO**-Link

| Part Reference | Housing Size mm | Operating Distance | Enclosure Rating | Output |
|---|---|---|---|---|
| **IDWE-M12MM-NMS-A0** | M12 | 6 mm | IP 68 / IP 69K | IO-Link / SIO & SIO / input |
| **IDWE-M18MM-NMS-A0** | M18 | 10 mm | IP 68 / IP 69K | IO-Link / SIO & SIO / input |

*Available in coated versions as well

# SMART DOUBLE-SHEET DETECTION SENSORS

## KEY ADVANTAGES

- Reliable detection of double sheets
- No external amplifier required
- Contactless detection
- One-piece stainless steel housing
- Easy configuration with PocketCodr
- ◉ **IO**-Link
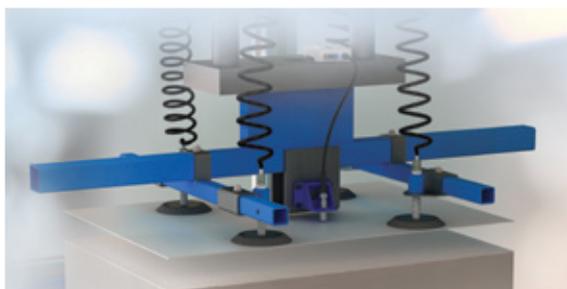
| Part Reference | Housing Size mm | Operating Distance | Material Min/Max Sheet Thickness | | | Output |
|---|---|---|---|---|---|---|
| | | | Steel | Aluminium | Stainless Steel | |
| **IDSN-M18MM-NMS-A0 | M18 | 3 - 5 mm | 0.5 / 1.25 mm | 0.2 / 2.5 mm | 1 / 5 mm | IO-Link / SIO & SIO / input |
| **IDSN-M30MM-NMS-A0 | M30 | 3 - 5 mm | 0.5 / 2 mm | 0.2 / 4 mm | 1 / 5 mm | IO-Link / SIO & SIO / input |

| Part Reference | Description |
|---|---|
| POC-CDR-M12 **PocketCodr Device** | No-Code ◉ **IO**-Link-Device Configurator Tool |
| SKU: SOFT-POC-APL-1-CRD **PocketCodr Subscription Card – ***Contrinex Applications Plan** | This physical scratch card provides an activation code for a 1-year subscription to the **Contrinex Applications Plan** |

*Available in coated versions as well **Both the PocketCodr device and Contrinex Applications subscription are mandatory for configuring the Smart Double-Sheet Detection Sensors. ***Enterprise subscriptions available on demand.

Detailed data sheets for these products can be found on the Contrinex website **contrinex.com**

# GENERAL RANGE

# SMART DIGITAL MEASUREMENT SENSORS

Shop

## KEY ADVANTAGES

- High-resolution distance measurement
- Linear digital output (IO-Link)
- Two configurable outputs
  - Teachable switching signals
  - Output on Pin2 also configurable as an input or wire teach
- Stretch, delay or one-shot timers
- Event-based alarms
  - Temperature monitoring
  - Counter functions
- Data Storage
- Stainless steel V2A housing available
- High pressure versions available
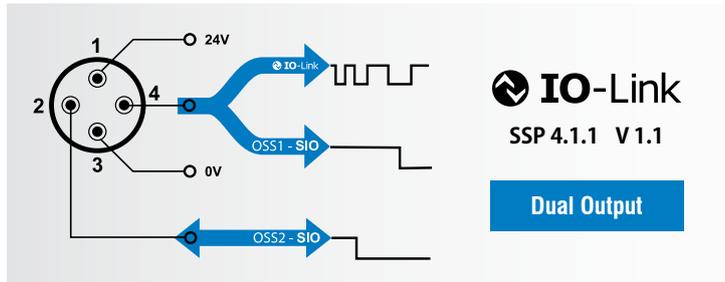
IO-Link
SSP 4.1.1   V 1.1
Dual Output

| Operating Distance (mm) | M5 emb. | *M8 emb. | *M12 emb. | P12 emb. | *M18 emb. | P20 emb. | *M30 emb. |
|---|---|---|---|---|---|---|---|
| | 2.5 | 4 | 6 | 2 | 10 | 3 | 20 |

*Also available with ACTIVSTONE® coating for weld spatter resistance

# GENERAL RANGE

# SMART ANALOG MEASUREMENT SENSORS

Shop

## KEY ADVANTAGES

- High-resolution distance measurement
- Linear analog or digital output (IO-Link)
- One configurable and teachable switching output
- Stretch, delay, or one-shot timers
- Event-based alarms
  - Temperature monitoring
  - Counter functions
- Data Storage
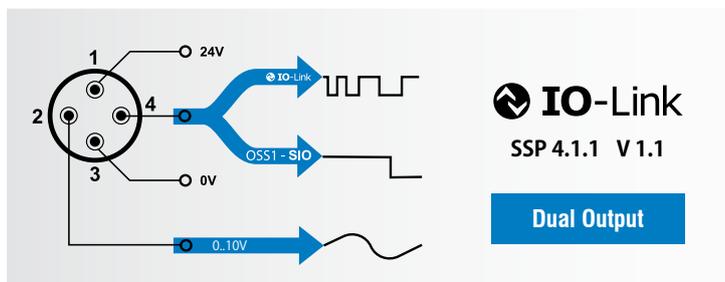
IO-Link
SSP 4.1.1   V 1.1
Dual Output

| Operating Distance (mm) | M5 emb. | *M8 emb. | *M12 emb. | P12 emb. | *M18 emb. | P20 emb. | *M30 emb. |
|---|---|---|---|---|---|---|---|
| | – | – | 6 | – | 10 | – | – |

*Also available with ACTIVSTONE® coating for weld spatter resistance

# SMART
# MEASUREMENT
## SENSORS

# PHOTO-
# ELECTRIC

## KEY ADVANTAGES

- High-resolution measurement
- Multiple sensing modes in a single sensor
- Two sensor output channels
- Extended measurement range vs Smart Inductive Sensors
- Advanced switching logic for more applications

# SMART PHOTOELECTRIC SENSORS

# PHOTOELECTRIC

**Shop**
Products

**Shop**
Features

## KEY ADVANTAGES

- Metal housing for harsh environments
- Object distance measurement
- Multiple detection modes in a single sensor
- ⌾ **IO**-Link data enables configurability and diagnostics, supporting seamless integration into IIoT applications
- Advanced switching logic encompasses more applications
- Enhanced 3-mode teach capability for increased flexibility
- ⌾ **IO**-Link smart profile with analog or digital dual output simplifies control-system integration and retrofit of existing installations
- Condition-based self-monitoring minimizes maintenance costs
- Drop-in place compatibility with standard C23/M18 Photoelectric portfolio
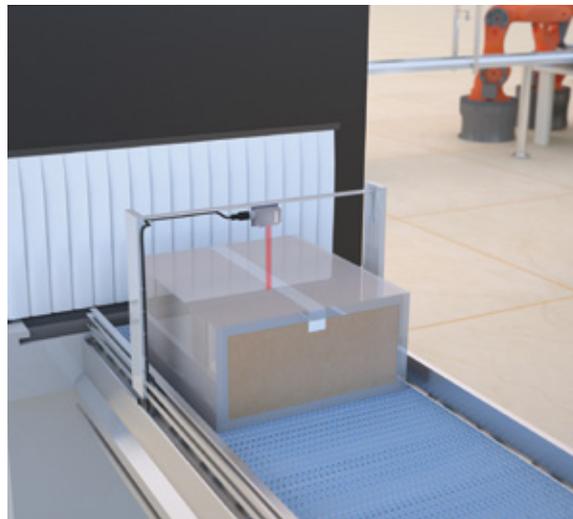
# SMART FEATURES

| Detection modes | Teach values | Timers | Dual output(s) | Counter | Temperature | Alarms |
|---|---|---|---|---|---|---|

| User data memory | Predictive maintenance features | Output signal linearization per target type (white/black) | User-configurable signal inversion and scaling function | SEM (Sensor Eco Mode) | Working domain configuration |
|---|---|---|---|---|---|

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## GENERAL RANGE

# SMART DIGITAL MEASUREMENT SENSORS

### KEY ADVANTAGES

- High-resolution distance measurement
- Linear digital output (◉ IO-Link)
- Two configurable outputs
  - Teachable switching signals
  - Output on Pin2 also configurable as an input or wire teach
- Stretch, delay or one-shot timers
- Event-based alarms
  - Temperature monitoring
  - Counter functions
- Data Storage
- Stainless steel V2A housing available

◉ **IO**-Link

**SSP 4.1.1   V 1.1**

**Dual Output**

| Operating Distance (mm) | C23 | M18 |
|---|---|---|
| | ‖‖ 10-200 | ‖‖ 10-150 |

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**Shop** 24/7

## GENERAL RANGE

# SMART ANALOG MEASUREMENT SENSORS

### KEY ADVANTAGES

- High-resolution distance measurement
- Linear analog or digital output (◉ IO-Link)
- One configurable and teachable switching output
- Stretch, delay, or one-shot timers
- Event-based alarms
  - Temperature monitoring
  - Counter functions
- Data Storage
- Stainless steel V2A housing available

◉ **IO**-Link

**SSP 4.1.1   V 1.1**

**Dual Output**

| Operating Distance (mm) | C23 | M18 |
|---|---|---|
| | ‖‖ 10-200 | ‖‖ 10-150 |

# POCKETCODR

## KEY ADVANTAGES

- Works seamlessly with all ⊘ IO-Link devices
- Configure and monitor devices from your smartphone or tablet
- Visualize device parameters in real time with live data charts
- Simplify complex configurations with intuitive, touch-friendly action widgets (Specific to Contrinex sensors)
- Share device settings effortlessly with your team for faster alignment

# POCKETCODR

# OVERVIEW

## No-code ◈IO-Link device configurator

### KEY ADVANTAGES

- PocketCodr app uses live data graphs to present ◈IO-Link process data on-screen and in real time
- PocketCodr's unique Action Widgets for Contrinex Smart Sensors eliminate need for coding skills
- Quickly configure and troubleshoot ◈IO-Link devices on-site, reducing downtime and streamlining setup

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## HIGHLIGHTS

### LIVE INTERACTIVE DATA GRAPHS

- View either routine process data or real-time event-driven changes of state

  Interactive data graphs shows exactly how an ◈IO-Link device is behaving in real time

### ACTION WIDGETS

- Simple configuration of Contrinex sensors without the need for programming skills

