> Solutions for Tires
Datalogic is a global technology leader in the automatic data capture and process automation markets, specializing in the designing and production of bar code readers, mobile computers, sensors for detection, measurement and safety, vision and laser marking systems.

Manufacturing is easier and more reliable with Datalogic identification devices, vision systems and sensors. Datalogic technology detects object presence, safeguards workers with light curtains, assures product quality with vision sensors, and identifies items using laser marking. Process and product traceability are assured by fixed industrial and hand held bar code readers, scanners, and mobile computers that track items through the manufacturing process and on to distribution.

**Product Portfolio**

- AUTOMOTIVE
- ELECTRONICS
- PACKAGING
- INTRALOGISTICS

**Identification**

Even the most efficient automation identification processes can leverage Datalogic’s leadership in the market. Datalogic manufactures the world’s most comprehensive family of fixed-mount line and omnidirectional scanners and offers the latest vision technology with the world’s largest installed base of devices for bar code reading and dimensioning. The offer includes a complete portfolio of rugged mobile computers solutions (hand held, pistol grip, PDA, vehicle mounted terminals) and a top performing industrial hand held reader portfolio.

All of our Auto ID products and solutions leverage the broadest decoding library that has been developed through the years. Datalogic’s comprehensive Auto ID portfolio is used in a wide range of applications and machines which are behind many of the everyday processes that keep the global economy running.

**Sensors and Safety**

Datalogic offers a best-in-class, comprehensive product portfolio of photoelectric and proximity sensors, rotary encoders, temperature controllers and measurement devices, as well as Type 2 and Type 4 safety light curtains and safety laser scanner solutions. These product lines provide solutions for applications involving color, contrast and luminescence, label detection, dimensional and distance measurement, in addition to machine safeguarding and access control in dangerous areas.

**Vision Systems**

The Datalogic vision systems product line encompasses both hardware and software while covering a wide range of performance and price point requirements. The vision portfolio of products and solutions ranges from simple vision sensors to smart cameras and embedded vision systems.

**Laser Marking Systems**

Laser Marking sources and systems provide value-driven marking solutions for automotive, metal tools, medical, electronics and packaging. Datalogic offers an extensive range of state-of-the-art technology, excellent performance and high reliability marking equipment.
FINAL FINISHING AND INSPECTION

Tires are identified and tracked as they progress through rough manufacturing and into final finishing and inspection stations.

LABELING VERIFICATION

A bar code label is applied to “Green Tire” for complete tracking of the tire through the manufacturing process.
SORTING AND SHIPPING
Tire bar codes are identified at shipment processing to correctly direct them to a distribution network or their final destination.

MANUAL SORTATION
Tires are manually identified by operators using hand held bar code readers.

CURING PROCESS CONTROL
Each tire is identified before the vulcanizing process in order to match the specific tire to the correct curing press and process setup.

SORTING AND SHIPPING
Tire bar codes are identified at shipment processing to correctly direct them to a distribution network or their final destination.
SORTING AREA PROTECTION WITH SAFETY LIGHT CURTAIN

The safety light curtain with integrated muting function is used to protect the sorting area. The muting function allows tires to be taken by a forklift for handling and warehousing management. The integrated muting function provided by the SG4 safety light curtains ensures that work can be carried out ergonomically and efficiently in the sorting area.

POSITIONING OF THE TIRE IN THE GRIPPER

The machine has to control the distance between the gripper and the tire in order to grab the tire correctly. The S8 background suppression sensor with laser emission allows the user to verify the presence and the positioning of the tire.
HAZARDOUS AREA PROTECTION WITH LASER SENTINEL

The Laser Sentinel protects the hazardous area in front of tire vulcanizing machines. Because of the two protective fields, the Laser Sentinel can independently manage the slow down and the stopping of the robot arm. Independent management of the processes allows users to increase the plant productivity.

TIRE DETECTION ON THE BELT

The S100 miniature sensors detect tires on the roller conveyor to manage the production processes. The missing sensitive adjustment on the S100 sensor allows the user to avoid tampering, increasing the efficiency of the plant and drastically reducing the maintenance activity.

TIRE HEIGHT MEASUREMENT

The height of the tire is measured to ensure the correct handling in the production processes. The DS2 Area Sensor is able to measure the height of the tire to its millimeter measurement precision and send the data through the Ethernet communication to the system.
MANUAL INDUCTION

Tires are manually inducted into an automatic warehousing system using Datalogic industrial hand held scanners.

ACCESS CONTROL IN A ROBOT CELL

SG4 safety light curtains are used to prevent a hazardous area from being accessed by any person. SG4 safety light curtains stop the robot arm during the material trolley replacement by the worker. A manual restart phase is required when the operator leaves the hazardous area to reboot the robot arm.

SORTING AND SHIPPING

High speed conveyors move product past Datalogic fixed scanners that provide flexible and robust identification supporting the shipping process.
FORKLIFT SOLUTIONS
Vehicle Mounted Computers paired with wired or wireless bar code readers allow the user to easily navigate the order and work with pick-up lists on the screen.

WAREHOUSE MANAGEMENT
A wide range of solutions from Datalogic including hand held scanners, smart cameras, fixed readers and mobile computers deliver error-free warehouse operations processing.

MOBILE HAZARDOUS AREA PROTECTION
Laser Sentinel is used on automated guided vehicles (AGV) to protect operators from moving on the floor and to avoid collisions with other vehicles or materials placed on the floor. Its compact size has the capability to manage warning and protective fields according to the vehicle speed, allowing an increase in the safety level and the productivity of the plant.
TIRES
PRODUCT PORTFOLIO
# 2D IMAGERS

## MATRIX 120™

Matrix 120 is the most compact industrial 2D imager on the market to fit any integration space and the smallest compact 2D imager with embedded Ethernet connectivity. Matrix 120 leads the market for customer Ease of Use and is characterized by a top Industrial grade in its class.

With only a few models, the Matrix 120 imager covers all of the targeted applications in OEM and the entry level manufacturing industry.

### FEATURES & BENEFITS

- Ultra compact dimensions for easy integration
- WVGA – 1.2 MP models and wide angle models
- Embedded Ethernet connectivity
- Serial and USB interfaces available on the same model
- Polarized versions
- Outstanding performance
- Smart user selectable focus for high application flexibility
- Top Industrial grade rating: IP65;
- Operating temperature: 0 to 45 °C / 32 to 113 °F
- DL.Code for ease of setup
- Xpress, Green Spot technology and intuitive HMI for top ease of use

### TIRES APPLICATIONS

- Traceability in manufacturing and final testing
- Parts and components tracking

## MATRIX 210N™

Datalogic’s Matrix 210N™ offers extreme reading performance and integrated Ethernet, Ethernet/IP and PROFINET in an ultra-compact housing.

With a WVGA imaging sensor able to capture up to 60 frames per second, and a flexible and powerful illuminator, the Matrix 210N™ offers the best-in-class direct part marked bar code reading capabilities. The unrivaled decoding libraries running on the high speed hardware platform deliver superior reading performance and impressive decoding rates, supporting high system throughput which delivers overall production efficiency.

Compact dimensions with straight or right angle optical options and an electronic variable focus option provides superb contact reading capability and a simple mechanical integration into tight spaces.

Installation and maintenance are extremely easy with the X-PRESS™ Interface. Datalogic’s Green Spot technology (projected onto the scanned object) provides easy and real-time feedback of the reading status without any additional software or accessories.

