Datalogic has more than 40 years of experience in the sensors and safety sector, developing their first product, a Photoelectric Sensor, in 1972. Today, Datalogic is one of the largest manufacturers of sensor and safety products worldwide.

Datalogic is the market leader in Italy for photoelectric sensors and safety light curtains, ranking among the top-10 manufacturers in Europe by market share.*

Datalogic’s Sensors and Safety portfolio solves customer applications in Factory Automation, specializing in Processing and Packaging machinery, and Automated Material Handling Systems related to Manufacturing Industries such as Automotive, Electronics, Pharmaceutical, Food & Beverage, Paper and Printing, Woodworking, Ceramics, Glass, Textiles etc.

*(source: based on VDC 2010 - 2011)
SAFETY PRODUCTS

**SAFETY PRODUCT RANGE**

- **Dimensional sensors** for height/width measurement and object positioning
- **TOF distance sensors** for measurement and object positioning
- **Maxi and Compact sensors** for object detection
- **Contrast and Luminescence sensors**
- **Area sensors**
- **Safety Light Curtains** for body protection with Mut ing function
- **Safety Light Curtains**

**SAFETY LIGHT CURTAINS**

- Type 2 and Type 4

**Controller**
- Light beam
- Module
- Relay unit
- Accessories

**Base / Extended Functionalities**

- **Auto / Manual restart**
- **Exit device monitoring**
- **Muting**
- **Override**
- **Blanking**
- **Cascadable**

**High / Low Resolution**

- **Finger protection**
- **Hand protection**
- **Body protection**
- **Presence control**
**Subminiature sensors**

**SM-ALL**

The smallest photoelectric sensor with all universal optic functions. Detection of hard to reach objects or in small spaces.

**TECHNICAL DATA**

- Fixed focus proximity 15, 20, 30, 50cm
- Retroreflective 1.5 m and Polarised 1 m
- Through-beam 2 m
- NPN or PNP version with NO-NC outputs
- 4 wires connection with 2m Cable
- IP67 Plastic subminiature case

**APPLICATIONS**

- Processing and Packaging machinery
- Electronics assembling
- Small appliance and vending machines

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**Miniature sensors**

**S3Z**

High performance in standardized miniature housing. Replaces larger sensors and fits in limited space in smaller machinery.

**TECHNICAL DATA**

- Diffuse proximity 15 or 70 cm
- Background suppression Red LED or Laser 50-300 mm
- Polarised RRR 4 m, Coaxial for Trasp. 2 m, Laser 10 m
- Through-beam 15 m and Laser 30 m
- 3 wire connection with 2m Cable or M8 connector
- IP67 Plastic miniature case
- M3 threaded holes on the front side

**APPLICATIONS**

- Processing and Packaging machinery
- Electronics assembling
- Small machinery and access control

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**Miniature sensors**

**S45**

High performance sensor with teach-in regulation and rugged plastic housing. All-in-one sensor family with LED and Laser emission for easy mounting and installing.

**TECHNICAL DATA**

- RED and Laser emissions
- Precise risk free laser class 1 emission
- Diffused LED proximity 800 mm
- Background Suppression 400 mm
- Retroreflective Laser 15 m / LED 7 m
- Through beam Laser 20 m / LED 15 m
- IP69K housing
- 2m Cable or MB 4 connector version
- PNP or NPN output with remote teach-in input

**APPLICATIONS**

- Processing and Packaging machinery
- Cosmetic and Pharmaceutical industry
- Electronics assembling
- Conveyor lines, material handling

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**Subminiature sensors**

**SM-ALL**

The smallest photoelectric sensor with all universal optic functions. Detection of hard to reach objects or in small spaces.

**APPLICATIONS**

- Packaging and labeling machinery
- Print and apply systems

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**Miniature sensors**

**S3Z**

High performance in standardized miniature housing. Replaces larger sensors and fits in limited space in smaller machinery.