  Easy-to-understand in-app process features a series of intuitive, graphics-based screens

  Familiar controls include sliders, toggle buttons, and checkboxes, while helpful prompts guide users through the configuration

### TEAM COLLABORATION

- PocketCodr enables remote sharing of device configurations among team members

  Device configurations are backed-up securely and available on demand at any location

## AVAILABLE ACTION WIDGETS

### Sensors:

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More info | Switch Point Modes | Teach | Counter | Alarms | Outputs | Timers | Library | All Values

### RFID-Specific:

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More info | Read Tag | Content | Alarms | Outputs | Library | All Values

# POCKETCODR

## POCKETCODR FREE PLAN

Compatible with most ⬡ **IO**-Link devices (any brand)

### KEY ADVANTAGES

- Display live data charts
- Monitor live process data
- View and edit all ⬡ **IO**-Link parameters
- Send system commands
- Back up device configurations
- Load custom configurations

| Part Reference | Description |
|---|---|
| POC-CDR-M12 **PocketCodr Device** | No-Code ⬡ **IO**-Link-Device Configurator Tool |

## CONTRINEX SUITE PLAN

Ideal for Contrinex Smart Sensor users

### KEY ADVANTAGES

- Use action widgets for
  - Configuring sensor switching signal (multiple detection modes) and teach with our easy Action Widget
  - Contrinex RFID modules
  - Output, alarm, and timer configuration
- Back up, load and share with other users
- Use configurations shared by other users

| Part Reference | Description |
|---|---|
| SOFT-POC-CTXSUITE-1-CRD **Subscription Card- Contrinex Suite 1 Year** | This physical scratch card provides an activation code for a 1-year subscription to the **Contrinex Suite Plan** |
| START-POC-CTXSUITE-1 **Starter Kit Contrinex Suite 1 Year** | Contains the physical configuration device, and a physical scratch card, with an activation code for a 1-year subscription of the **Contrinex Suite Plan** |
| SOFT-POC-CTXSUITE-5-CRD **Subscription Card- Contrinex Suite 5 Years** | This physical scratch card provides an activation code for a 5-year subscription to the **Contrinex Suite Plan** |
| START-POC-CTXSUITE-5 **Starter Kit Contrinex Suite 5 Years** | Contains the physical configuration device, and a physical scratch card, with an activation code for a 5-year subscription of the **Contrinex Suite Plan** |

## POCKETCODR

# CONTRINEX APPLICATIONS PLAN

Provides access to application-specific action widgets

## KEY ADVANTAGES

- Ensure process stability and repeatability in complex applications
- Application-specific widgets such as the teach procedure for Contrinex Smart Double-Sheet Sensors
  - Easily configure and teach for different sheet materials and thickneses
- Back up, load and share with other users
- Use configurations shared by other users

| Part Reference | Description |
|---|---|
| SKU: SOFT-POC-APL-1-CRD<br>**Subscription Card – Contrinex Applications** | This physical scratch card provides an activation code for a 1-year subscription to the **Contrinex Applications plan** |

**Shop**

# PocketCodr

**TEACH**

## TEACH YOUR DOUBLE-SHEET DETECTION
## IN JUST 5 STEPS!

# SMART CAMERA 3D
## VISION MADE SIMPLE

# 3D SMART CAMERA

## KEY ADVANTAGES

- Real time 3D depth measurement camera
- Embedded intelligence
- Ready-to-use embedded **use cases** for measurement, completeness, and sizing
- No-code configuration of **use cases** with companion app
- First 3D camera with ◈ **IO**-Link output
- SIO, ◈ **IO**-Link or REST API over Ethernet operating mode
- No need for illumination or external PC
- Best suited for medium to large-sized objects

**IFF 2024-2025 PRIZE WINNER**
FRIBOURG / FREIBURG INNOVATION

◈ **IO**-Link

# 3D SMART CAMERA

## 3D SMART CAMERA

### Simple setup. Embedded intelligence. Instant results

**Shop**

- **Plug & Play Setup** – Configure in minutes with a no-code app on any device
- **Smart Vision** – Embedded intelligence delivers instant pass / fail results without a PC
- **Ready-to-Use Applications** – Preloaded embedded use cases for measurement, completeness, and sizing
- **Affordable Connectivity** – First 3D smart camera with ◉ **IO**-Link output and standard cabling
- **Built for Industry** – Reliable ±5 mm precision in industrial environments
- **Seamless Production Integration** – Save and reload configurations via ◉ **IO**-Link for uninterrupted workflows



## CONTRINEX 3D SMART CAMERA

A **compact and affordable 3D smart camera utilizing Time-of-Flight (ToF) technology** for real-time depth measurement with **embedded image processing.** No external illumination or processing computer is required. The camera captures 3D images in real time, applies internal algorithms, and evaluates scenes in real-time according to customer-defined parameters, providing a clear pass/fail result for each inspected piece.
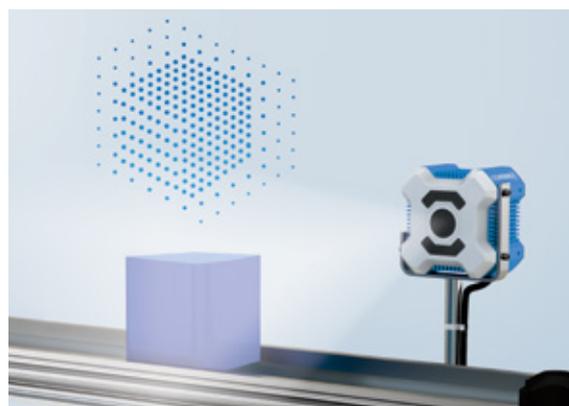


## TARGET APPLICATIONS

- Automated logistics and warehousing
- Production lines and quality checks
- Industrial assembly and completeness verification

## TARGET OBJECTS

Designed for medium to large-sized objects, the camera ensures reliable 3D measurements with an accuracy of up to ±5 mm, even in challenging environments when placed against a flat, low-glare background. Best results with matte or low-reflective surfaces; highly reflective or dark objects may reduce accuracy.

# SMART VISION CONFIGURATION APP

## SMART VISION APP

- **Cross-Platform** — Compatible with **iOS, Android, and Windows** devices
- **Wireless Connectivity** — Seamless communication between the 3D Smart Camera and the App
- **Live Image Streaming** — View real-time depth and amplitude images from the camera
- **Use Case Library** — Access pre-configured use cases for standard camera tasks
- **Guided Setup** — Step-by-step teaching process to configure and adapt use cases easily
- **Live Performance Monitoring** — Track and visualize results of configurations in real time
- **User Configuration Library** — Save, manage, and reload saved configurations



# EMBEDDED USE CASES

Designed for simplicity, the Contrinex 3D Smart Camera lets anyone master and fine-tune vision applications autonomously, without relying on a specialist.

The **Smart Vision App** provides a library of preconfigured use cases — predefined sequences of image-processing algorithms tailored to standard industrial tasks. Each use case is set up through an intuitive no-code wizard, allowing easy object teaching and individual parameter adjustment to achieve optimal performance in real-world conditions.

## DISTANCE MEASUREMENT

The camera provides accurate distance measurement in millimetres for multiple user-defined zones. Using the intuitive wizard of our **Smart Vision App**, users draw their zones on the screen and set the parameters for the measurement. The camera will measure the distance for each zone, enabling reliable positioning, clearance checks, and level control.
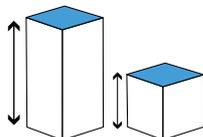
## COMPLETENESS CHECK

The camera verifies underfills or overfills of packaging. The **Smart Vision App** wizard lets users draw inspection zones and set different filling criterions. The camera ensures that each zone is filled correctly for reliable quality control.
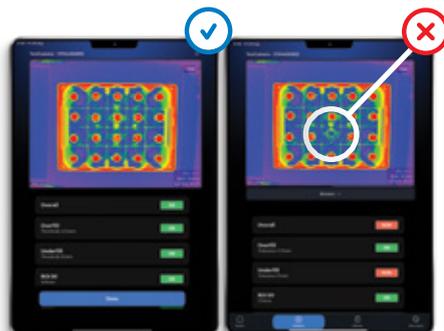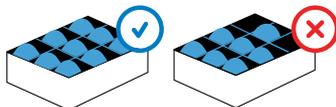
## OBJECT SIZING

The camera provides full measurement of objects in millimetres, including length, width, height, and orientation — for dependable size control and sorting of objects. Measurement options can be configured in the **Smart Vision App.**
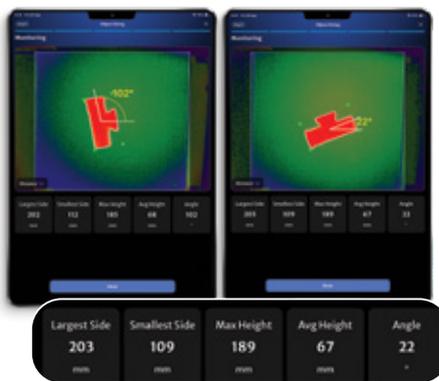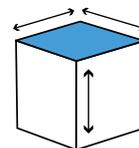
# 3D SMART CAMERA VISION SPECIFICATIONS

| Part Reference | Sensor Type | Resolution | Operating Range | Angle of Aperture | Laser Class |
|---|---|---|---|---|---|
| CAM-3TIQC-C99S-SN-A | Time of flight | 320 x 240 pixels (QVGA) | 300-3,500 mm | 37° x 27.9° (Diag 46.1°) | Class 1 |
| CAM-3TIQC-C99S-SF-A | | | | | |

| Field of View | | |
|---|---|---|
| Installation Distance (m) | X (m) | Y (m) |
| 0.5 | 0.33 | 0.25 |
| 1 | 0.67 | 0.5 |
| 2 | 1.34 | 1 |
| 3 | 2.01 | 1.51 |
| 3.5 | 2.34 | 1.76 |

# 3D SMART CAMERA HARDWARE SPECIFICATIONS

| Part Reference | CAM-3TIQC-C99S-SN-A | CAM-3TIQC-C99S-SF-A |
|---|---|---|
| Wireless Connection | Yes | |
| Connector 1 | Male M12 – 5 PIN: Power supply PNP / NPN ◆ IO-Link 1.1.4 | |
| Connector 2 | N/A | Female M12 4 Pin D-coded Fast-Ethernet |
| Operating Voltage | 18… 30 VDC | |
| Dimensions | 92 x 92 x 68 mm | |
| Mounting | 8 x M4 holes (4 x on each opposite side) | |
| Housing Materials | Aluminum, PMMA, PC, PA | |
| IP Rating | IP65, IP67 | |
| Operating Temperature | 0 ..+ 50°C | |