### FEATURES & BENEFITS

- Integrated Ethernet, PROFINET, EtherNet/IP, interfaces
- Electronic Focus Control
- Straight and right angle models for smart mounting
- Outstanding decoding capability on codes marked with DPM and 1D/2D standard codes
- On-board image saving
- ID-NET™ reader clustering/networking
- Ultra-fast image acquisition for high speed production lines
- Industrial Protection: ESD-safe, YAG, IP65

### TIRES APPLICATIONS

- Traceability in manufacturing and final testing
- Parts and components tracking
### 2D IMAGERS

<table>
<thead>
<tr>
<th><strong>MATRIX 120™</strong></th>
<th><strong>MATRIX 210N™</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>READING RANGE</strong></td>
<td>25 to 220 mm / 0.98 to 8.66 in</td>
</tr>
<tr>
<td><strong>MAXIMUM RESOLUTION</strong></td>
<td>Up to 0.076 mm / .003 in (3 mils) - MP model</td>
</tr>
<tr>
<td><strong>FRAME RATE / SCAN RATE</strong></td>
<td>Up to 57 full-frame/sec (WVGA model); Up to 36 full-frame/sec (MP model)</td>
</tr>
<tr>
<td><strong>FOCUSING SYSTEM</strong></td>
<td>Manual adjustment in three precalibrated positions WVGA: 45, 70, 125 mm / 1.7, 2.7, 4.9 in; MP: 45, 80, 125 mm / 1.7, 3.1, 4.9 in</td>
</tr>
<tr>
<td><strong>SENSOR</strong></td>
<td>CMOS sensor with Global Shutter WVGA – 752 x 480, MP – 1280 x 960</td>
</tr>
<tr>
<td><strong>READABLE CODES</strong></td>
<td>1D Codes: all standard 1 dimensional symbologies 2D Codes: Data Matrix, QR Code, Micro QR, Maxicode, Aztec Postal Codes: Royal Mail, Japan Post, Planet, Postnet and many more</td>
</tr>
<tr>
<td><strong>CODE ORIENTATION</strong></td>
<td>Omnidirectional on any code type</td>
</tr>
<tr>
<td><strong>MULTILABEL/MULTICODE READING</strong></td>
<td>YES</td>
</tr>
<tr>
<td><strong>VOLTAGE SUPPLY / POWER CONSUMPTION</strong></td>
<td>5 to 30 VDC, 1.6 – 2.4 W</td>
</tr>
<tr>
<td><strong>IP RATING</strong></td>
<td>IP65</td>
</tr>
<tr>
<td><strong>TEMPERATURE RANGE</strong></td>
<td>0 to 45 °C / 32 to 113 ºF</td>
</tr>
<tr>
<td><strong>CASE MATERIAL</strong></td>
<td>Zama (Zinc Alloy) Plastic protective window cover</td>
</tr>
<tr>
<td><strong>DIMENSIONS (TYPICAL VALUE)</strong></td>
<td>45.4 x 23.5 x 29 mm / 1.7 x 0.9 x 1.1 in (Serial and USB model) 45.4 x 23.5 x 42.9 mm / 1.7 x 0.9 x 1.6 in (Serial and Ethernet model)</td>
</tr>
<tr>
<td><strong>WEIGHT</strong></td>
<td>116 gr / 4.0 oz (Serial and USB model) 199 gr / 7.0 oz (Serial and Ethernet model)</td>
</tr>
<tr>
<td><strong>EMBEDDED COMMUNICATION INTERFACES</strong></td>
<td>RS-232/RS-422 USB 2.0 (USB-CDC, USB-HID) Ethernet 10/100</td>
</tr>
<tr>
<td><strong>FIELDBUS</strong></td>
<td>Profinet I/O Embedded Additional fielbus available with CBX &amp; QLM accessories</td>
</tr>
<tr>
<td><strong>ETHERNET</strong></td>
<td>Embedded [Serial and Ethernet model]</td>
</tr>
<tr>
<td><strong>XPRESS INTERFACE</strong></td>
<td>YES</td>
</tr>
<tr>
<td><strong>DIGITAL INPUTS</strong></td>
<td>Two SW Programmable (PNP/NPN)</td>
</tr>
<tr>
<td><strong>DIGITAL OUTPUTS</strong></td>
<td>Two SW Programmable (PNP/NPN)</td>
</tr>
<tr>
<td><strong>DEVICE PROGRAMMING</strong></td>
<td>Windows® based 5W DL.CODE™</td>
</tr>
<tr>
<td><strong>VOLTAGE SUPPLY / POWER CONSUMPTION</strong></td>
<td>10 to 30 VDC, 4.5 W</td>
</tr>
<tr>
<td><strong>IP RATING</strong></td>
<td>IP65</td>
</tr>
<tr>
<td><strong>TEMPERATURE RANGE</strong></td>
<td>0 to 50 °C / 32 to 122 °F</td>
</tr>
<tr>
<td><strong>CASE MATERIAL</strong></td>
<td>Aluminum, plastic protective window cover</td>
</tr>
<tr>
<td><strong>DIMENSIONS (TYPICAL VALUE)</strong></td>
<td>50 x 25 x 45 mm / 1.9 x 0.9 x 1.7 in (Serial and Ethernet model)</td>
</tr>
<tr>
<td><strong>WEIGHT</strong></td>
<td>199 gr / 7.0 oz (Serial and Ethernet model)</td>
</tr>
<tr>
<td><strong>EMBEDDED COMMUNICATION INTERFACES</strong></td>
<td>RS-232/RS-422/RS-485 USB 2.0 in RS-232 MODE Ethernet 10/100</td>
</tr>
<tr>
<td><strong>FIELDBUS</strong></td>
<td>Profinet I/O Embedded Additional fielbus available with CBX &amp; QLM accessories</td>
</tr>
<tr>
<td><strong>ETHERNET</strong></td>
<td>Embedded</td>
</tr>
<tr>
<td><strong>XPRESS INTERFACE</strong></td>
<td>YES</td>
</tr>
<tr>
<td><strong>DIGITAL INPUTS</strong></td>
<td>Two opto-isolated. Polarity insensitive and 5W Programmable.</td>
</tr>
<tr>
<td><strong>DIGITAL OUTPUTS</strong></td>
<td>Two 5W programmable optocoupled</td>
</tr>
<tr>
<td><strong>DEVICE PROGRAMMING</strong></td>
<td>Windows® based 5W (DL.CODE™) via Ethernet</td>
</tr>
</tbody>
</table>
**2D IMAGERS**

**MATRIX 300N™**

The Matrix 300N™ is an ultra-compact image-based bar code reader designed for performance on high speed and Direct Part Marking (DPM) applications. The Matrix 300N™ reader is powered by the new software DL.CODE and combines a high resolution sensor with ultra-fast image acquisition: 1.3 MP, 60 frames per second.

**FEATURES & BENEFITS**
- Fast and high resolution image sensor: 1.3 megapixels, 'true' 60 frame/s
- Ultra-compact reader, rotating connector system
- High performance DPM reading
- Profinet-IO communication embedded
- Both manual and electronic focus control options
- Integrated dual illuminator: dark field/bright field
- Polarized model available
- Packtrack 2D for short object gapping
- Power over Ethernet Option
- Extreme Industrial grade: IP67 rating; Operating temperature: 0 to 50 °C / 32 to 122 °F

**TIRES APPLICATIONS**
- Traceability in manufacturing and final test
- Parts and components tracking

**MATRIX 410N™**

Matrix 410N™ is an industrial 2D imager purpose-built for the most complex traceability applications in material handling and logistics, equipped with an ultra-fast image sensor that performs at 2.0 MP and a frame rate of 45 frames per second. The industrial imager offers Ethernet connectivity embedded, including TCP/IP, HTTP, FTP, PROFINET IO, EtherNet/IP, Modbus TCP/IP.

**FEATURES & BENEFITS**
- Patented ultra-fast strobed lighting with stable effect for users
- Packtrack 2D for short object gapping
- Embedded Ethernet connectivity, with common protocol support: PROFINET IO, ETHERNET/IP, TCP/IP, FTP, HTTP
- On board image storage saving up to 3,000 images (scaled)
- External connection box with parameter backup memory and display
- Increased flexibility with single reading point or multiple device cluster with easy configuration
- Laser pointing system, Datalogic’s ‘Green Spot’ technology, focusing aiming system

**TIRES APPLICATIONS**
- Traceability in manufacturing and final test
- Parts and components tracking

**MATRIX 450N™**

The MATRIX 450N™ is a high-end, industrial 2D reader designed for transportation and logistics applications. With an extraordinary acquisition rate at a very high resolution and a high intensity illuminator, the Matrix 450N™ reader is the ideal product for automated and material handling. This 2D reader provides a large reading area in a single shot, resulting in high throughput and maximum ease of use – eliminating the need for multiple reading attempts.

