

DATALOGIC - VISION SENSOR DATAVS2 AOR

DATAVS2-06DEAOR
 Vision Sensor, 6mm lens, ADV Object recognition, Red LED



- 360° pattern recognition
- 8 different controls
- Memory for up to 20 different inspections
- 4 outputs

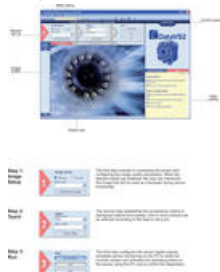
Product description

DataVS2 is a series of Vision sensors for flexible solutions for machine applications.

The sensor is complete with optics, red LED lighting and electronics in a compact housing. The parameters in the sensor are set via PC through Ethernet communication. The software comes with the sensor and is developed to lead the user step by step through parameter setting. DataVS2 is available in three different versions with different control instruments.

Advanced Object recognition AOR - Has a control instrument for 360° pattern recognition.

.Logic functions for that are connected between different control instruments and outputs such as: AND, OR, NOT, NAND, NOR etc.



Technical data

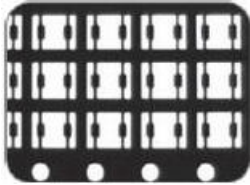


| | |
|------------------------------------|--|
| Supply voltage | 24 V DC $\pm 10\%$ |
| Ripple | 1Vpp max. with lighting 2Vpp without lighting |
| Current consumption | 100 mA at 24 VDC (without lighting) |
| Output type | 4 PNP |
| Output current | 100 mA max. |
| Resolution | 640x480 (VGA) |
| Network interface | M12 4-pole Ethernet 10/100 Mbps |
| Interface external lighting | Strobe signal (24 V PNP N.O) |
| Frame rate | 60 fps |

| | |
|-------------------------------|--|
| optics | integrated (6 mm/8 mm/12 mm/16 mm) |
| Indication | 4 LED |
| Connection | M12 8-pole A-coded M12 4-pole D-coded |
| IP-class | IP50 |
| Encapsulation material | Aluminium alloy/ABS |
| Weight | 125 g |
| Working temperature | -10 to +50 °C |
| Storage temperature | -25 to +70 °C |

Control instruments



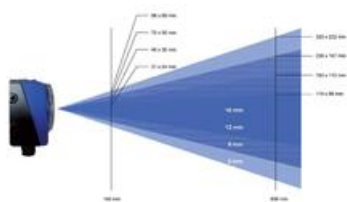
| Control | Function | Applications | Image |
|----------------------|--|--|-------|
| Pattern Match | Search for a sample within a specified range | <ul style="list-style-type: none"> • Packaging: check of logo • Installation: product-orientation • Automation of post: stamp control | |
| Contour Match | Control of form | <ul style="list-style-type: none"> • Metal working: integrity check • Foodstuffs: control of form | |
| Position | Control of limit position of the object | <ul style="list-style-type: none"> • Bottling: level control • Foodstuffs: control of label position | |
| Width | Measures the object's width | <ul style="list-style-type: none"> • Installation: control of plastic parts • Woodworking industry: measurement of branch thickness | |

| | | | |
|-------------------|---------------------------------------|--|---|
| Counting | Counts number of objects along a line | <ul style="list-style-type: none"> • Electronics: counting components • Pharmaceutical industry: Counting units |  |
| Contrast | Calculation of contrast | <ul style="list-style-type: none"> • Foodstuffs: checking presence of date and consignment label • Metal working: Check of laser marking |  |
| Brightness | Calculation of luminance | <ul style="list-style-type: none"> • Bottling: checking presence of cap • Packaging: counting objects |  |