# MOUNTING PLATE FOR STANDARD CAMERA MOUNT THREADS

| | Part Reference | Material | Screws | Adaptor For |
|---|---|---|---|---|
| | ASU-0076-14U | Aluminum | 4 x M4 screws | 1 / 4-20-UNC thread |
| | ASU-0076-38U | | | 3 / 8-16-UNC thread |

All listed values are indicative and may be subject to change

BEST SUITED FOR MEDIUM TO LARGE-SIZED OBJECTS (EXCLUDING BLACK OR HIGHLY REFLECTIVE SURFACES) PLACED AGAINST A FLAT, LOW-GLARE BACKGROUND. MEASUREMENT ACCURACY UP TO ±5 MM

# INDUCTIVE SENSORS

## KEY ADVANTAGES

- Smallest self-contained miniature inductive sensors
- Practically indestructible Full Inox sensors for extreme conditions
- Weld-immune sensors and accessories featuring ACTIVSTONE® anti-spatter coating
- Full Inox sensors with Factor 1 on steel and aluminum
- Sensors with 4× standard operating distance
- Outstandingly durable sensors for high cyclic pressures
- (peak: 1000 bar / 14510 psi)
- Highly accurate analog output sensors for distance control
- Sensors to withstand high temperatures (up to 230°C / 446°F)
- Ecolab-approved sensors
- ◈ IO-Link

# INDUCTIVE SENSORS

# BASIC

## Excellence in standard applications

### KEY ADVANTAGES

- Exceptional price / performance ratio
- Excellent accuracy
- Outstanding switching-point stability
- Vibration and shock resistant
- ⊘ **IO**-Link or SIO-Mode switching sensor

### ⊘ **IO**-Link

| Housing Size mm | | Ø 6.5 | M8 | C8 | M12 | M18 | M30 | C44 | C12 |
|---|---|---|---|---|---|---|---|---|---|
| s_n mm | Classics | 1.5…2 ⊘ | 1.5…4 ⊘ | 1.5…2 ⊘ | 2…8 ⊘ | 5…12 ⊘ | 10…25 ⊘ | 15…40 ⊘ | 4 ⊘ |
| | Full Inox | – | 2 ⊘ | – | 3 ⊘ | 5 ⊘ | 10 ⊘ | – | |

# INDUCTIVE SENSORS

# SMART BASIC

## Excellence in higher level ⊘ **IO**-Link applications

### KEY ADVANTAGES

- Two teachable switching outputs
- Stretch, delay or one-shot timers
- Event-based alarms
  - Temperature monitoring
  - Counter functions
- ⊘ **IO**-Link

⊘ **IO**-Link
SSP 2.7   V 1.1

**Dual Output**
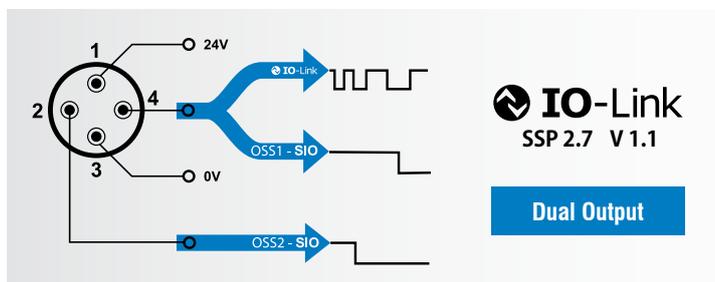
| Operating Distance (mm) | M5 emb. | *M8 emb. | *M12 emb. | P12 emb. | *M18 emb. | P20 emb. | *M30 emb. |
|---|---|---|---|---|---|---|---|
| | – | ‖‖3 | ‖‖‖4 | – | ‖‖‖‖‖‖‖8 | – | – |

*Also available with ACTIVSTONE® coating for weld spatter resistance

# INDUCTIVE SENSORS

# EXTRA DISTANCE

Long operating distance up to 4-times standard

## KEY ADVANTAGES

- Up to 4-times standard operating distance
- Exceptional price/performance ratio
- Excellent repeat accuracy
- Best in class temperature stability
- Special material detection (like carbon)
- Current and voltage analog output
- IO-Link



CONTRINEX
EXTRA DISTANCE
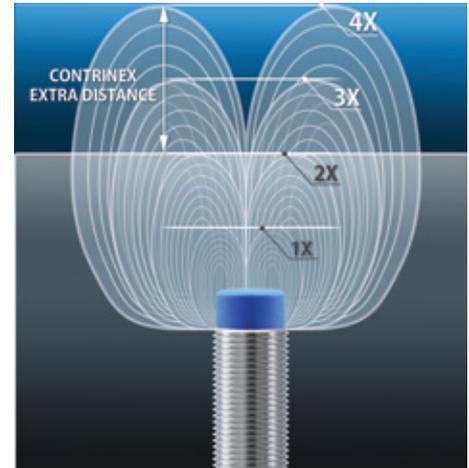
# OVERVIEW

## EXTRA DISTANCE Ø 6.5 TO M30

- Cylindrical form factor, from diameter 6.5 to M30
  Available in cable and connector versions
  Best in class sensing distances
  IO-Link

## EXTRA DISTANCE C8

- Cubic C8 form factor
  Available in cable and connector versions
  Easy to integrate
  IO-Link

### IO-Link

| Housing Size mm | Ø 6.5 | M8 | C8 | M12 | M18 | M30 |
|---|---|---|---|---|---|---|
| s_n mm  Extra Distance | 3 ⊘ | 3…6 ⊘ | 3 ⊘ | 6…10 ⊘ | 12…20 ⊘ | 22…40 ⊘ |

# INDUCTIVE SENSORS

## MINIATURE

### Full functionality, smallest size

**KEY ADVANTAGES**
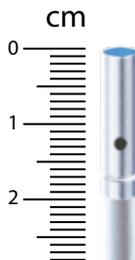
- Smallest self-contained inductive sensors
- Ideal for mounting where space is limited
- Outstanding temperature stability from −25°C to +70°C or +85°C for Full Inox types
- Sensor weight starting as low as 18 g
- High switching frequency up to 8k Hz
- ⊘ **IO**-Link
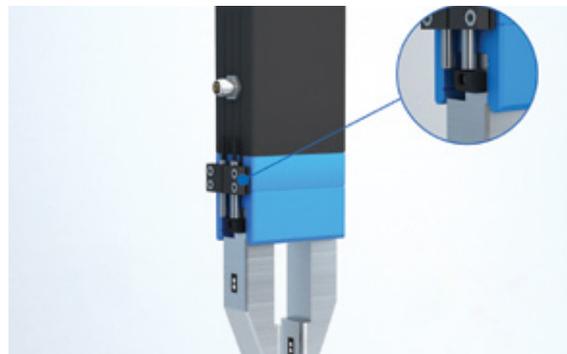
## OVERVIEW
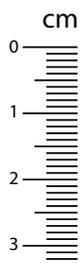
### MINIMINI

- Embeddable ultraminiature device
- Housing length 12 mm, 3 mm diameter, stainless steel V2A
- Increased operating distance: 1 mm
- High switching frequency up to 8,000 Hz
- ⊘ **IO**-Link

### FULL INOX MINIATURE

- Outstanding lifetime and robustness due to Condet® technology and Contrinex ASIC
- One-piece stainless steel housing (sensing face included)
- Long operating distances
- Factor 1 on steel and aluminum
- Pressure resistant up to 120 bar (1,740 psi)
- ⊘ **IO**-Link

### EXTRA DISTANCE

- Long operating distances, proven for more than 20 years across the world's largest installed base
- Outstanding lifetime and electromagnetic compatibility due to Condist® technology and Contrinex ASIC
- ⊘ **IO**-Link

### ⊘ **IO**-Link

| Housing Size mm | Ø 3 | M4 | Ø 4 | M5 | C5 |
|---|---|---|---|---|---|
| Classics | 0.6…1 ⊘ | 0.6…1 ⊘ | 0.8…15 ⊘ | 0.8…15 ⊘ | 0.8…15 ⊘ |
| Extra Distance | – | – | 2.5 ⊘ | 2.5 ⊘ | – |
| Full Inox | – | – | 3 ⊘ | 3 ⊘ | – |
| Extra Pressure | – | – | 0.6 ⊘ | – | – |
| High Pressure | – | – | – | 1 ⊘ | – |
| 2-wire | 0.6 | 0.6 | 0.8 | 0.8 | 0.8 |
| Extra Temperature | – | – | – | 0.8 ⊘ | – |

$s_n$ mm

# INDUCTIVE SENSORS

# EXTREME

## Extreme durability in harsh environments

**Shop** 24/7

### KEY ADVANTAGES

- One-piece stainless steel housing
- Mechanically and chemically extremely robust
- Corrosion resistant
- IP68 and IP69K, water resistant
- Pressure resistant up to 100 bar (1,451 psi)
- Factor 1 on steel and aluminum
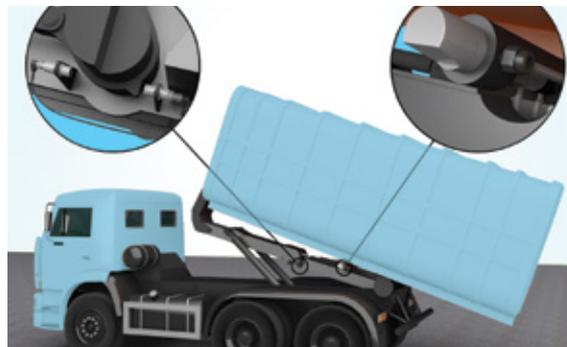
### IO-Link

| Housing Size mm | M8 | M12 | M18 | M30 | C23 |
|---|---|---|---|---|---|
| Full Inox ($s_n$ mm) | 3...6 | 2...15 | 5...20 | 10...40 | 7 |

# INDUCTIVE SENSORS

# ANALOG OUTPUT

## Analog output for distance control

**Shop** 24/7

### KEY ADVANTAGES

- Longest sensing ranges
- Best in class temperature stability
- Excellent repeat accuracy
- Resolution in $\mu$m range
- Current or voltage output
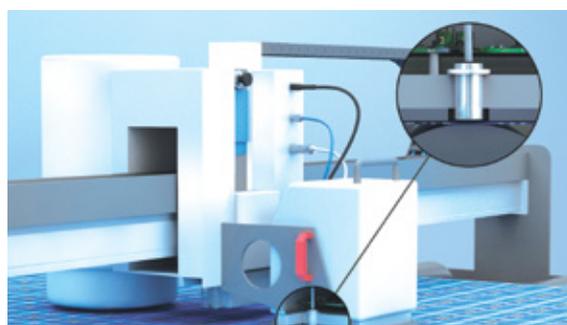
| Housing Size mm | C8 | M8 | M12 | M18 | M30 |
|---|---|---|---|---|---|
| Extra Distance ($s_n$ mm) | 0...4 | 0...4 | 0...6 | 0...20 | 0...40 |