**TECHNICAL DATA**

- Dynamic or static teach models
- Slot size 3mm
- High resolution up to 2mm label gap
- M8 connector with PNP or NPN output and external teach-in
- Rugged and sturdy aluminium housing

**APPLICATIONS**

- Detection of transparent, opaque labels, metallic ink label
- Double sheet detection
- Adhesive surface detection

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**Contrast sensors**

**TL46**

High resolution, White, Red or RGB emission, very fast response time. Performs precisely in packaging machinery and synchronization based mark detection, even when used in extremely fast processes.

**TECHNICAL DATA**

- Operating distance 6-12mm (80mm with acc. lens)
- Bright light emission with Red, White, or RGB LED
- Mark/Background automatic, manual and dynamic setting
- Trim or Teach-in setting with 4 digit display version
- Very fast switching frequency 15, 20, 25 or 30 kHz
- Configurable NPN/PNP and 0-5 V analogue output
- Standard metal case with IP67 protection and IP69K (S40W)

**APPLICATIONS**

- Packaging and labeling machinery
- Food & Bev., Cosmetic, Pharma industry
- Printing machinery
**Miniature sensors**

**S100**

Universal Miniature Photoelectric Sensor

**Cost saving:** best price on the market

**Space saving:** standard miniature dimension and universal mounting

**Time saving:** quick and easy mechanical and electrical installation

**APPLICATIONS**

- Processing and Packaging machinery
- Conveyor lines, material handling
- Automated warehousing

**TECHNICAL DATA**

- Through beam 12m
- Retroreflective 7m
- Polarized retroreflective 3m and 5.5m
- Diffuse proximity 30 and 50cm
- Fixed focus 70cm
- Background suppression 100mm
- NPN or PNP output with L/D input
- 2m cable or M8 connector version
- IP67 plastic miniature case
- M3x4 slotted holes on the back side
- M3 threaded holes on the front side

**Compact sensors**

**S8**

Extremely high performance

Solves difficult detection applications (i.e. target objects that are too small, too fast, too clear, too shiny)

**APPLICATIONS**

- Food, Cosmetic and Pharmaceutical Industry
- Electronics assembling

**TECHNICAL DATA**

- Background suppression 50-300mm, Laser 20-200mm
- Background suppression for transparent objects with reflective background
- Polarised retroreflective 5m, Laser 10m, Coaxial for transparent objects 2m
- RGB Contrast sensor 6-12mm, 25kHz switching freq.
- UV Luminescence sensor 10-30mm, 2kHz switching freq.
- NO-NC outputs with 2m Cable or M8 connector
- IP67 Plastic case and IP69K stainless steel version
- EcoLab and Diversey certification

**Compact sensors**

**S62**

50x50 Standard universal sensor with improved performance and pricing

Standardization of the same 50x50mm housing, mounting holes, installation and wiring for all optic functions

**APPLICATIONS**

- Processing and packaging machinery
- Conveyor lines, material handling
- Automotive assembly, intra-logistics

**TECHNICAL DATA**

- Diffuse proximity 90 or 200cm, Laser 90cm
- Background suppression 30, 60, 120, 200cm, Laser 15, 35cm
- Retroreflex 13m, Polarized 8m, Laser 20m
- Through beam 25m
- 10-30 Vdc version with NO-NC, NPN or PNP output
- Multi-voltage 24-240Vac/24-60Vdc with Relay output
- 2m cable or M12 rotatable connector

**Luminescence sensors**

**LD46**

UV high power emission LED with high sensitivity

Precise packaging machinery synchronization or material sorting and selection based on luminescent “invisible” mark detection

**APPLICATIONS**

- Packaging and labeling machinery
- Food, Cosmetic and Pharma industries
- Ceramic tiles selection and sorting
- Wood working

**TECHNICAL DATA**

- High power UV light emission at 375 nm wavelength
- Operating distance 10-20, 20-40, or 30-50mm
- Teach-in setting and manual threshold adjustment
- 5-segments bar graph for sensitivity level indication
- Fast response time 250µs and switching freq. 2kHz
- NPN and PNP outputs and and 0-5 V analogue output
- Standard metal case with IP67 protection