**FEATURES & BENEFITS**
- Gigabit Ethernet integrated connectivity
- Adjustable focus through C-Mount lenses
- White and blue lighting options
- Continuous, no-flashing lighting
- Colored spot indicators
- Region of interest window for higher frame rate
- X-PRESS™ for easy and intuitive setup
- ID-NET™ embedded high speed connectivity

**TIRES APPLICATIONS**
- Traceability in manufacturing and final test
- Parts and components tracking
# 2D IMAGERS

## MATRIX 300N™
- **Reading Range:** 25 to 450 mm / 1.2 to 19.7 in
- **Sensor:** CMOS sensor, Global Shutter SXGA – 1280 x 1024 – 1.3 MP
- **Frame Rate:** 60 frames/s @ full window size
- **On Board Memory:** 256 MB
- **Readable Codes:**
  - 1D Codes: all standard 1 dimensional symbologies
  - 2D Codes: Data Matrix, QR Code, Micro QR, Maxicode, Aztec
  - Postal Codes: Royal Mail, Japan Post, Planet, Postnet and many more
- **Code Orientation:** Omnidirectional on any code type
- **Multilabel/Multicode Reading:** Yes
- **Voltage Supply / Power Consumption:** Std 5-30 VDC
- **IP Rating:** IP67
- **Temperature Range:** 0 to 50 °C / 32 to 122 °F
- **Dimensions (Typical Value):** 95 x 54 x 43 mm / 3.7 x 2.1 x 1.6 in
- **Weight:** 485 g / 17 oz
- **YAG Laser Protection:** Yes
- **Embedded Communication Interfaces:** YES
- **Fieldbus:** YES
- **Ethernet:** YES
- **XPRESS Interface:** YES
- **Digital Inputs:**YES Embedded
- **Digital Outputs:** Three software programmable PNP/NPN (short circuit protection) OUT3 programmable as input too
- **Device Programming:** Windows® based software (DL.CODE™) via Ethernet

## MATRIX 410N™
- **Reading Range:** 50 to 2000 mm / 1.9 to 78.7 in
- **Sensor:** CMOS sensor SXGA (1280 x 1024) 1.3 MP CCD sensor UXGA (1600x1200) 2 MP
- **Frame Rate:** 60 frames/s CCD: 45 frames/s
- **On Board Memory:** 256 MB
- **Readable Codes:**
  - 1D and Stacked: IL 2/5, Code 128, Code 39, EAN/UPC, PDF417, Pharmacode, GS1 DataBar (RSS) family, and many more.
  - 2D: Data Matrix, QR Code, Micro QR, Maxicode, Aztec, Microglyph
  - Postal: Royal Mail, Japan Post, Planet, Postnet and many more
- **Code Orientation:** Omnidirectional on any code type
- **Multilabel/Multicode Reading:** Yes
- **Voltage Supply / Power Consumption:** 10 to 30 VDC, 5 - 8 W
- **IP Rating:** IP67
- **Temperature Range:** 0 to 50 °C / 32 to 122 °F
- **Dimensions (Typical Value):** 123 x 60.5 x 87 mm / 4.8 x 2.3 x 3.4 in
- **Weight:** 482g / 17 oz
- **YAG Laser Protection:** Yes
- **Embedded Communication Interfaces:** YES
- **Fieldbus:** YES
- **Ethernet:** YES
- **XPRESS Interface:** YES
- **Digital Inputs:** Three software programmable, optocoupled and polarity insensitive
- **Digital Outputs:** Three software programmable, optocoupled
- **Device Programming:** Windows® based software (DL.CODE™) Serial Host Mode Programming sequences

## MATRIX 450N™
- **Reading Range:** 300 to 3000 mm / 11.8 to 118.1 in
- **Sensor:** CCD sensor 5 MP (2448 x 2050)
- **Frame Rate:** 15 frames/s
- **On Board Memory:** 512 MB
- **Readable Codes:**
  - 1D and Stacked: IL 2/5, Code 128, Code 39, EAN/UPC, PDF417, Pharmacode, GS1 DataBar (RSS) family, and many more.
  - 2D: Data Matrix, QR Code, Micro QR, Maxicode, Aztec, Microglyph
  - Postal: Royal Mail, Japan Post, Planet, Postnet and many more
- **Code Orientation:** Omnidirectional on any code type
- **Multilabel/Multicode Reading:** Yes
- **Voltage Supply / Power Consumption:** 24 VDC, 2.5 A
- **IP Rating:** IP65
- **Temperature Range:** 0 to 50 °C / 32 to 122 °F
- **Dimensions (Typical Value):** 170 x 200 x 150 mm / 6.6 x 7.8 x 5.9 in
- **Weight:** 3 kg / 105.8 oz with lens
- **YAG Laser Protection:** No
- **Embedded Communication Interfaces:** YES
- **Fieldbus:** YES
- **Ethernet:** YES
- **XPRESS Interface:** YES
- **Digital Inputs:** Two software programmable, optocoupled and polarity insensitive
- **Digital Outputs:** Two software programmable, optocoupled
- **Device Programming:** Windows® based software (DL.CODE™) Serial Host Mode Programming sequences
**XRF410N™**

The XRF410N™, named for its extended Reading Field, is a solution based on the Matrix 410N™ platform for material handling and sortation in the logistics industry. XRF410N is designed and built for a broad variety of material handling applications with transportation speeds up to 2.2 m/s (433 fpm) for medium sized objects, with typical scanning depths of 400 mm (15.7 in.).

**FEATURES & BENEFITS**
- Easy to select the correct model: no technical analysis is required. Just the code dimension, conveyor width and speed
- Easy to install: the XRF410N is pre-assembled and configured at the factory
- Increase customer productivity: XRF410N is fully capable of successfully scanning hard-to-read, damaged or poor quality bar codes
- DL.Code for ease of setup
- Patented Packtrack 2D for short object gapping in sortation applications
- Laser pointing system, Green Spot technology, focusing aiming system

**TIRES APPLICATIONS**
- Traceability in manufacturing and final test
- Parts and components tracking

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**STS400™**

STS400™ is a state-of-the-art solution for tire sorting. With an extremely compact and self-contained structure, this solution excels in delivering top reading performance with simple, user-friendly installation and maintenance. STS400 is pre-assembled and calibrated, making integration into a tire sorting system quicker than ever. In less than one hour, with no special tools or training, the STS400 can go from the shipping carton to reading tires in the production line.

**FEATURES & BENEFITS**
- Easy to install install and maintain (100% pre-assembly calibration)
- Simple and lean: regulated render layout, eliminating articulated mounting patterns
- Long-term reliability with no moving on-board
- Compatible with changing requirements, such as code heights

**TIRES APPLICATIONS**
- Final Inspection
- Sorting and Shipping
- Finishing and Inspection
- Curing Process Control
- Labeling Verification
## 2D IMAGERS