Detailed data sheets for these products can be found on the Contrinex website **contrinex.com**

# INDUCTIVE SENSORS

## EXTRA PRESSURE

Pressure resistant up to 200 bar (2,901 psi)

### KEY ADVANTAGES

- Pressure resistant up to 200 bar (2,901 psi)
- Mechanically and chemically rugged
- Impervious: IP68
- Gas-tight sensing face
- Miniature devices

◈ **IO**-Link

| Housing Size mm | Ø 4 | Ø 6.5 | M8 |
|---|---|---|---|
| **Classics** | 0.6 ◈ | – | – |
| **Extra Distance** | – | 2.5 ◈ | 2.5 ◈ |

($s_n$ mm)

---

# INDUCTIVE SENSORS

## HIGH PRESSURE

Pressure resistant up to 500 bar (7,255 psi)

### KEY ADVANTAGES

- Highest operating (500 bar / 7,255 psi) and peak pressure (1000 bar / 14,510 psi) on the market
- Resistant to pressure cycles: 50 times longer lifetime under pressure than the market standard
- Gas-tight sensing face
- Extended temperature range −25°C (−13°F) … +100°C (+212°F)
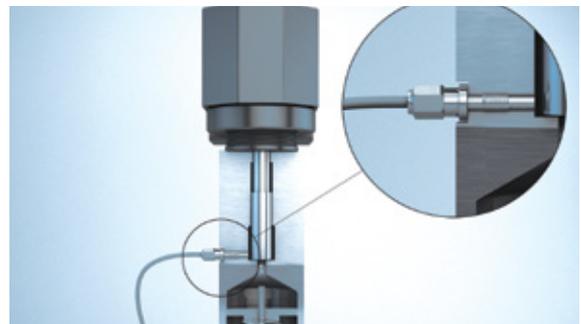
◈ **IO**-Link

| Housing Size mm | M5/P5 | M8/P8 | M12/P12 | M14/P20 |
|---|---|---|---|---|
| **Extra Distance** | 1 ◈ | 1.5 ◈ | 1.5… 2.5 ◈ | 3 ◈ |
| **Full Inox** | – | – | 1.5 ◈ | – |

($s_n$ mm)

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Detailed data sheets for these products can be found on the Contrinex website **contrinex.com**

# INDUCTIVE SENSORS

# EXTRA TEMPERATURE

Temperature resistant up to +120°C (+248°F)

## KEY ADVANTAGES

- Temperature resistant up to +120°C (+248°F)
- Excellent long term reliability
- ◈ **IO**-Link

◈ **IO**-Link

| Housing Size mm | M5 | M8 | M12 | M18 |
|---|---|---|---|---|
| | | | | |
| Classics ($s_n$ mm) | 0.8 ◈ | 4 ◈ | 2...5 ◈ | 5 ◈ |

# INDUCTIVE SENSORS

# HIGH TEMPERATURE

Temperature resistant up to +230°C (+446°F)

## KEY ADVANTAGES

- Highest long-term stability due to fully potted electronics
- Long sensor life
- Reliable sensing in high temperature applications
- Compact construction with integral amplifier for temperatures up to +180°C (+356°F)
- External amplifier module for temperatures up to +230°C (+446°F)

| Housing Size mm | M8 | M12 | M18 | M30 | M50 |
|---|---|---|---|---|---|
| | | | | | |
| Classics ($s_n$ mm) | 2 | 3 / 4 | 5 | 10 / 15 | 25 |

Detailed data sheets for these products can be found on the Contrinex website **contrinex.com**

# INDUCTIVE SENSORS

## 2-WIRE

Easy installation and high switching frequency

### KEY ADVANTAGES

- Sizes from Ø 3 mm to M30 and 5 × 5 mm
- DC and AC/DC types
- NAMUR types with switching frequencies up to 10,000 Hz
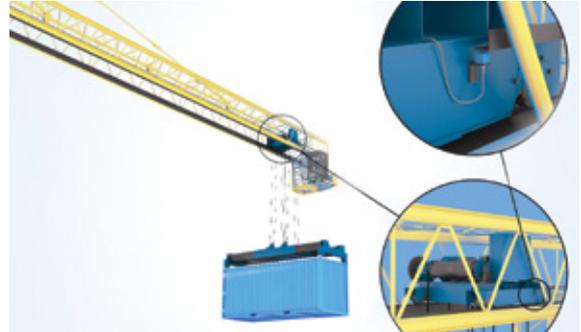
| Housing Size mm | Ø 3 | M4 | Ø 4 | M5 | C5 | Ø 6.5 | M8 | M12 | M18 | M30 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| Classics ($s_n$ mm) | 0.6 | 0.6 | 0.8 | 0.8 | 0.8 | 1.5 | 1.5/2.5 | 2/4 | 5/8 | 10/15 |
| Coated Ceramic Face | – | – | – | – | – | – | – | ✓ | ✓ | ✓ |

# INDUCTIVE SENSORS

## MARITIME

For ships, ports and offshore

### KEY ADVANTAGES

- GL approved, class DNV-GL-CG-0339
- Special EMC protection
- Resistant to corrosion and salt water
- Impervious, enclosure rating IP68 or IP69K
- Temperature range −25 … +85°C (−13 … +185°F)
- Full Inox types: one-piece stainless steel housing (V4A/AISI 316L), factor 1 on steel and aluminum
- Pressure-resistance available up to 500 bar (800 bar peak)
- IO-Link

IO-Link

| Housing Size mm | M10 | M12 | M18 | M30 | P12G | C23 |
|---|---|---|---|---|---|---|
| | | | | | | |
| $s_n$ mm Full Inox | – | 6 | 10 | 20 | 1.5 | 7 |
| Classics | 0.6 | – | – | – | – | – |

# INDUCTIVE SENSORS

# WELD-IMMUNE

## Revolutionary protection for long life

## KEY ADVANTAGES

- **Anti-spatter coating**
  ACTIVSTONE® coating is an abrasion proof, non-stick coating preventing weld-spatter accumulation

- **Weld-field immunity**
  Contrinex sensors are immune to magnetic interference from medium-frequency (MF) weld fields (current ≤ 15 kA) and 50 Hz weld fields (amplitude ≤ 40 mT)

- **Impact resistance**
  With one-piece stainless steel housings and Condet® technology, Full Inox sensors offer maximum impact resistance

- **Accessories**
  Featuring ACTIVSTONE® -coated mounting brackets, harsh-environment cables, and protective tubes for superior resistance against spatter and heat
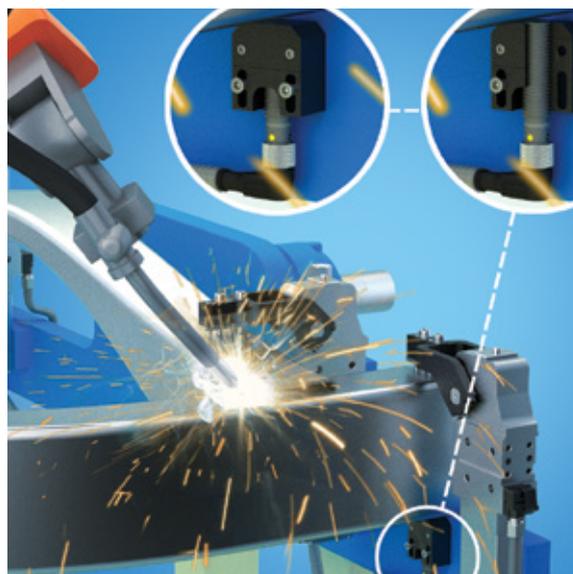
**IO**-Link

| Housing Size mm | M8 | M12 | M18 | M30 | | C23 | C44 | Miniature Flat Pack R81 |
|---|---|---|---|---|---|---|---|---|
| | | | | emb | non emb | | | |
| Full Inox | 3 | 6 | 10 | 16/40 | | 7 | 38 | 2 |
| Classics ($s_n$ mm) | 2 | 4 | 8 | 14 | | – | – | – |

# INDUCTIVE SENSORS

# WELD-IMMUNE

Revolutionary protection for long life

*Shop*

## NEW ARRIVALS

### PIGTAIL SERIES

▰ Enhanced flex ratio

Integrated LED in the connector

Also available with a PTFE protective tube

◉ **IO**-Link

ACTIVSTONE®
anti-spatter coating

### MINIATURE FLAT PACK

▰ Fully stainless steel housing

Precise 2 mm sensing distance

◉ **IO**-Link

ACTIVSTONE®
anti-spatter coating

### 2-WIRE

▰ Fully stainless steel housing

Ceramic face

ACTIVSTONE®
anti-spatter coating

### HARSH ENVIRONMENT CABLES

▰ High temperature resistance – withstands temperatures up to 200°C or 260°C for protective tube versions

IP69K protection

Versatile length options – ranging from 0.6 m to 10 m

### MOUNTING BRACKETS

▰ ACTIVSTONE® anti-spatter coating

Heavy-duty steel construction

Wide sensor range (M8 to M30)
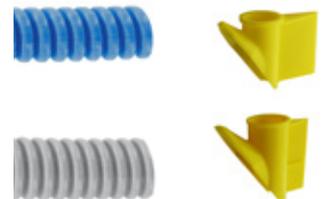
### PROTECTIVE TUBES + MOUNTING TOOLS

▰ High temperature resistance – withstands temperatures up to 260°C

Pre-slit design – allows quick and easy installation with the help of our mounting tools