**Area sensors**

**AS1/DS1**

High resolution area sensor

Detection and measurement of small objects crossing the area, even in a random positions

**APPLICATIONS**

- Food, Cosmetic and Pharma industries
- Electronics and mechanical assembly
- Conveyor lines and sorting systems

**TECHNICAL DATA**

- AS1 Area Sensor for small object detection
- DS1 Light Array for small object measurement
- Minimum object detection Ø 6mm or flat 0.2x75mm
- Minimum measurement resolution 7mm or 4mm
- Heights ranging from 100mm (16 beams) to 300mm (48 beams)
- Standard distance 2m and Long distance up to 4m
- PNP switching output and 0-10 V analog output

**Dimensional sensors**

**DS2**

Dimensional sensor with extended controlled heights

Set controls based on height or width measurement and object positioning

**APPLICATIONS**

- Secondary Packaging eg. cartons
- Automated vertical warehouses
- Automotive assembly eg. paint shop
- Non-LFT measurement in logistics

**TECHNICAL DATA**

- Measurement light array with 8 parallel beams
- Controlled heights from 150 to 2400mm (n x 150mm)
- Standard resolution 25mm, high resolution 6mm
- Standard distance 5m and Long distance 10m
- PNP switching output with configurable function
- 0-10 V analog output with configurable function
- RS-485 or Ethernet port and Graphic User Interface

**AS1 Area Sensor for small object detection**

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- PNP switching output and 0-10 V analog output

**APPLICATIONS**

- Food, Cosmetic and Pharma industries
- Electronics and mechanical assembly
- Conveyor lines and sorting systems
**Long distance sensor based on TOF**

Accurate controls based on a target object distance and improved cost saving

**Applications**

- Packaging end of line
- Paper reel unwinding control
- Automated warehousing
- Trans-elevator and crane positioning
- Automotive assembling lines
- Non-LFT measurement in logistics

**Technical Data**

- Time Of Flight (TOF) sensor with Red Laser emission
- Detection and measurement range up to 10 or 20m
- 1mm resolution/repeatability and 7mm accuracy
- 4-20mA or 0-10V scalable analog output and 2 push-pull digital outputs
- RS485 serial interface
- Built-in graphic display and push buttons
- Standard M12 8-poles connector
- IP67 compact metal housing

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**Fiber Optic Amplifiers**

**S7/S70**

High resolution, fiber optic sensor detection of small objects through fiber optic cable, even in confined spaces and high temperature environments. Sensor can be installed at distance far from detection object

**Applications**

- Processing and Packaging machinery
- Electronics assembly
- Pharmaceutical industry

**Technical Data**

- Diffuse fiber optics up to 500mm
- Through beam fiber optics up to 1800mm
- Red or White LED emission for contrast detection
- Double 4-digit display
- 4-digit display and teach-in or trimmer setting
- 10 bits (1024 points) or 12 bits (4096 points) resolution
- Switching Freq. 1kHz, Fast 5kHz, Ultra-fast 10kHz and 50kHz
- NPN or PNP output with 2m cable or MB connector
- I/O link connection

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**Maxi sensors**

**S300-PA/PR**

Heavy duty, multi-voltage sensors with terminal block and internal relay. Durability for integration in outdoor applications and harsh environments

**Applications**

- End-of-line packaging, palletizers
- Outdoor or indoor gates control
- Manufacturing plants

**Technical Data**

- Diffuse proximity 2m (-PA), 5m (-PR)
- Background suppression 2m (-PA), 2.5m (-PR)
- Polarized retroreflex 7m (-PA), 22m (-PR)
- Through beam 50m (-PA), 60m (-PR)
- 10-30 Vdc version with NPN or PNP outputs
- Multi-voltage with Relay output and terminal block
- Configurable timing function for turn-ON/OFF delay
- IP67 plastic case, fiber glass reinforced

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**M18 tubular sensors**

**S15**

Short barrel and IP69K protection plastic or stainless steel case. Space and cost saving, performs in harsh environments including in water-jets and aggressive cleaning agents