<table>
<thead>
<tr>
<th>XRF410N™</th>
<th>STS400™- Passenger Light Truck Tires</th>
<th>STS400™- Commercial Vehicle Tires</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>READING DISTANCE (MIN / MAX)</strong></td>
<td>860 - 1670 mm</td>
<td>890 - 1140 mm (35 - 44.9 in)</td>
</tr>
<tr>
<td><strong>SENSOR</strong></td>
<td>CMOS sensor SXGA (1280 x 1024) 1.3 MP</td>
<td>CCD sensor UXGA (1600x1200) 2 MP</td>
</tr>
<tr>
<td><strong>FRAME RATE</strong></td>
<td>CMOS: 60 frames/s CCD: 45 frames/s</td>
<td>15 frames / s</td>
</tr>
<tr>
<td><strong>CODE ORIENTATION</strong></td>
<td>Omnidirectional on any code type</td>
<td>Omnidirectional on any code type</td>
</tr>
<tr>
<td><strong>MULTILABEL/MULTICODE READING</strong></td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td><strong>VOLTAGE SUPPLY / POWER CONSUMPTION OR CURRENT ABS.</strong></td>
<td>10 to 30 VDC, 5 - 8 W</td>
<td>24 VDC; 1.35 A</td>
</tr>
<tr>
<td><strong>IP RATING</strong></td>
<td>IP67</td>
<td>IP65</td>
</tr>
<tr>
<td><strong>TEMPERATURE RANGE</strong></td>
<td>0 to 50 °C (32 to 122 °F)</td>
<td>0 - 50 °C (32 - 122 °F)</td>
</tr>
<tr>
<td><strong>CASE MATERIAL</strong></td>
<td>Aluminum</td>
<td>Aluminum</td>
</tr>
<tr>
<td><strong>DIMENSIONS (TYPICAL VALUE)</strong></td>
<td>320x230x166.5 mm (12.6x9x6.55 in); a capo. 320x242.75x167.5 mm (12.6x9.55x6.59 in)</td>
<td>785 x 223 x 149 mm (30.91 x 8.78 x 5.87 in.)</td>
</tr>
<tr>
<td><strong>WEIGHT</strong></td>
<td>from 3600 g to 4200 g</td>
<td>STS400-006: 10 kg (22.05 lb)</td>
</tr>
<tr>
<td><strong>EMBEDDED COMMUNICATION INTERFACES</strong></td>
<td>RS232 / RS422 / RS485 Ethernet IEEE 802.3 10 Base T and IEEE 802.3U 100 BaseTX compliant</td>
<td>RS232/RS422/RS485 Ethernet IEEE 802.3 10 Base T and IEEE 802.3U 100 BaseTX compliant</td>
</tr>
<tr>
<td><strong>ID-NET™ INTERFACE</strong></td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td><strong>FIELDBUS</strong></td>
<td>Profinet I/O Embedded Additional fieldbus available with CBX &amp; QLM accessories</td>
<td>Available with external device</td>
</tr>
<tr>
<td><strong>ETHERNET</strong></td>
<td>YES</td>
<td>YES Embedded</td>
</tr>
<tr>
<td><strong>XPRESS INTERFACE™</strong></td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td><strong>DIGITAL INPUTS</strong></td>
<td>Two SW programmable, optocoupled and polarity insensitive</td>
<td>Input 1 (External Trigger) Input 2 Opto-coupled and polarity insensitive</td>
</tr>
<tr>
<td><strong>DIGITAL OUTPUTS</strong></td>
<td>Two SW programmable optocoupled + one non-optocoupled</td>
<td>Output 1 and Output 2 Opto-coupled</td>
</tr>
<tr>
<td><strong>DEVICE PROGRAMMING</strong></td>
<td>Windows® based SW DL.CODE® Serial Host Mode Programming sequences</td>
<td>Windows® based SW (Visiset) Serial Host Mode Programming sequences</td>
</tr>
</tbody>
</table>
PowerScan™ 9100 Series

The PowerScan™ 9100 readers include Datalogic’s innovative new technology, a green ‘laser-like’ acquisition system based on a pioneering miniaturized scan engine with outstanding 1D decoding capability. This innovative laser-like green scanning line implements the definition of a laser and the benefits of a linear imager scanner. The green scanning light has been proven to be the most comfortable color for the operator’s eyes.

The PowerScan 9100 family is available in a full suite of models to provide the best solution for different customer needs: corded desk models; cordless models featuring Datalogic’s STAR Cordless System™ proprietary radio or Bluetooth wireless technology.

FEATURES & BENEFITS
- New Linear Imaging Technology
- Decodes low contrast codes up to 15% PCS
- Resolution up to 2.5 mils
- Datalogic’s STAR Cordless System 2.0 proprietary narrow band radio
- 3-second battery replacement
- Datalogic’s 3GL™ Technology (3 Green Lights) Good-Read Feedback

TIRES APPLICATIONS
- Manual Traceability in manufacturing and warehouse

PowerScan™ 9300 Laser Series

The PowerScan™ 9300 reader’s mechanics have been developed and tested to withstand extreme environmental conditions, maintaining consistent reading performance without degrading performance or reliability.

The 9300 series includes different models able to satisfy all customers’ needs; corded and cordless (STAR Radio or Bluetooth), with or without display, 4 keys/16 keys keypad.

The Auto Range models are particular suitable for forklift applications capable to read up to 11.5 m / 37 ft on reflective codes.

FEATURES & BENEFITS
- Ergonomic shape provides hours of tireless data collection for the user
- 2 Radio options STAR radio 2.0 or Bluetooth
- Datalogic’s 3GL™ (3 Green Lights) technology and loud beeper for good read feedback
- User replaceable lithium-ion battery

TIRES APPLICATIONS
- Manual Traceability in manufacturing and warehouse

PowerScan™ 9500 2D AREA IMAGER (Standard and Direct Part Marking)

The PowerScan™ PM9500 area Imager offers an intuitive and effortless scanning experience. It combines omnidirectional reading capabilities with outstanding optical characteristics. The result is a scanner that is able to read any kind of bar code, regardless of the orientation, from contact to over 1.0 m / 3.3 ft.

Within the PowerScan 9500 family the DPM Evo models includes the latest optics and software from Datalogic to make the reading of codes with DPM easy and intuitive.

The PM9500 standard models and DPM increase workplace flexibility and productivity through its STAR cordless system avoiding any interference with Wi-Fi or Bluetooth systems.

FEATURES & BENEFITS
- Datalogic’s new instinctive ‘frame’ aimer
- Liquid Lens models capable to read high density codes as well as wide labels
- STAR cordless system: point-to point and multi-point configurations in a seamless roaming without interference with existing radio systems
- Datalogic’s Motionix™ motion-sensing technology
- Datalogic’s 3GL™ (3 Green Lights) technology and loud beeper for good read feedback

TIRES APPLICATIONS
- Manual Traceability in manufacturing and warehouse
INDUSTRIAL HAND HELD DEVICES

**PowerScan™ 9100 Series**
- Reading Distance: 0 to over 2 m / 0.8 to over 90.6 in depending on code resolution
- Sensor: Datalogic scan engine
- Scan Rate: NO 35 scans/sec
- Variable Focus: NO
- Reading Angle: Pitch: +/- 75°; Roll (Tilt): +/- 45°; Skew (Yaw): +/- 70°
- Multilabel Reading: NO
- Case Material: ABS
- Dimensions (Typical Value): 212 x 110 x 74 mm / 8.3 x 4.3 x 2.9 in
- Weight: 340.0 g / 11.9 oz
- Temperature Range: Operating: -20 to 50 °C / -4 to 122 °F
- Voltage Supply / Current Absorption: 380 mA @ 5V (Corded model)
- IP Rating: IP65
- MODELS (OPTIC OPTIONS): Corded, Cordless
- Embedded Communication Interfaces: Keyboard Wedge; RS-232; RS-485; USB: OEM USB, USB COM; USB HID Keyboard; Optional Ethernet (Standard, Industrial)
- Radio Range (Cordless Models): Up to 100 m / 328 ft (STAR RADIO 433 MHz) Up to 150 m (STAR RADIO 910 MHz)
- Ethernet: On the cradle for the cordless model
- Device Programming: Aladdin

**PowerScan™ PM9300 Laser Series**
- Reading Distance: Standard Range: up to 1.6 m / 5.2 ft Auto Range: up to 11.5 m / 37 ft on reflective codes
- Sensor: Laser
- Scan Rate: 35 scans/sec
- Variable Focus: NO
- Reading Angle: Pitch: 5 to 55° / -5 to -55°; Roll (Tilt): +/- 20°; Skew (Yaw): +/- 60°
- Multilabel Reading: NO
- Case Material: ABS
- Dimensions (Typical Value): 212 x 110 x 74 mm / 8.3 x 4.3 x 2.9 in
- Weight: 295.0 g / 10.4 oz
- Temperature Range: Operating: -20 to 50 °C / -4 to 122 °F
- Voltage Supply / Current Absorption: 5 VDC @ 10 VDC; 800 mA (PM9500/PBT9500 cradle)
- IP Rating: IP65
- MODELS (OPTIC OPTIONS): Corded, Cordless
- Embedded Communication Interfaces: USB, RS-232, KBD emulation INDUSTRIAL, ETHERNET and RS-485 (PM9500/PBT9500 cradle)
- Radio Range (Cordless Models): Up to 100 m / 328 ft (STAR RADIO 433 MHz) Up to 150 m (STAR RADIO 910 MHz)
- Ethernet: On the cradle for the cordless model
- Device Programming: Aladdin