# INDUCTIVE SENSORS

# CHIP-IMMUNE

## For the harshest machining environments

### KEY ADVANTAGES

- Detection not influenced by chips of steel, stainless steel, aluminum, brass, copper or titanium
- Detection of targets made of the above metals
- Robust, one-piece stainless steel housing, protection rating IP68 and IP69K
- Temperature range $-25\ldots+85°C$ $(-13\ldots+185°F)$
- Size M12, M18 and M30
- Operating distances up to 12 mm
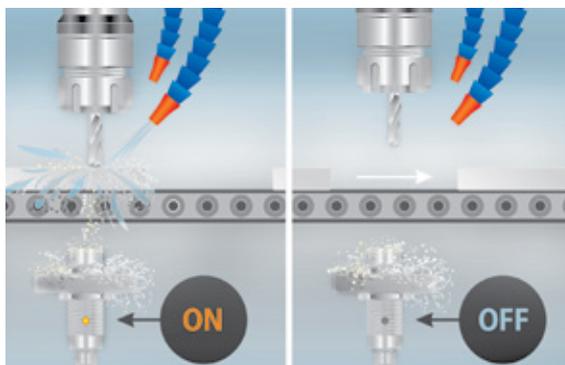
**IO**-Link

| Housing Size mm | M12 | M18 | M30 |
|---|---|---|---|
| | | | |
| Full Inox ($s_n$ mm) | 3 ⊙ | 5 ⊙ | 12 ⊙ |

# INDUCTIVE SENSORS

## WASHDOWN

Ecolab approved for harshest cleaning processes

### KEY ADVANTAGES

- Corrosion resistant
- Food safe
- IP68 / IP69K protection
- Extremely rugged Full Inox types: one-piece stainless steel housing, factor 1 on steel and aluminum, Ecolab approved

**◈ IO**-Link

| Housing Size mm | | M12 | M18 | M30 |
|---|---|---|---|---|
| s_n mm | Full Inox | 6...10 ◈ | 10...20 ◈ | 20...40 ◈ |
| | Classics | 2 ◈ | – | – |

# ULTRASONIC SENSORS

Ideal for liquid or granular targets

### KEY ADVANTAGES

- Precise control of position, distance, height and level
- Sensing ranges up to 6,000 mm
- Diffuse and reflex types
- Robust housings in food-grade stainless steel or plastic, IP67
- M18 in standard or short housing
- M30 in standard housing or with large front
- Various output types
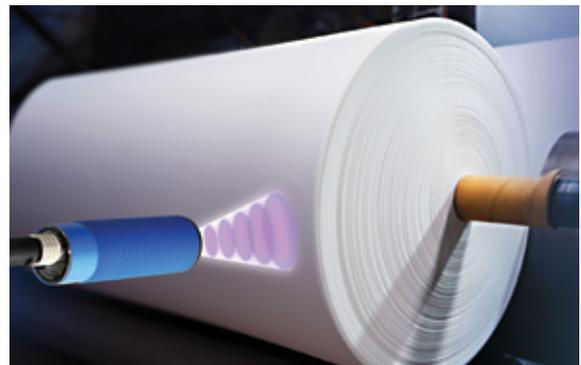
| SERIES Housing Size mm | | M18 Short body* | M18 Standard body* | M30 Standard body* | M30 Large head** |
|---|---|---|---|---|---|
| s_n mm | Diffuse | 300 / 1,200 | 900 / 2,000*** | 2,500 / 3,500 | 6,000 |
| | Reflex | 300 / 1,200 | 900 / 2,000 | – | – |

*Metal or plastic housing   **Plastic housing   ***◈ IO-Link version available

# PHOTO-ELECTRIC SENSORS

## KEY ADVANTAGES

- Complete C23 series with first-class sensing ranges
- Excellent background suppression sensors
- Smallest self-contained miniature sensors on the market
- Wide range of fiber-optic amplifiers, including ⊘ **IO**-Link
- Excellent color and contrast recognition sensors
- ⊘ **IO**-Link

# PHOTOELECTRIC SENSORS

## STANDARD

First-class performance
for general use

### KEY ADVANTAGES

- First-class sensing ranges
- Outstanding background suppression characteristics
- Light sources: red, infrared, laser and pinpoint LED
- ◉ **IO**-Link
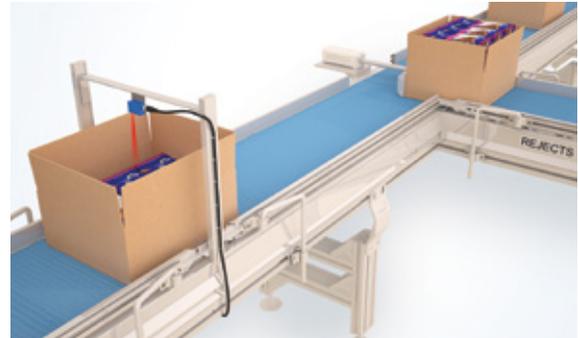
## OVERVIEW

### C23 SERIES

- Small plastic housing, 20 × 30 × 10 mm
- Excellent background suppression characteristics with pinpoint LED
- ◉ **IO**-Link interface available on PNP types
- Mutual interference immunity
- Versions available with stability alarm as second output
- Enclosure rating IP67, Ecolab approved

### M18P SERIES

- Short housing: M18 × 33 mm (cable version), M18 × 37 mm (connector version)
- Excellent background suppression characteristics with pinpoint LED
- ◉ **IO**-Link interface available on PNP types
- Mutual interference immunity
- Easy flush mounting
- Easy-to-mount special accessories for right-angle emission

◉ **IO**-Link

| SERIES Housing Size mm | M12M M12 | 1120 M12 | M18P M18 | M18M M18 | 1180 M18 | C23 □20x30x10 | 3030 □30x30x15 | 4050 □40x50x15 | C55 □50x50x23 |
|---|---|---|---|---|---|---|---|---|---|
| Diffuse | 800 ◉ | 300 | 1,200 ◉ | 1,200 ◉ | 250/600 ◉ | 1,500 ◉ | 600/1,200 | 1,200 | – |
| Reflex | 4,000 ◉ | 1,500 | 7,000 ◉ | 7,000 ◉ | 2,000 | 8,000 ◉ | 2,000/4,000 | 4,000 | – |
| Through-Beam | 10,000 ◉ | 10,000/50,000 | 30,000 ◉ | 30,000 ◉ | 20,000/50,000 | 30,000 ◉ | 6,000/12,000 | 50,000 ◉ | – |
| Background Suppression | – | – | 250 ◉ | 250 ◉ | 120 | 300 ◉ | 200 | 500 | – |

$s_n$ mm

# PHOTOELECTRIC SENSORS

# SMART BASIC

## KEY ADVANTAGES

- Two teachable outputs
- Stretch, delay or one-shot timers
- Data storage
- Temperature monitoring
- Counter functions
- Event-based alarms
- Stainless steel V2A housing
- IP69
- IO-Link
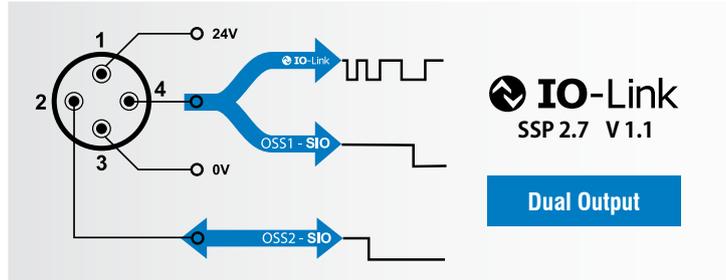


|  | Operating Distance (mm) | | | |
|---|---|---|---|---|
|  | Background Suppression | Diffuse | Reflex | Through Beam |
| **C23** | ||| 10...300 | |||| 5...1,500 | – | |||||||| 0...30,000 |
| **M18** | || 10...250 | ||| 5...1,200 | ||||| 0...7,000 | |||||||| 0...30,000 |

# PHOTOELECTRIC SENSORS

# MINIDIST

## Customizable and ready to integrate

**Shop** Without Housing

**Shop** With Housing

### KEY ADVANTAGES

- Miniature, photoelectric distance-measurement sensors
- Analog output 01...2.6 VDC + adjustable PNP light-on output
- Fully embeddable and suitable for easy integration with option for micro-housing
- Available with or without housing
- Enables distance-measurement for metallic and non-metallic targets
- Advanced optical and ASIC technology
- Pinpoint LED red light source with light spot 5 mm

IO-Link

| SERIES Housing Size mm | N01 without housing □14.45x7x4 | C02 with housing □22x5x6 |
|---|---|---|
|  |  |  |
| Distance ($s_n$ mm) | up to 35 | up to 35 |

# PHOTOELECTRIC SENSORS

# MINIATURE

## Smallest on the market

### KEY ADVANTAGES

**D04 / M05 / 0507 series**

- Rugged diffuse, background suppression or through-beam sensors in stainless steel V2A housing Ø 4 mm, M5 or 5 × 7 × 40 mm
- Sapphire glass lens, resistant to cleaning chemicals used in the pharmaceutical industry
- Teach available with extended types
- Accurate target detection due to focused red light beam
- Extremely compact self contained photoelectric sensors

**C12 series**

- Plastic housing, 13 × 21 / 27 × 7 mm
- Red pinpoint LED, small visible light spot
- Long sensing ranges
- Excellent background suppression up to 120 mm with 3-turn potentiometer

## OVERVIEW

### D04 / M05 SERIES

- Recessed mounting for added protection

  Housing in stainless steel V2A, Ø 4 mm (smooth barrel), M5 (threaded barrel)

  Calibrated sensing ranges

  Teach available with extended types

  High switching frequency

  Connection by cable or M8 pigtail

  Enclosure rating IP67

  **IO**-Link

### M05 SAPPHIRE

- Reliable detection of transparent or translucent objects

  Ideal for applications with reflective, moving or vibrating objects

  Recessed mounting for added protection

  Sapphire lens is resistant to chemical cleaning

  **IO**-Link and ASIC enable simple setup, teach-in and remote adjustment

## IO-Link

| SERIES Housing Size mm | D04/M05 Ø4/M5 | M05 Sapphire glass | 0507 □5x7x40 | C12 □13x21/27X7 |
|---|---|---|---|---|
| Light source | Red light | Infrared | Infrared | Red light |
| Diffuse | 12/24/60/120 | 30 | 20/50/90 | – |
| Background Suppression | 25 | – | – | 15/30/120 |
| Reflex | – | – | – | 3,000 |
| Through-Beam | 600 | – | – | 2,000 |

# PHOTOELECTRIC SENSORS

## DISTANCE

High precision and direct digital transmission

### KEY ADVANTAGES

**C23 Distance measuring sensors**

- Two distance measurement ranges: 20…80 mm and 30…200 mm
- Housing 20 × 34 × 12 mm
- High precision and repeatability
- Settable analog range for optimum distance measurement
- Enclosure rating IP67 / IP69K