**Applications**

- Processing and Packaging machinery
- Assembly and conveyor lines

**Technical Data**

- Diffuse proximity 10, 35, or 100cm, fix focus 5cm
- Background suppression 40-120mm
- Retroreflex 5m, Polarised 4m, for Transparent 1m
- Through beam 20m
- L/D input, 2m Cable, M12 connector, or pig-tail vers.
- IP69K Plastic or Stainless steel case
- Johnson Diversey certification for industrial detergents

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**M18 tubular sensors**

**S50/S51**

Standardization of the same M18 housing with mounting holes, installation and wiring for all optic functions. Further cost saving with S51 basic line

**Applications**

- Processing and Packaging machinery
- Assembly and conveyor lines
- Automatic material handling
- Automated warehousing

**Technical Data**

- Diffuse proximity 10, 40, or 70cm, and Laser 35cm
- Fix-focus 100mm and Background suppr. 50-100mm
- Polarised RRX 4m, Laser 16m, for Transparent 1m
- Through-beam 20m and Laser 60m
- Contrast sensor 10mm, Luminescence sensor 20mm
- 2m Cable or M12 connector with NO-NC outputs
- Axial or Radial optics, Plastic flat or Metal M18 case

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**Fiber Optic Amplifiers**

**S7/S70**

High resolution, fiber optic sensor detection of small objects through fiber optic cable, even in confined spaces and high temperature environments. Sensor can be installed at distance far from detection object

**Applications**

- Processing and Packaging machinery
- Electronics assembly
- Pharmaceutical industry

**Technical Data**

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- Through beam fiber optics up to 1800mm
- Red or White LED emission for contrast detection
- Double 4-digit display
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- Through beam 50m (-PA), 60m (-PR)
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- Polarised RRX 4m, Laser 16m, for Transparent 1m
- Through-beam 20m and Laser 60m
- Contrast sensor 10mm, Luminescence sensor 20mm
- 2m Cable or M12 connector with NO-NC outputs
- Axial or Radial optics, Plastic flat or Metal M18 case
**OPTICAL ROTARY ENCODERS**

**Incremental encoders**

**ENC41/ENC58**

Versatile and flexible incremental encoders with compact and standard dimensions. Hollow or solid shaft and universal output circuit.

**Applications**

- Working and assembly lines
- Packaging machinery
- Light conveyors

**Technical Data**

- Plastic or aluminium housing Ø41mm and Ø58mm
- Hollow or solid shaft
- Resolution from 1 to 10000 PPR
- 1.5m cable connection
- ABO/ABO output signals
- Smart Push-Pull & Line-Drive output
- Power supply 5 – 30 Vdc

**Programmable incremental encoders**

**IEP58**

Programmable incremental encoder reduces storage cost and downtime with to customer specific programming.

**Applications**

- Automated machinery
- Conveyor lines

**Technical Data**

- Standard housing Ø58mm
- Resolution from 1 to 16384 PPR
- 1.5m cable connection
- ABO/ABO output signals
- Smart Push-Pull & Line-Drive output
- Power supply 5 – 30 Vdc

**Absolute encoders**

**AST58/AMT58**

Compact optical single and multi-turn encoder. Extremely high accuracy. Serial interface SSI up to 25 bit. Modular fieldbus Profinet, Profibus, EtherCat, DeviceNet, CanOpen up to 30 bit.

**Applications**

- Motion control
- Automated machinery
- Length measurement/positioning

**Technical Data**

- Aluminium anticorodal metal case Ø58mm
- Solid shaft Ø6 or 10mm, hollow shaft Ø15mm
- M12, M23, or 1.5m cable connection
- Power supply 7.5 – 34 Vdc

**COMPLEMENTARY PRODUCTS**

**Sensors Accessories**

- High efficiency reflectors for longer operating distance
- Micro-prismatic reflectors for high resolution detection
- High temperature, Extra-flexible, High efficiency fibers
- Fiber optics light array, Fiber units with focusing lens
- Cables with axial or right angle M8 or M12 connectors
- Plastic support and metal bracket for sensor mounting