**PowerScan™ 9500 Series**
- Reading Distance: 0 to over 1 m / 0 to over 39.4 in depending on code resolution
- Sensor: Laser
- Scan Rate: 60 scans/sec
- Variable Focus: NO
- Reading Angle: Pitch: +/- 40°; Roll (Tilt): 360°; Skew (Yaw): +/- 40°
- Multilabel Reading: YES
- Case Material: ABS
- Dimensions (Typical Value): 212 x 110 x 74 mm / 8.3 x 4.3 x 2.9 in
- Weight: 330.0 g / 11.6 oz
- Temperature Range: Operating: -20 to 50 °C / -4 to 122 °F
- Voltage Supply / Current Absorption: 5 VDC @ 10 VDC; 800 mA (PM9500/PBT9500 cradle)
- IP Rating: IP65
- MODELS (OPTIC OPTIONS): Corded, Cordless
- Embedded Communication Interfaces: USB, RS-232, KBD emulation INDUSTRIAL, ETHERNET and RS-485 (PM9500/PBT9500 cradle)
- Radio Range (Cordless Models): Up to 100 m / 328 ft (STAR RADIO 433 MHz) Up to 150 m / 492 ft (STAR RADIO 910 MHz)
- Ethernet: On the cradle for the cordless model
- Device Programming: Aladdin
**CBX100 and CBX500**

The CBX100 and CBX500, part of the CBX series, are connectivity devices designed to simplify and speed-up cabling operations during the installation of Datalogic Industrial Automation devices. The CBX100’s modular concept and complete range of module options make installation, configuration and maintenance faster than ever.

**FEATURES & BENEFITS**

- Flexible mounting and simplified wiring to speed up installation
- Reliable Backup and Restore features
- Open architecture allows connectivity to Ethernet TCP/IP, PROFIBUS, DeviceNet Ethernet/IP and other common networks
- Multi-language display for easy monitoring and troubleshooting
- Visible LED indicators and power On/Off switches

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**CBX800**

The CBX800 industrial connectivity device serves as a gateway, connecting devices equipped with a standard RS-232 communication interface to the most common fieldbus systems, through a complete range of option module options, in addition to an ID-NET™ high speed communication network.

**FEATURES & BENEFITS**

- Serial to Fieldbus / Ethernet TCP/IP/ID-NET™ industrial gateway
- Open architecture provides interface to Ethernet TCP/IP, PROFIBUS, DeviceNet Ethernet/IP and other common networks
- Visible LED indicators and power On/Off switches
- Multilanguage Genius™ configuration tool
- Flexible mounting and simplified wiring to speed up installation

---

**QL500–QLM500/600/700**

The Quick Link series, available in 5 different models, is a complete range of accessories for connectivity dedicated to 1D and 2D bar code readers. Quick Link accessories offer an easy, fast, modular and cost-effective solution for the applications where “plug-in” connection is preferable.

**FEATURES & BENEFITS**

- Easy, fast, modular connection for ID-NET™ Network
- Distribution on separate connectors of Power Supply, External Trigger, ID-NET™ network, Digital I/O and Communication signals
- Serial-to-Ethernet TCP/IP protocol conversion through QL500 module
- Cost effective solution
- Compact dimensions
## CONNECTIVITY

<table>
<thead>
<tr>
<th>DIMENSIONS (TYPICAL VALUE)</th>
<th>CBX100</th>
<th>CBX500</th>
<th>CBX800</th>
<th>QL-QLM</th>
</tr>
</thead>
<tbody>
<tr>
<td>128 x 138 x 62 mm / 5.04 x 5.43 x 2.44 in</td>
<td>193 x 180 x 71 mm / 7.6 x 7.09 x 2.8 in</td>
<td>193 x 180 x 71 mm / 7.6 x 7.09 x 2.8 in</td>
<td>QL300: 129 x 76 x 27 mm / 5.08 x 3.00 x 1.06 in</td>
<td></td>
</tr>
<tr>
<td>193 x 180 x 71 mm / 7.6 x 7.09 x 2.8 in</td>
<td>193 x 180 x 71 mm / 7.6 x 7.09 x 2.8 in</td>
<td>193 x 180 x 71 mm / 7.6 x 7.09 x 2.8 in</td>
<td>QLM500/600/700: 200 x 81 x 40 mm / 7.87 x 3.19 x 1.57 in</td>
<td></td>
</tr>
<tr>
<td>193 x 180 x 71 mm / 7.6 x 7.09 x 2.8 in</td>
<td>193 x 180 x 71 mm / 7.6 x 7.09 x 2.8 in</td>
<td>193 x 180 x 71 mm / 7.6 x 7.09 x 2.8 in</td>
<td>QLM: 500 g / 17.64 oz</td>
<td></td>
</tr>
</tbody>
</table>

| WEIGHT | 380g (13.40 oz) | 780g (27.51 oz) | 830g (29.28 oz) | QL300: 312 g / 11 oz |

| VOLTAGE SUPPLY | 10 to 30 VDC | 10 to 30 VDC | 10 to 30 VDC | 10 to 30 VDC |

| POWER CONSUMPTION OR CURRENT ABSORPTION | 2.5 W max | 2.5 W max | 2.5 W max | 4 A max |

| OPERATING TEMPERATURE | 0 to 50 °C / 32 to 122 °F | 0 to 50 °C / 32 to 122 °F | 0 to 50 °C / 32 to 122 °F | 0 to 50 °C / 32 to 122 °F |

| PROTECTION CLASS | IP65 | IP65 | IP65 | IP65 |

| DISPLAY AND KEYPAD | 20 x 4 characters and 3 keys | 20 x 4 characters and 3 keys | NO | NO |

| EMBEDDED COMMUNICATION INTERFACES | NO | YES | NO | Ethernet, EtherNet/IP, Profibus, PROFINET (depending on model) |

| COMMUNICATION PROTOCOL | Datalogic Application Driver (DAD Driver) | Datalogic Application Driver (DAD Driver) | Datalogic Application Driver (DAD Driver) | NO |

<table>
<thead>
<tr>
<th>DIGITAL INPUTS</th>
<th>Input 1(External Trigger)</th>
<th>Input 1(External Trigger)</th>
<th>Input 1(External Trigger)</th>
<th>Input 1(External Trigger)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Input 2 Opto-coupled and polarity insensitive</td>
<td>Input 2 Opto-coupled and polarity insensitive</td>
<td>Input 2 Opto-coupled and polarity insensitive</td>
<td>Input 2 Opto-coupled and polarity insensitive</td>
</tr>
</tbody>
</table>

| DIGITAL OUTPUTS | Output 1 and Output 2 Opto-coupled | Output 1, Output 2 and Output 3 Opto-coupled | Output 1, Output 2 and Output 3 Opto-coupled | N° 1 I/O |

| DEVICE PROGRAMMING | HW Switches, Genius®, DL.CODE | HW Switches, Genius®, DL.CODE | HW Switches, Genius®, DL.CODE | HW Switches, Genius®, DL.CODE |

| DIGITAL OUTPUTS | HW Switches, Genius®, DL.CODE | HW Switches, Genius®, DL.CODE | HW Switches, Genius®, DL.CODE |

| Compatible Devices | MATRIX 120, MATRIX 210N®, MATRIX 300V®, MATRIX 410N®, MATRIX 450V® | MATRIX 120, MATRIX 210N®, MATRIX 300V®, MATRIX 410N®, MATRIX 450V® | (including 3rd Party) | MATRIX 120, MATRIX 210N®, MATRIX 300V®, MATRIX 410N®, MATRIX 450V® |

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*Note: Datalogic Application Driver (DAD Driver)*
MOBILE COMPUTERS

FALCON X3+

Capture bar codes while utilizing both 1D laser and 2D imaging technologies with Standard and Extra Long Range versions available. A full VGA display and a 3.1 Megapixel color camera are featured in all WEHH Operating System configurations. Communicate over a Laird/Summit 802.11 a/b/g/n radio with CCX v4 certification for security and seamless roaming, or through wired standards including USB Hi-Speed, RS-232, Modem and Ethernet.

FEATURES & BENEFITS
- Full-shift battery and a choice of 3.5 inch touchscreen displays: QVGA or VGA
- Ruggedized with 1.8 m / 6.0 ft drop to concrete resistance and IP65 sealing rating
- Datalogic’s patented ‘Green Spot’ technology for good-read feedback
- Multiple Laser and Imaging data capture options
- Windows Embedded Handheld 6.0 Professional operating system
- Parallel processor architecture combines an XScale™ PXA310 806 MHz and a Cortex-M3 processor

TIRES APPLICATIONS
- Receiving
- Cross Docking
- Voice Picking
- Shipping
- Inventory

FALCON X4

Capture bar codes while utilizing both 1D and 2D imaging technologies. Communicate over a/b/g/n radio with CCX v4 certification for security and seamless roaming and superior connectivity through MIMO Technology in Falcon™ X4 family, or through wired standards including USB Hi-Speed, RS-232, Modem and Ethernet, ensuring the full compatibility with Falcon X3+ accessories.