**C55 distance measuring sensors**

- Distance measurement up to 5,000 mm
- Housing 50 × 50 × 23 mm
- High precision and repeatability
- Settable analog range for optimum distance measurement
- Enclosure rating IP67 / IP69K, Ecolab approved

**IO**-Link

| SERIES Housing Size mm | C23 □20x34x12 | C55 □50x50x23 |
|---|---|---|
| Short Range | 80 / 100 / 200 | – |
| Medium Range | – | 5,000 |

# PHOTOELECTRIC SENSORS

## FIBER-OPTIC

Reliable short and long-range sensing

### KEY ADVANTAGES

**Fiber-optic sensors**

- Robust 3030 series (30 × 30 × 15 mm)
- DIN-rail mounted 3060 series (31 × 60 × 10 mm) suitable for multiple-sensor applications
- Distance setting by potentiometer or teach-in

**Fiber**

- Large selection of types, including cylindrical light beam, multi-beam, liquid-level monitoring, low-and high-temperature
- Diffuse or through-beam sensing, axial or radial
- Synthetic fibers with bending radii from 2 mm, suitable for cutting on-site
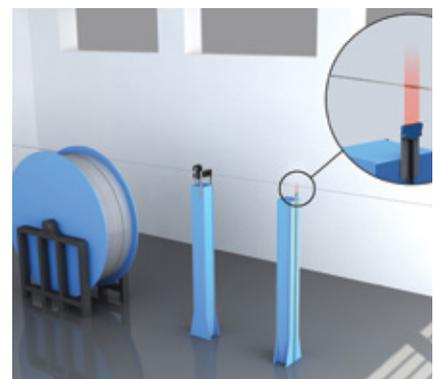
**IO**-Link

| SERIES Housing Size mm | 3030 □30x30x15 | 3060 □30x60x10 |
|---|---|---|
| Fiber-Optic Amplifier ($s_n$ mm) | 60 / 120 | 200 |
| Fibers | Plastic | Glass |

# PHOTOELECTRIC SENSORS

# TRANSPARENT OBJECT

## Outstanding reliability and ease of adjustment

*Shop*

### KEY ADVANTAGES

- Light sources: UV and red for reliable detection
- **IO**-Link interface available on PNP types
- Versions available with stability alarm as second output
- Adjustment by teach or **IO**-Link
- Mutual interference immunity
- Enclosure rating IP67, Ecolab approved
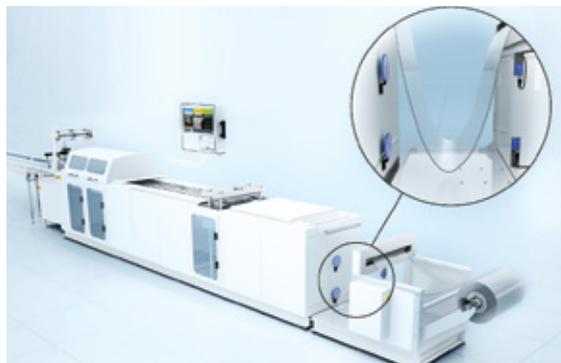
# OVERVIEW

### C23 TRANSPARENT UV

◢ Ideal for the presence control of all transparent and translucent materials thanks to strong absorption of UV light

Easy sensor set-up, even for thinnest transparent objects

Low environmental sensitivity minimizes threshold adjustments and maximizes uptime

Autocollimated, polarized UV light beam eliminates blind zone, allowing detection of targets close to the sensor or through a small notch

Sensing range up to 1,200 mm based on the reflex operating principle

### C23 TRANSPARENT STANDARD

◢ Red polarized light source

Calibrated sensing range up to 5,000 mm operating distance

Sensitivity adjustment via teach button, **IO**-Link or potentiometer

Highly favorable price-performance ratio

## **IO**-Link

| SERIES<br>**Housing Size mm** | **C23 UV Light**<br>☐20x30x10 | **C23 Red Light**<br>☐20x30x10 |
|---|---|---|
| | | |
| **Reflex ($s_n$ mm)** | 1,200 | 5,000 |

# PHOTOELECTRIC SENSORS

## COLOR AND CONTRAST

Excellent resolution for smallest variations

### KEY ADVANTAGES

- Rugged housing, 40 × 50 × 15 mm
- Connector adjustable at 0°, 45° and 90°
- 5 switching tolerance levels
- **IO**-Link

## OVERVIEW

### COLOR SENSORS

◢ 3 color teach channels with independent outputs

Five selectable tolerance levels for each output enable sensors to recognize or ignore even the smallest variations of color

High switching frequency: up to 4 kHz

### CONTRAST SENSORS

◢ Detection of very small print marks thanks to a narrow, collimated light spot

RGB emission technology with best emission color automatically selected

Five tolerance levels ensure accurate detection and positioning, even when contrast differences are minimal.

High switching frequency: up to 10 kHz

**IO**-Link

### **IO**-Link

| SERIES<br>**Housing Size mm** | 4050 Color<br>□40x50x15 | 4050 Contrast<br>□40x50x15 |
|---|---|---|
| | | |
| Diffuse ($s_n$ mm) | 40 | 12 ◉ |

# PHOTOELECTRIC SENSORS

## LIGHT GRIDS

Fast detection, counting and measurement

### KEY ADVANTAGES

**Shop** 24/7

**Detection grids**

- Fast response time 0.8 ms … 4.8 ms
- Ideal for detection and counting of even the smallest objects
- Resolution: 0.9 mm, 2 mm, 4 mm, 8 mm or 25 mm
- Detection height: up to 2,010 mm

**Measurement grids**

- Ideal for position and dimension control
- Center beam spacing: 5 mm or 12 mm
- Analog output 0–10 V or 4–20 mA
- Measurement height: up to 1,418 mm

| SERIES Housing Size mm | | DGI □40x20.5xH | MGI □40x20.5xH |
|---|---|:---:|:---:|
| $s_n$ mm | Detection Grids | 8,000 | – |
| | Measurement Grids | – | 4,000 |

# PHOTOELECTRIC SENSORS

## FORK SENSORS

Robust space-saving design offers versatility and simplicity

### KEY ADVANTAGES

**Shop** 24/7

- High resolution: Ø 0.1–0.2 mm
- High frequency up to 14 kHz
- 4 sensor modes: Standard, High Resolution, Power, Speed
- ⊘ **IO**-Link
- Sensitivity adjustment allowing detection of transparent objects

- Compact design accommodates photoelectric emitter and receiver in a single housing
- Push-pull output keeps inventory costs down while allowing exceptional flexibility
- Robust space-saving housing ensures precise alignment requiring no on-site adjustment

⊘ **IO**-Link

| SERIES Housing Size mm | U 10 □25x45x10 | U 20 □40x50x10 | U 30 □50x60x10 | U 40 □60x70x10 | U 50 □70x80x10 | U 80 □100x80x10 | U 100 □120x80x10 | U 120 □144x90x12 |
|---|:---:|:---:|:---:|:---:|:---:|:---:|:---:|:---:|
| Through-Beam ($s_n$ mm) | 10 ⊘ | 20 ⊘ | 30 ⊘ | 40 ⊘ | 50 ⊘ | 80 ⊘ | 100 ⊘ | 120 ⊘ |

Detailed data sheets for these products can be found on the Contrinex website **contrinex.com**

# SAFETY
## LIGHT CURTAINS AND SENSORS

### KEY ADVANTAGES

- Finger-, hand- and body-access resolutions
- Operating range from 0.25…50 m
- Protective heights from 142…1827 mm
- Category 2 or 4 according to EN/ISO 13849-1
- Certified TÜV, CE and UL
- IP65 and IP67
- Permanent autocontrol
- 2 channel selection
- Low power consumption
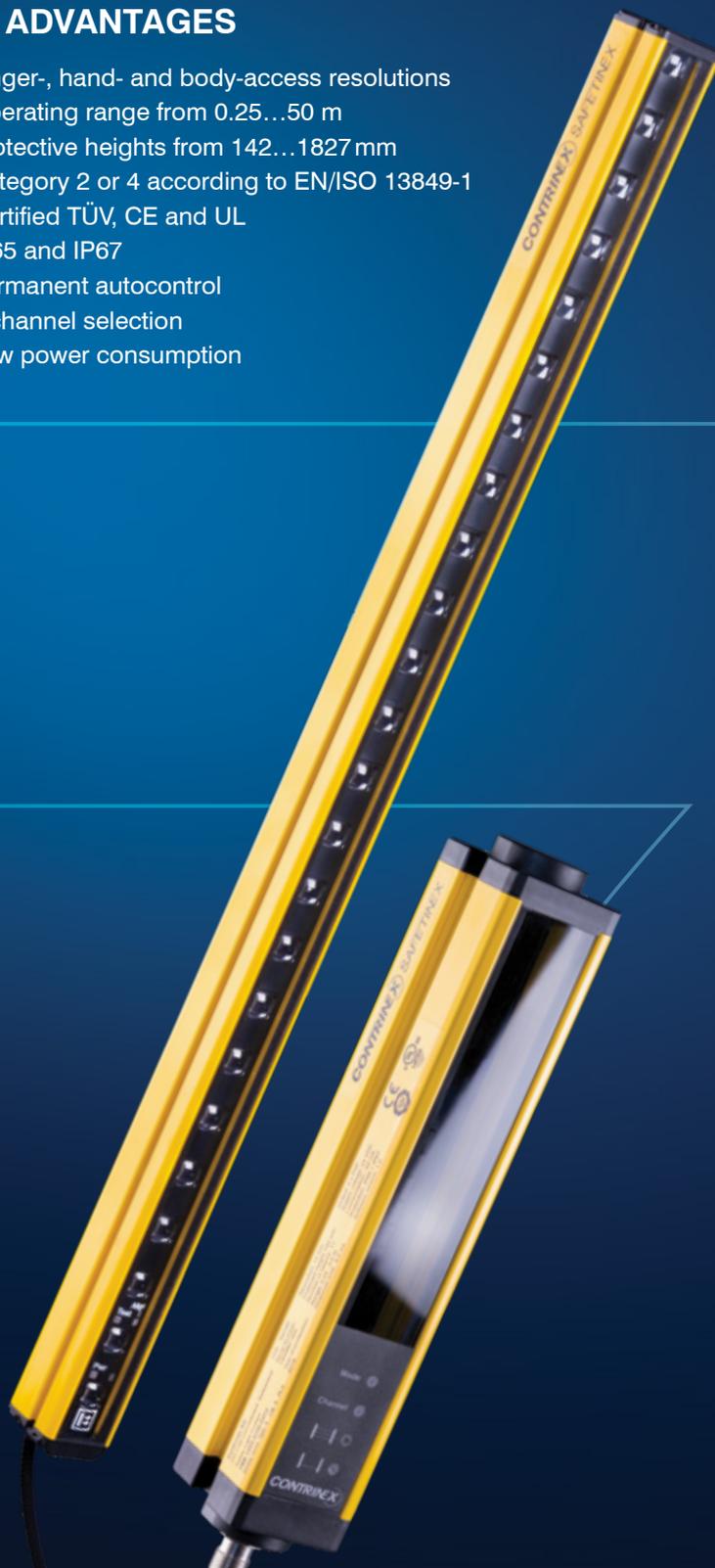
# SAFETY LIGHT CURTAINS

## BASIC SLIM

### Excellent price / performance ratio

Type 2 light curtains from the BASIC SLIM range are TÜV, CE and UL-certified according to IEC 61496-1 and -2 and ISO 13849-1. Protective heights range from 170 to 1,610 mm with permanent auto control and low power consumption. The slim, aluminum housing (26 x 26 mm) enables blind-zone free installation. Connection is via an integral 5-pin M12 pigtail.