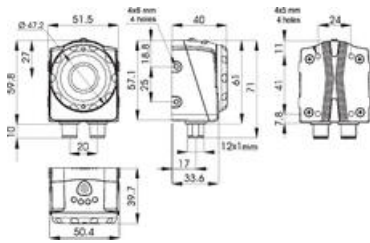
Read field

Read field

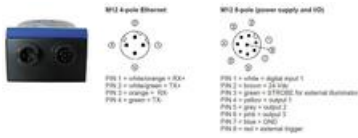
| Working distance (mm) | Read field (Width x Height) in mm | | | |
|-----------------------|-----------------------------------|-------------------|-------------------|-------------------|
| | DATAVS2-16-DE-xxx | DATAVS2-12-DE-xxx | DATAVS2-08-DE-xxx | DATAVS2-06-DE-xxx |
| 50 | - | 17 x 12 | 25 x 20 | 42 x 30 |
| 80 | - | 25 x 20 | 40 x 30 | 60 x 41 |
| 110 | - | 33 x 25 | 55 x 40 | 80 x 55 |
| 140 | 31 x 24 | 45 x 35 | 70 x 50 | 98 x 69 |
| 170 | 39 x 29 | 53 x 38 | 85 x 60 | 118 x 83 |
| 200 | 46 x 34 | 60 x 50 | 100 x 70 | 138 x 92 |
| 300 | 70 x 53 | 90 x 65 | 145 x 103 | 201 x 140 |
| 400 | 94 x 71 | 121 x 82 | 186 x 132 | 265 x 189 |
| 500 | 118 x 89 | 150 x 110 | 236 x 167 | 330 x 232 |
| 600 | 143 x 107 | 185 x 130 | 282 x 232 | 385 x 270 |



Dimensions



Connection



Order number

| Order number | Description | Output |
|-----------------|-------------------|-----------|
| DATAVS2-06DEAOR | 6 mm lens, AOR | 4 outputs |
| DATAVS2-08DEAOR | 8 mm lens, AOR | 4 outputs |
| DATAVS2-12DEAOR | 12 mm lens, AOR | 4 outputs |
| DATAVS2-16DEAOR | 16 mm lens, AOR | 4 outputs |
| DATAVSCVRJ45D03 | Ethernet cable 3m | |

Download

| | |
|-------------------|--------------------------|
| Data sheet | Download |
| Manual | Download |

Specifications

| | |
|-------------------------------|---|
| Frame Rate | 60 |
| Interface | Ethernet 10/100 Mbs (4-pole M12 -connector) |
| IP Class | IP50 |
| Optics | 6mm integrated lens |
| Output current max | 0,1 |
| Power consumption max | 0,1 |
| Resolution | 640x480 (VGA) |
| Temperature range from | -10 |
| Temperature range to | 50 |
| Voltage DC max | 24 |

The Advanced Object Recognition (AOR) models integrate new important functionalities, including:



360° Pattern Match Locator
Object detection independent from rotations.



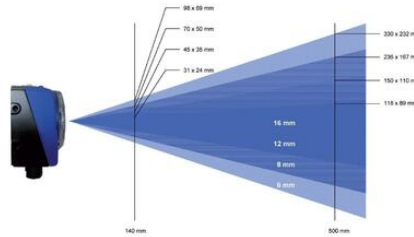
Logical tools
Possibility to combine the results of the single tools through boolean operator (AND, OR, NOT, etc.)



Advanced Ethernet
Current inspection results available also on Ethernet communication.



Speed-up
High recognition speed thanks to the management of reduced resolution and TURBO mode.



360° Pattern match



Step 1: Image Setup



The first step consists in connecting the sensor and configuring the image quality parameters. When the desired results are obtained, the user can memorise the image that will be used as a template during sensor functioning.

Step 2: Teach



The second step establishes the acceptance criteria to distinguish objects from wastes. One or more contours can be selected according to the task to carry out.

Step 3: Run



The third step configures the sensor digital outputs, simulates sensor functioning on the PC to verify the controls chosen and activates the operating phase on the sensor using the PC only to control the diagnostics.



M12 4-pole Ethernet

- PIN 1 = white/orange = RX+
- PIN 2 = white/green = TX+
- PIN 3 = orange = RX-
- PIN 4 = green = TX-

M12 8-pole (power supply and I/O)

- PIN 5 = white = digital input 1
- PIN 2 = brown = 24 VDC
- PIN 3 = green = STROBE for external illuminator
- PIN 4 = yellow = output 1
- PIN 5 = grey = output 2
- PIN 6 = pink = output 3
- PIN 7 = blue = GND
- PIN 8 = red = external trigger