FEATURES & BENEFITS
- Full-shift battery and a 3.5 inch touchscreen display
- Ruggedized with 1.8 m / 6.0 ft drop to concrete resistance and IP65 sealing rating
- Datalogic’s patented ‘Green Spot’ technology for good-read feedback
- Multiple Laser and Imaging data capture options
- Windows WEC7 and Android operating system on the same hardware
- Parallel processor architecture up to dual core 1GHz

TIRES APPLICATIONS
- Final Inspection
- Sorting and Shipping
- Finishing and Inspection
- Curing Process Control
- Labeling Verification

RHINO II

The Rhino II™ vehicle mount computers set the standard for ruggedness in the warehouse. A sealed design tested to IP65/IP67 ensures operation in the toughest environments. A dedicated freezer-rated allows use in and out of cold storage. Tailored for warehouse management, the Rhino vehicle computer increases productivity through reduced errors during receiving, put-away, picking and shipping activities. Adding a hand held bar code scanner such as Datalogic’s PowerScan™ via STAR Radio 2.0 through Datalogic STAR dongle allows for quick data entry and location confirmations.

The Rhino vehicle computer is equipped with an internal isolated power supply, ignition sense to automatically control the power, and an optional battery backup for the ultimate protection against data loss. Mounting options include various brackets for the vehicle computer along with external keyboards.

FEATURES & BENEFITS
- Choice of Microsoft and Android™ Operating Systems
- 10 inch or 12 inch high resolution color display
- Anti-glare multi-touch screen, with gloves support
- Wi-Fi: 802.11 a/b/g/n, CCX v4 with diversity antennas
- Bluetooth® v4.0 Wireless Technology
- Wired Ethernet (GbE)
- Sealed to IP65/IP67 protection class
- External ABCD, QWERTY and Software Keyboard Options

TIRES APPLICATIONS
- Warehousing and Distribution: Inventory, Picking, Shipping/Receiving, Put away, Cross docking
- Manufacturing Shop Floor: Process control, quality control
<table>
<thead>
<tr>
<th>MOBILE COMPUTERS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MOBILE COMPUTERS</strong></td>
</tr>
<tr>
<td><strong>FALCON X3+</strong></td>
</tr>
<tr>
<td>LOCAL AREA NETWORK (LAN) Laird/Summit IEEE 802.11 a/b/g/n</td>
</tr>
<tr>
<td>Frequency range: Country dependent, typically 2.4 GHz and 5.2 GHz; Cisco Compatible CCX v4</td>
</tr>
<tr>
<td>Security</td>
</tr>
<tr>
<td>PERSONAL AREA NETWORK (PAN) Bluetooth® Wireless Technology IEEE 802.15 Class 2.1 with EDR</td>
</tr>
<tr>
<td><strong>BATTERY</strong></td>
</tr>
<tr>
<td>Hot-swappable rechargeable Li-ion 3.7 V 5200 mAh</td>
</tr>
<tr>
<td><strong>DROP RESISTANCE</strong></td>
</tr>
<tr>
<td>Withstands drops from 1.8 m / 6.0 ft onto concrete and 1500 random drops from 1.0 m / 3.3 ft according to IEC68-2-32 (Method 2)</td>
</tr>
<tr>
<td><strong>MAJOR APPLICATIONS</strong></td>
</tr>
<tr>
<td>• Receiving</td>
</tr>
<tr>
<td>• Cross Docking</td>
</tr>
<tr>
<td>• Voice Picking</td>
</tr>
<tr>
<td>• Shipping</td>
</tr>
<tr>
<td>• Inventory</td>
</tr>
<tr>
<td><strong>INTERFACES</strong></td>
</tr>
<tr>
<td>Main connector with USB 1.1 Host, USB 2.0 Hi-Speed Client, RS-232 up to 115.2 KbpsEthernet: via single-slot dock (external module)</td>
</tr>
<tr>
<td><strong>CONSTRUCTION</strong></td>
</tr>
<tr>
<td>Coated aluminum, no fan design</td>
</tr>
<tr>
<td><strong>OPERATING SYSTEM</strong></td>
</tr>
<tr>
<td>Microsoft Windows CE 6.0 Professional with Microsoft WordPad and Internet Explorer® 6.0; Windows Embedded Hand held 6.5 with Office Mobile Outlook® Mobile, Word Mobile, Excel® Mobile, PowerPoint® Mobile, OneNote® Mobile and Internet Explorer® Mobile 6.0</td>
</tr>
<tr>
<td><strong>RHINO II</strong></td>
</tr>
<tr>
<td>Bluetooth Wireless Technology 4.0</td>
</tr>
<tr>
<td>Wi-Fi: IEEE 802.11n/g/b (2.4 GHz and 5 GHz); Cisco CCX v4; Wired Ethernet: 1 x GbE, RJ-45 (bottom)</td>
</tr>
<tr>
<td><strong>DECLARATIVE CAPABILITY</strong></td>
</tr>
<tr>
<td>1D, 2D, 1D LR, 2D XLR</td>
</tr>
<tr>
<td>3.1 MP camera Green Spot technology</td>
</tr>
<tr>
<td><strong>POWER SUPPLY</strong></td>
</tr>
<tr>
<td>N/A</td>
</tr>
<tr>
<td><strong>TEMPERATURE</strong></td>
</tr>
<tr>
<td>Operating: -20 to 50 °C / -4 to 122 °F</td>
</tr>
<tr>
<td>Storage: -30 to 70 °C / -22 to 158 °F</td>
</tr>
<tr>
<td><strong>IP RATING</strong></td>
</tr>
<tr>
<td>IP65</td>
</tr>
<tr>
<td><strong>INTERFACES</strong></td>
</tr>
<tr>
<td>Main connector with USB 1.1 Host, USB 2.0 Hi-Speed Client, RS-232 up to 115.2 KbpsEthernet: via single-slot dock (external module)</td>
</tr>
<tr>
<td><strong>BATTERY</strong></td>
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<tr>
<td>Hot-swappable rechargeable Li-ion 3.7 V 5200 mAh</td>
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<tr>
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</tr>
<tr>
<td><strong>IP RATING</strong></td>
</tr>
<tr>
<td>IP65/IP67</td>
</tr>
<tr>
<td><strong>INTERFACES</strong></td>
</tr>
<tr>
<td>1 x Ethernet 10/100/1000 Mbps; RJ-45;USB: 2 x USB 2.0 Type A (bottom)1 x USB 3.0 Type A (bottom) [Win7/10 only]1 x USB 2.0 Type A (top)Serial: 2 x RS-232 (bottom); COM1: 5 V on pin 9; COM2: 5/12 V on pin 91 x Mini-PCIe, half or full size slot [full size used for Wi-Fi];1 x CFast for SSD [Win 7/Win 10];1 x SD Card slot for SDHC card (WEC7)</td>
</tr>
<tr>
<td><strong>CONSTRUCTION</strong></td>
</tr>
<tr>
<td>Coated aluminum, no fan design</td>
</tr>
<tr>
<td><strong>OPERATING SYSTEM</strong></td>
</tr>
<tr>
<td>Windows Embedded Compact 7 or Android 4.4 on the same hardware for easy and smooth upgradability</td>
</tr>
<tr>
<td><strong>RHINO II</strong></td>
</tr>
<tr>
<td>Bluetooth Wireless Technology 4.0</td>
</tr>
<tr>
<td>Wi-Fi: IEEE 802.11n/g/b (2.4 GHz and 5 GHz); Cisco CCX v4; Wired Ethernet: 1 x GbE, RJ-45 (bottom)</td>
</tr>
<tr>
<td><strong>DECLARATIVE CAPABILITY</strong></td>
</tr>
<tr>
<td>1D linear imager White illumination 2D imager Green Spot technology</td>
</tr>
<tr>
<td><strong>POWER SUPPLY</strong></td>
</tr>
<tr>
<td>N/A</td>
</tr>
<tr>
<td><strong>TEMPERATURE</strong></td>
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<td>Operating: -20 to 50 °C / -4 to 122 °F</td>
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<td>Storage: -30 to 70 °C / -22 to 158 °F</td>
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<td><strong>IP RATING</strong></td>
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<td>IP65</td>
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<td><strong>INTERFACES</strong></td>
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<td>Main connector with USB 1.1 Host, USB 2.0 Hi-Speed Client, RS-232 up to 115.2 KbpsEthernet: via single-slot dock (external module)</td>
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<td><strong>INTERFACES</strong></td>
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</tr>
<tr>
<td><strong>CONSTRUCTION</strong></td>
</tr>
<tr>
<td>Coated aluminum, no fan design</td>
</tr>
<tr>
<td><strong>OPERATING SYSTEM</strong></td>
</tr>
<tr>
<td>Windows Embedded Compact 7 or Windows 10 IoT Enterprise 64 bit</td>
</tr>
</tbody>
</table>
SENSORS & SAFETY