Shop 24/7

| Resolution mm | Housing | Category | KEY ADVANTAGES |
|---|---|---|---|
| 30 | Slim | Cat. 2 | • No blind zone<br>• Protective height: from 170 mm to 1,610 mm<br>• Operating range: 0.25 to 8 m |

---

**Bluetooth®**

# SAFETY LIGHT CURTAINS

## EXTENDED SLIM

### Wireless Configuration ( Bluetooth®)

Type 4 light curtains from the EXTENDED SLIM range are TÜV, CE and UL certified according to IEC 61496-1/2, IEC 61508-1/2/3 and ISO 13849-1. Protective heights range from 170 to 1,610 mm with integrated EDM*, restart interlock and beam coding. Since EDM includes a relay monitoring function, users can also avoid the cost of wired relays. Wireless configuration is easy via the free Bluetooth® smartphone app. No additional tool or cable is required.

Shop 24/7

| Resolution mm | Housing | Category | KEY ADVANTAGES |
|---|---|---|---|
| 14 | Slim | Cat. 4 | • No blind zone<br>• Beam coding (3 channels), EDM, start and restart interlock configurable functions<br>• Wireless configuration through Bluetooth® |
| 30 | Slim | Cat. 4 | • No blind zone<br>• Beam coding (3 channels), EDM, start and restart interlock configurable functions<br>• Wireless configuration through Bluetooth® |

*External Device Monitoring

# SAFETY LIGHT CURTAINS

# BASIC STANDARD

## Excellent price / performance ratio

Type 4 light curtains from the BASIC STANDARD range are TÜV, CE and UL-certified according to IEC 61496-1 and -2 and ISO 13849-1. Protective heights range from 142 to 1,827 mm with permanent auto control and low power consumption. The aluminium housing is standard in size (42 x 48 mm) and connection is via an integral 5-pin M12 connector.

| Resolution mm | Housing | Category | KEY ADVANTAGES |
|---|---|---|---|
| 14 | Standard | Cat. 4 | • Max. operating range 3.5 m<br>• Operating temperature -35…+60°C<br>• IP65, IP67 |
| 30 | Standard | Cat. 4 | • Max. operating range 12 m<br>• Operating temperature -35…+60°C<br>• IP65, IP67 |

# SAFETY LIGHT CURTAINS

# ACCESS CONTROL BARRIERS

## Excellent price / performance ratio

Type 4 light curtains from the ACCESS CONTROL BARRIERS range are TÜV, CE and UL-certified according to IEC 61496-1 and -2 and ISO 13849-1. Protective heights range from 832 to 1,532 mm with permanent auto control and low power consumption. Beam gap comes in 300, 400 or 500 mm (3 to 6 beams). The aluminium housing is standard in size (42 × 48 mm) and connection is via an integral 5-pin M12 connector.

| Resolution mm | Housing | Category | KEY ADVANTAGES |
|---|---|---|---|
| 300<br>400<br>500 | Standard | Cat. 4 | • Max. operating range 50 m<br>• Operating temperature -35…+60°C<br>• IP65, IP67 |

*External Device Monitoring

# SAFETY SENSORS

# MAGNETIC & RFID SENSORS

## Non-contact monitoring of doors

MAGNETIC and RFID safety sensors are ideal for monitoring guard doors, hoods or covers. Their compact housings with standard fixing are particularly suitable for washdown applications in the food industry. RFID types are also ideal for multi-sensor applications, such as long assembly lines. Thanks to non-contact operation and coded communication, service life is very long.

**Shop** 24/7

| | | Principle | Housing mm | Category | KEY ADVANTAGES |
|---|---|---|---|---|---|
| **Magnetic** | | | 36 × 26 × 13 | up to Cat. 4 | • Magnetically coded, ISO 14119 type 4<br>• Detection through metal plate possible<br>• IP6K9K, Ecolab |
| | | | 88 × 25 × 13 | up to Cat. 4 | • Magnetically coded, ISO 14119 type 4<br>• Detection through metal plate possible<br>• IP6K9K, Ecolab |
| **RFID** | | 1010 011 0111 | 36 × 26 × 13 | Cat. 4 | • RFID coded, ISO 14119 type 4<br>• Cascadable up to 30 units<br>• EDM and diagnostic function<br>• IP6K9K, Ecolab |

# SAFETY ACCESSORIES

# RELAY & MOUNTING BRACKETS

**Shop** 24/7

| | | Housing mm | Category | KEY ADVANTAGES |
|---|---|---|---|---|
| **Relay** | | 22.5 × 99 × 114.5 | Cat. 4 | • Performance Level (PL) e and category 4 according to EN/ISO 13849-1<br>• Manual or automatic restart<br>• Short response time |
| **Mounting Brackets** | | Top/bottom mounting brackets | | • Synthetic mounting brackets<br>• Suitable for SLIM light curtains<br>• Pair of brackets supplied with each light curtain |
| | | Side mounting brackets | | • Metal mounting brackets<br>• Suitable for SLIM light curtains |
| | | Side/end mounting brackets | | • Metal mounting brackets<br>• Suitable for SLIM light curtains |

# RFID
## LOW AND HIGH FREQUENCY

### KEY ADVANTAGES

**Highlights**
- ⊘ **IO**-Link Read/Write Modules
- Low- and high-frequency (LF and HF) systems networkable on ContriNET or on conventional PC using USB connection
- Widest fieldbus coverage on market

**LF system**
- All-metal housings, IP68 and IP69K
- Food safe and saltwater resistant (316L/V4A)
- All tags embeddable in metal

**HF system**
- ISO/IEC 15693 compatible
- Fast data transfer time
- User-defined password protection features

**NEW**
- HF Read/Write Modules with ⊘ **IO**-Link
- HF tags for high temperatures
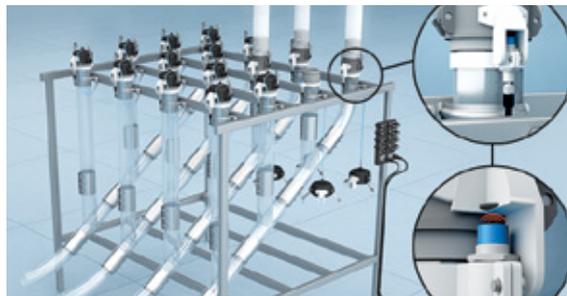- LF and HF Read/Write Modules with USB connection

# RFID

# READ/WRITE MODULES

## IO-Link

Ideal for Industry 4.0 solutions, IO-Link read/write modules (RWMs) combine two of the key communication standards in one device: ISO 15693 at the read-write head for communication with tags and ISO 61131-9 at the S12 connector for communication with the control system. Their simplified, plug-and-play installation ensures easy, cost-effective integration.

| | | Frequency | Housing Size mm | Read/Write Distance mm | KEY ADVANTAGES |
|---|---|---|---|---|---|
| IO-Link | RWM | HF | M18 | 0…42 | • IO-Link protocol V1.1 with two operating modes:<br>• IO-Link device: UID, Read, Write, Auto-Read and Auto-Write commands selectable from the RWM process data |
| | | | M30 | 0…60 | • Stand-alone SIO: Tag presence / memory data comparison / RWM Alarms |
| | | | C44 | 80 | • Temperature range −25 … +80°C (−13 … +176°F), IP67, integral S12 connector |

## USB AND BASIC

USB Read/Write Modules are an ideal solution for hardware connection to a PC computer, as they provide an USB output on their integral connector cable (2 m).

Read/Write Modules from the BASIC range provide cost-effective solutions with ISO/IEC 15693-15693-compatible HF trasnponders or proprietary LF trasnponders (please view page 46) Data protection is excellent, transfer time is fast all components use the same CONTRINET protocol with an RS-485 or USB-layer.

| | | | Frequency | Housing Size mm | Read/Write Distance mm | KEY ADVANTAGES |
|---|---|---|---|---|---|---|
| USB | RWM | | LF | M18 | 0…36 | • ContriNET USB protocol for direct connection to PC (non-networkable) |
| | | | | M30 | 0…41 | • Compatible with ContriNET BASIC support tools and DEMO software; DLL for easy development of custom solutions |
| | | | HF | M18 | 0…31 | • Temperature range −25 … +70°C (−13 … +158°F), IP67, integral USB A male connector |
| | | | | M30 | 0…60 | |
| | Interface | | LF HF | 67 x 66 x 28 | | |
| Basic | RWM | | LF | M18 | 0…36 | • ContriNET RS-485 protocol with outstanding fieldbus coverage |
| | | | | M30 | 0…41 | • LF and HF RWMs can be daisy-chained on same network |
| | | | HF | M18 | 0…31 | • Temperature range −25 … +80°C (−13 … +176°F), IP67, integral S12 connector |
| | | | | M30 | 0…60 | |
| | | | | C44 | 0…80 | |

# EXTREME AND WASHDOWN READ/WRITE MODULES

Read/write modules (RWMs) from these two ranges feature robust, full-metal, stainless steel construction. They offer outstanding performance in metallic environments and are insensitive to dirt and metal chips. For the highest mechanical and chemical resistance, WASHDOWN components in food-grade stainless steel (V4A/AISI 316L) are fully sealed and laser welded. They function reliably when immersed in fluids such as water or oil.



| | | | Frequency | Housing Size mm | Read/Write Distance mm | KEY ADVANTAGES |
|---|---|---|---|---|---|---|
| Extreme | RWM | | LF | M18 | 0…12 | • ContriNET RS-485 protocol with outstanding fieldbus coverage<br>• All-metal, stainless steel housing (V2A/AISI 304) resists corrosion, impact and abrasion<br>• Temperature range −25 … +80°C (−13 … +176°F), IP68 & IP69K, integral S12 connector |
| | | | | M30 | 0…12 | |
| Washdown | RWM | | LF | M18 | 0…12 | • ContriNET RS-485 protocol with outstanding fieldbus coverage<br>• All-metal housing in food-grade stainless steel (V4A AISI 316L) resists saltwater, solvents, corrosion, impacts and abrasion<br>• Temperature range −40 … +125°C (−40 … +257°F), IP68 & IP69K, integral S12 connector |
| | | | | M30 | 0…12 | |

## RFID

# BASIC TAGS

Our RFID tagging solutions offer a cost-effective and durable option for a wide range of applications. Featuring passive High Frequency (HF) and Low Frequency (LF) tags that require no batteries, these tags are resistant to dirt and environmental wear. The LF tags can be embedded in metal, making them ideal for industrial settings. Combined with compact USB and Basic Read/Write modules, this system delivers reliable performance with minimal maintenance.