S8 ADVANCED COMPACT SENSOR

S8 advanced sensor line offers extremely high performances in a very compact case, also in IP69K stainless steel versions. Because of its wide variety of optical functions the S8 is able to solve any application in automation Industry. Laser models allows to offer very high detection resolution and repeatability in object detection thanks its sharp and bright spot in combination with a very high switching frequency.

FEATURES & BENEFITS
- Compact dimensions
- Contrast and luminescence sensors
- Wide range of optic functions
- Very high resolution on LASER models
- IP69K stainless steel AISI 316L model

TIRES APPLICATIONS
- Tire detection and positioning
- Gripper robot arm for load control

S100 MINIATURE SENSOR

S100 miniature sensor is the suitable cost-effective solution for object detection in a large variety of applications. Because of its universal mounting system and the anti-tampering function is the right choice for automation Industry allowing a fast and simple installation. The IP67 mechanical protection and a complete set of standard optical functions allows to guarantee a very high reliability functionality.

FEATURES & BENEFITS
- Universal mounting holes
- Anti-tampering sensor (no adjustment)
- M8 connector and cable models
- PNP or NPN models with LIGHT/DARK selection by wire
- Plastic housing, IP67 mechanical protection

TIRES APPLICATIONS
- Conveyors
- Automatic warehousing

DS2 AREA SENSOR

DS2 line offers dimensional sensors with extended features and configurability for controls based on height or width measurement and object positioning. Because of its performances and configurability, DS2 allows to guarantee an accurate and reliability object measurement in automation Industry. An intuitive Graphic User Interface allows to program easily the entire system.

FEATURES & BENEFITS
- Measurement light array with IR parallel beams
- Controlled heights from 150 to 2100 mm / 5.9 to 82.6 in
- Resolution up to 6 mm / 0.2 in
- 5 m or 10 m / 16 or 32 ft operating distance
- PNP switching and 0-10 V analog outputs available

TIRES APPLICATIONS
- Conveyors
- Automatic warehousing
## SENSORS & SAFETY

### Power supply
- **S8 ADVANCED COMPACT SENSOR**: 10 to 30 VDC
- **S100 MINIATURE SENSOR**: 10 to 30 VDC
- **DS2 AREA SENSOR**: +24 VDC ± 20%

### Light emission
- **S8 ADVANCED COMPACT SENSOR**:
  - Red LED 660 nm (mod. S8…B/C/M/G/T)
  - RGB LEDs: blue 465 nm, green 520 nm, red 630 nm with automatic selection (mod. S8…W)
  - UV LED 375 nm (mod. S8…L)
  - Red Laser 645..665 nm (mod. S8…B/M)
- **S100 MINIATURE SENSOR**: Red LED 632 nm (mod. S100…B/C/D/M01)
- **DS2 AREA SENSOR**: IR LED 880nm

### Control height
- **S8 ADVANCED COMPACT SENSOR**: -150 to 1650 mm / 5.9 to 64.9 in
- **S100 MINIATURE SENSOR**: -150 to 1650 mm / 5.9 to 64.9 in
- **DS2 AREA SENSOR**: -150 to 1650 mm / 5.9 to 64.9 in

### Resolution
- **S8 ADVANCED COMPACT SENSOR**: 6 to 25 mm / 0.2 to 0.9 in
- **S100 MINIATURE SENSOR**: 6 to 25 mm / 0.2 to 0.9 in
- **DS2 AREA SENSOR**: 6 to 25 mm / 0.2 to 0.9 in

### Operating distance
- **S8 ADVANCED COMPACT SENSOR**:
  - Through beam: 0 to 25 m / 0 to 82.0 ft
  - Polarized retroreflective: 0.1 to 5 m / 0.3 to 16.4 ft
  - Diffuse proximity: 0 to 500 mm / 0.3 to 19.6 in
  - Contrast sensor: 10 mm / 0.3 in
- **S100 MINIATURE SENSOR**:
  - Through beam: 0 to 25 m / 0 to 82.0 ft
  - POLARIZED RETROREFLECTIVE: 0.1 to 5 m / 0.3 to 16.4 ft
  - DIFFUSE PROXIMITY: 0 to 500 mm / 0.3 to 19.6 in
- **DS2 AREA SENSOR**:
  - Through beam: 0 to 25 m / 0 to 82.0 ft
  - Retroreflective: 0.1 to 5 m / 0.3 to 16.4 ft
  - Diffuse proximity: 0 to 500 mm / 0.3 to 19.6 in

### Setting
- **S8 ADVANCED COMPACT SENSOR**: 8-turn distance adjustment trimmer (mod. S8…M53/M)
- **S100 MINIATURE SENSOR**: LIGHT / DARK mono-turn trimmer (mod. S8…B/C/F/T51)
- **DS2 AREA SENSOR**: Teach-in push button (mod. S8…M53/W03/W13/T53/U)

### Indicators
- **S8 ADVANCED COMPACT SENSOR**: Yellow OUTPUT/ALARM LED
- **S100 MINIATURE SENSOR**: Yellow OUTPUT LED
- **DS2 AREA SENSOR**: Yellow OUTPUT LED

### Output
- **S8 ADVANCED COMPACT SENSOR**: PNP or NPN
- **S100 MINIATURE SENSOR**: PNP or NPN
- **DS2 AREA SENSOR**: PNP, 0…10Vdc analog output

### Interface
- **S8 ADVANCED COMPACT SENSOR**: RS-485; Ethernet
- **S100 MINIATURE SENSOR**: RS-485, Ethernet
- **DS2 AREA SENSOR**: -

### Response time
- **S8 ADVANCED COMPACT SENSOR**: 1 ms (mod. S8…M53/M)
- **S100 MINIATURE SENSOR**: 2 ms (mod. S100…FG)
- **DS2 AREA SENSOR**: 2 ms (mod. S100…FG)

### Mechanical protection
- **S8 ADVANCED COMPACT SENSOR**: IP69K (Stainless Steel vers.), IP67
- **S100 MINIATURE SENSOR**: IP67 (EN60529)
- **DS2 AREA SENSOR**: IP65 (EN60529)

### Mechanical protection
- **S8 ADVANCED COMPACT SENSOR**: IP69K (Stainless Steel vers.), IP67
- **S100 MINIATURE SENSOR**: IP67 (EN60529)
- **DS2 AREA SENSOR**: IP65 (EN60529)

### Ambient light rejection
- **S8 ADVANCED COMPACT SENSOR**: according to EN 60947-5-2
- **S100 MINIATURE SENSOR**: according to EN 60947-5-2
- **DS2 AREA SENSOR**: according to EN 60947-5-2

### Ambients
- **S8 ADVANCED COMPACT SENSOR**: 0.5 mm / .001 in amplitude, 10 to 55 Hz frequency, for every axis (EN60068-2-6)
- **S100 MINIATURE SENSOR**: 0.5 mm / .001 in amplitude, 10 to 55 Hz (EN60068-2-6)
- **DS2 AREA SENSOR**: 0.5 mm / .001 in amplitude, 10 to 55 Hz (EN60068-2-6)

### Housing material
- **S8 ADVANCED COMPACT SENSOR**: ABS, Stainless Steel AISI 316L
- **S100 MINIATURE SENSOR**: ABS body, PMMA indicators cover
- **DS2 AREA SENSOR**: Stainless Steel AISI 316L

### Lens material
- **S8 ADVANCED COMPACT SENSOR**: window in PMMA; lens in PC
- **S100 MINIATURE SENSOR**: PMMA window
- **DS2 AREA SENSOR**: PMMA

### Operating temperature
- **S8 ADVANCED COMPACT SENSOR**: -10…+55°C
- **S100 MINIATURE SENSOR**: -25 to 65°C / -13 to 141 °F
- **DS2 AREA SENSOR**: -40 to 70 °C / -40 to 158 °F

### Storage temperature
- **S8 ADVANCED COMPACT SENSOR**: -20…+70°C
- **S100 MINIATURE SENSOR**: 50 g max. cable vers., 10 g max. connector vers.
- **DS2 AREA SENSOR**: 2 to 5Kg / 11.0 to 25
SAFETY LASER SENTINEL

LASER SENTINEL is the innovative solution for safe area scanning in a large variety of applications in automation and intra-logistic Industries. Because of its measurement filters, it can also work reliably in the harshest industrial environments. In addition to the basic safety function of providing a safe stop signal when a person is detected in the area, a number of important features have been implemented in order to respond to the diverse needs in the world of automation. An intuitive Graphic User Interface (GUI) allows the user to easily program the entire system as a whole, and the backup memory allows a very quick maintenance update without the need of downloading the program.

FEATURES & BENEFITS
- Easy programming of the system with intuitive Graphic User Interface
- Up to 4 scanners can work together without any need of external controller
- Speed monitoring and 70 switch areas for movable applications
- Safety area field up to 5.5 m / 18.0 ft radius over 275°
- Measurement data available over Ethernet

TIRES APPLICATIONS
- Robot cells
- Automated Guided Vehicles
- Palletizers/Depalletizers

SG4 BODY COMPACT SAFETY LIGHT CURTAIN

SG4 Safety light Curtain with integrated Muting function is suitable for hazardous area protection and access control in Intra-logistic Industry. Because of the integrated muting function, the SG4 can simplify and speed up the installation phases ensuring high reliability and cost savings. A fully integrated muting function is available to distinguish the material flow from an accidental passage of an operator.

FEATURES & BENEFITS
- 2, 3, 4 Beams for Body protection and access control
- Long operating distance up to 50 m / 164 ft
- Dip-switch configuration of Auto/Man, EDM, Coding
- Muting version with L or T integrated arms and lamp
- Easy and cost effective standard M12 connectors

TIRES APPLICATIONS
- Robot cells
- Palletizers/Depalletizers
### SAFETY LASER SENTINEL

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>EN61496-1</td>
</tr>
<tr>
<td>PL (EN ISO 13849-1)</td>
<td></td>
</tr>
<tr>
<td>SIL (IEC 61508)</td>
<td></td>
</tr>
<tr>
<td>Power supply</td>
<td>24 VDC ± 20%</td>
</tr>
<tr>
<td>Light emission</td>
<td>IR 905 nm</td>
</tr>
<tr>
<td>Protective height</td>
<td>-</td>
</tr>
<tr>
<td>Resolution</td>
<td>70 mm / 2.7 in</td>
</tr>
<tr>
<td>Angular resolution</td>
<td>0.1°</td>
</tr>
<tr>
<td>Scanning angle</td>
<td>275°</td>
</tr>
<tr>
<td>Operating distance</td>
<td>0.05 to 5.5 m / 0.1 to 18.0 ft (Safety zone) / 0.05 to 40 m / 0.1 to 131.2 ft (Warning zone)</td>
</tr>
<tr>
<td>Indicators</td>
<td>Display three colors [Red, Yellow and Green]</td>
</tr>
<tr>
<td>Safety Graphic User Interface</td>
<td>Safety status zone LED, Red/Green, interlock LED, yellow powered/sync LED, red safe break LED, green normal op LED</td>
</tr>
<tr>
<td>Safety output</td>
<td>2 OSSDs</td>
</tr>
<tr>
<td>Safety output current</td>
<td>0.25 A max / each OSSD</td>
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<tr>
<td>Standard output</td>
<td>1 (configurable)</td>
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<tr>
<td>Input</td>
<td>max 3 (configurable)</td>
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<tr>
<td>Response time</td>
<td>62 ms</td>
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<tr>
<td>Connection</td>
<td>M12 8 poles connector</td>
</tr>
<tr>
<td>Mechanical protection</td>
<td>IP 65 (EN 60529)</td>
</tr>
<tr>
<td>Ambient light rejection</td>
<td>according IEC-61496-1</td>
</tr>
<tr>
<td>Mechanical protection</td>
<td>according to IEC 61496-1 § 4.3.1: 5.4.4.1</td>
</tr>
<tr>
<td>Vibrations</td>
<td>IEC 60068-2</td>
</tr>
<tr>
<td>Shock resistance</td>
<td>According to IEC 61496-1 § 4.3.2 § 5.4.4.2</td>
</tr>
<tr>
<td>Housing material</td>
<td>Aluminum Alloy</td>
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<tr>
<td>Lens material</td>
<td>PC</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>0 to 50 °C / 32 to 122 °F</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-20 to 70 °C / -4 °F to 158 °F</td>
</tr>
</tbody>
</table>

### SG4 BODY COMPACT SAFETY LIGHT CURTAIN

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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</thead>
<tbody>
<tr>
<td>Type</td>
<td>EN61496-1</td>
</tr>
<tr>
<td>PL (EN ISO 13849-1)</td>
<td></td>
</tr>
<tr>
<td>SIL (IEC 61508)</td>
<td></td>
</tr>
<tr>
<td>Power supply</td>
<td>24 VDC ± 20%</td>
</tr>
<tr>
<td>Light emission</td>
<td>IR 880 nm</td>
</tr>
<tr>
<td>Protective height</td>
<td>515 mm / 20.2 in (2 beams) / 615 mm / 32.0 in / 915 mm / 36.0 or 47.8 in (4 beams)</td>
</tr>
<tr>
<td>Resolution</td>
<td>915 mm / 12.4 in (4 beams) / 415 mm / 16.3 in / 515 mm / 20.2 in (2 beams)</td>
</tr>
<tr>
<td>Angular resolution</td>
<td></td>
</tr>
<tr>
<td>Scanning angle</td>
<td></td>
</tr>
<tr>
<td>Operating distance</td>
<td>0.5 to 50 m / 1.6 to 164 ft (S version) / 0.5 to 3 m / 1.6 to 9.8 ft (L or T version)</td>
</tr>
<tr>
<td>Indicators</td>
<td>Yellow powered/sync LED, Red safe/ break LED, green normal op LED</td>
</tr>
<tr>
<td>Safety output</td>
<td>2 PNP outputs (2 NPN on request)</td>
</tr>
<tr>
<td>Safety output current</td>
<td>0.5 A max / each output</td>
</tr>
<tr>
<td>Standard output</td>
<td></td>
</tr>
<tr>
<td>Input</td>
<td></td>
</tr>
<tr>
<td>Response time</td>
<td>14 to 16 ms</td>
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<tr>
<td>Connection</td>
<td>M12 connector, 4 poles on Emitter</td>
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<tr>
<td>Mechanical protection</td>
<td>IP 65 (EN 60529)</td>
</tr>
<tr>
<td>Ambient light rejection</td>
<td>according IEC-61496-2</td>
</tr>
<tr>
<td>Mechanical protection</td>
<td>according to IEC 61496-3 § 5.4.4.1</td>
</tr>
<tr>
<td>Vibrations</td>
<td>According to IEC 61496-1 § 4.3.2 § 5.4.4.2</td>
</tr>
<tr>
<td>Shock resistance</td>
<td>0.35 mm / 0.01 in wide / 10 to 55 Hz frequency / 20 sweep for each axis 1octave/min (EN 60068-2-6)</td>
</tr>
<tr>
<td>Housing material</td>
<td>Painted aluminium (yellow RAL 1003)</td>
</tr>
<tr>
<td>Lens material</td>
<td>PMMA</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>0 to 55 °C / 32 to 131 °F</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-25 to 70 °C / -13 to 158 °F</td>
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