Shop



| | | | Frequency | Housing Size mm | Read/Write Distance mm | KEY ADVANTAGES |
|---|---|---|---|---|---|---|
| Basic | Transponder | | LF | Ø 20 | 0…28 | • HF and LF passive tags, no battery required<br>• LF tags embeddable in metal<br>• Insensitive to dirt<br>• Temperature range −40 … +125°C (−40 … +257°F)<br>• IP67 |
| | | | | Ø 30 | 0… 29 | |
| | | | | Ø 50 | 0…41 | |
| | | | HF | Ø 9 | 0…14 | |
| | | | | Ø16 | 0…30 | |
| | | | | Ø 20 | 0…34 | |
| | | | | Ø 30 | 0…45 | |
| | | | | Ø 50 | 0…67 | |

# RFID

# HIGH TEMPERATURE TAGS

Designed for environments up to 180°C or 250°C, HIGH TEMPERATURE tags offer exceptional longevity and a thermal cycling reliability of 1,000 hours (or 1,000 cycles). Tags are insensitive to dirt and provide 128 and 2,048 Bytes of user memory. As passive devices, no battery or other power source is required. Housings are impervious (IP68 & IP69K).

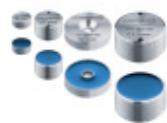| | | Frequency | Housing Size mm | Read/Write Distance mm | KEY ADVANTAGES |
|---|---|---|---|---|---|
| High Temp. | Transponder | HF | Ø 26 | 0…31 | • HF tag RTH-D26RV-EC0: −25 … +180°C (-13 … +356°F), embeddable in metal |
| | | | Ø 50 | 0…42 | • HF tags RTP-0502-062: −25 … +250°C (-13 … +482°F), 100% silicone-free |

# RFID

# EXTREME AND WASHDOWN TAGS

Embeddable tags from these two ranges feature robust, full-metal, stainless steel construction. They offer outstanding performance in metallic environments and are insensitive to dirt and metal chips. For the highest mechanical and chemical resistance, WASHDOWN components in food-grade stainless steel (V4A/AISI 316L) are fully sealed and laser welded. They function reliably when immersed in fluids such as water or oil.

| | | Frequency | Housing Size mm | Read/Write Distance mm | KEY ADVANTAGES |
|---|---|---|---|---|---|
| Extreme | Transponder | LF | Ø 10 | 0…17 | • LF passive tags, no battery required |
| | | | Ø 16 | 0…19 | • All-metal, stainless steel housings (V2A/AISI 304) resist corrosion, impact and abrasion |
| | | | M16 | 0…13 | • Temperature range −40 … +95°C (−40 … +203°F) |
| | | | Ø 26 | 0…26 | • IP68 & IP69K (when embedded in metal) |
| | | | M30 | 0…23 | |
| Washdown | Transponder | LF | Ø 10 | 0…13 | • LF passive tags, no battery required |
| | | | Ø 16 | 0…19 | • All-metal housings in food-grade stainless steel (V4A/AISI 316L) resist saltwater, solvents, corrosion, impacts and abrasion |
| | | | M16 | 0…13 | |
| | | | Ø 26 | 0…26 | • Temperature range −40 … +125°C (−40 … +257°F) IP68 & IP69K |
| | | | M30 | 0…23 | |

# CONNECTIVITY

## KEY ADVANTAGES

- Comprehensive cable and connector program
- IP69K and Ecolab-certified cables for the food and beverage industry (on demand)
- UL-approved cables and connectors
- Cables with straight or right-angle sockets
- Distribution boxes
- Field-attachable connectors
- T-connectors (on demand)

# CONNECTIVITY

# INDUCTIVE & PHOTOELECTRIC CABLES

**Shop** 📱

## CABLES WITH OPEN ENDED WIRE

| Connector | Pins | Config. | Cable Material | Cable Length | Wire | Part Reference |
|---|---|---|---|---|---|---|
| **M12** | 3 | Straight, right-angled | PUR, PVC | 2 to 20 m | 3 | S12-3Fxx-xxx |
| | 4 | Straight, right-angled | PUR, PVC, TPE-S | 0.3 to 25 m | 4 | S12-4Fxx-xxx |
| | 5 | Straight, right-angled | PUR, PVC | 0.6 to 25 m | 5 | S12-5Fxx-xxx |
| | 8 | Straight, right-angled | PUR, PVC | 2 to 15 m | 8 | S12-8Fxx-xxx |
| **M8** | 3 | Straight, right-angled | PUR, PVC | 0.3 to 15 m | 3 | S08-3Fxx-xxx |
| | 4 | Straight, right-angled | PUR, PVC | 0.6 to 10 m | 4 | S08-4Fxx-xxx |

## CABLES WITH END CONNECTOR

| Connector | Pins | Config. | Cable Material | Cable Length | Connector End | Pins | Part Reference |
|---|---|---|---|---|---|---|---|
| **M12** | 3 | Straight, right-angled | PUR | 2 to 5 m | M12 | 3 | S12-3Fxx-xxx-12MG |
| | 4 | Straight, right-angled | PUR, PVC, TPE-S | 0.3 to 10 m | M12 | 4 | S12-4Fxx-xxx-12MG |
| | 8 | Straight, right-angled | PUR | 2 to 5 m | M12 | 8 | S12-8Fxx-xxx-12MG |
| **M8** | 4 | Straight, right-angled | PUR, PVC | 0.6 to 10 m | M12 | 4 | S08-4Fxx-xxx-12MG |
| | 3 | Straight, right-angled | PUR, PVC | 0.3 to 5 m | M8 | 3 | S08-3Fxx-xxx-08MG |
| | 3 | Straight, right-angled | PUR, PVC | 0.6 to 10 m | M12 | 3 | S08-3Fxx-xxx-12MG |

## HARSH ENVIRONMENT WELD-IMMUNE CABLES

SUPER GRADE                    ALPHA GRADE

Designed for extreme welding conditions – Alpha Grade cables withstand up to 200°C, while Super Grade cables, with protective tubing, resist temperatures as high as 260°C.

| Connector | Pins | Config. | Cable Material | Cable Length | Connector End | Pins | Part Reference |
|---|---|---|---|---|---|---|---|
| **SUPER GRADE** | | | | | | | |
| **M12** | 5 | Straight, right-angled | FPE + PTFE tube | 0.6 to 10 m | M12 | 5 | S12-5FFx-xxx-NPWN-12MG |
| **ALPHA GRADE** | | | | | | | |
| **M12** | 5 | Straight, right-angled | FPE | 0.6 to 10 m | M12 | 5 | S12-5FFx-xxx-NBWN-12MG |

# ACCESSORIES

## KEY ADVANTAGES

- User-friendly standard portfolio
- Sensor testers for fast field checks
- Sensor mounting clamps
- Bases for mounting clamps
- Mechanical stops
- Amplifiers for 3-wire and NAMUR sensors (on demand)

# ACCESSORIES

**Shop**

## ◢ MOUNTING BRACKETS

### UNIVERSAL (PLASTIC)

ASU-000X-XXX

ASU-1000-000

ASU-2000-000

Available in ∅ 3-∅ 30

### INDUCTIVE (METAL)

ASU-3012-XXX

Available in ∅ 8-∅ 18

### INDUCTIVE COATED (METAL)

ASU-3052-XXX

ASU-00X1-XXX

ASU-3X41-XXX

ASU-0061-300

Available in ∅ 8-∅ 18

Available in ∅ 8-∅ 30

Available in ∅12-M18 and ∅ 8-M12

Available in ∅ 30

### PHOTOELECTRIC

LXW-C23PA-00X

LXW-M18PA-000

LXW-M18PA-001

LXW-X0X0-000

LXW-3060-000

LXW-4050-000

LXW-4050-002

LXW-C55PA-000

LLW-M18PA-001

LXW-DGMGA-000

## ◢ MECHANICAL STOPS

AMS-000X-M08

AMS-000X-M12

## ◢ ADAPTERS

ADA-0000-XXX

Available in M12-M18

## ◢ PNP CONVERTERS

AC0-0000-001

## ◢ FIBER OPTICS

LXF-0000-000

## ◢ SENSOR TESTERS

ATE-0000-010

## ◢ PHOTOELECTRIC REFLECTORS

LXU-0000-025

LXU-0001-064

LXR-0000-084

LXR-0001-064

LXR-0002-100

LXR-0003-025

## ◢ SAFETY ALIGNMENT TOOL

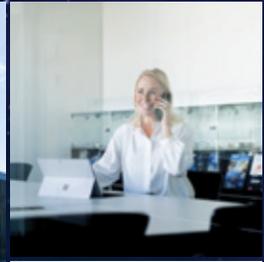YXL-001-000

# WHY CHOOSE US

- Companies around the world trust us to solve their sensor problems
- Like our sensors, our engineering teams thrive on your toughest challenges
- You can rely on leading-edge Swiss technology, certified to international standards
- Our connected Smart Sensors are IIoT-capable and ready for your transition to Industry 4.0
- Our products withstand extremes of environment, weather and contamination

# CUSTOMER FOCUS

- Global sales network covering 60+ countries
- International customer services
- Solution-oriented application support
- 3 production sites for worldwide availability
- 3 logistics hubs for rapid delivery

# ALL OVER THE WORLD

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France
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Greece
Hungary
Ireland

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Luxembourg
Netherlands
Norway
Poland
**Portugal\***
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Australia

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