

DATALOGIC - VISION SENSOR DATAVS2 OBJ

DATAVS2-06DEOBJ

Vision Sensor, 6mm lens, Object recognition, Red LED

- 7 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 four different versions with different control instruments.

Object Recognition OBJ - Is the base model and compares parts against a basic image. It has 7 different control instruments to work with.



Technical data





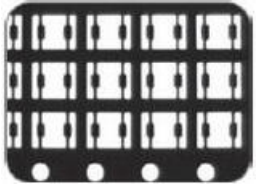
| | |
|------------------------------------|--|
| Supply voltage | 24 V DC $\pm 10\%$ |
| Ripple | 1Vpp max. with lighting 2Vpp without lighting |
| Current consumption | 100 mA at 24 VDC (without lighting) |
| Output type | 4 PNP |
| Output current | 100 mA max. |
| Resolution | 640x480 (VGA) |
| Network 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

Object recognition

Seven different controls cover most applications

| 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

- Foodstuffs: checking presence of date and consignment label
- Metal working: Check of laser marking

**Brightness**

Calculation of luminance

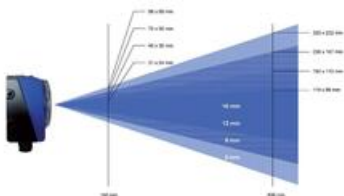
- Bottling: checking presence of cap
- Packaging: counting objects



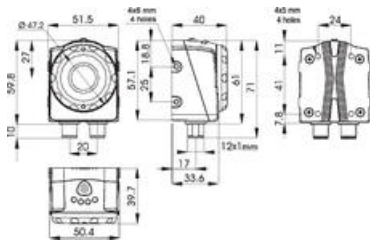
Read field

Read field

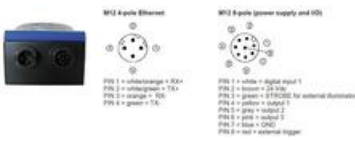
| Working distance (mm) | Read field (Width x Height) in mm | | | |
|-----------------------|-----------------------------------|-------------------|-------------------|-------------------|
| | DATAVS2-16-DE-xxx | DATAVS2-12-DE-xxx | DATAVS2-08-DE-xxx | DATAVS2-06-DE-xxx |
| 50 | - | 17 x 12 | 25 x 20 | 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 |
|-----------------|-------------------|-----------|
| DATAVS2-06DEOBJ | 6 mm lens, OBJ | 4 outputs |
| DATAVS2-08DEOBJ | 8 mm lens, OBJ | 4 outputs |
| DATAVS2-12DEOBJ | 12 mm lens, OBJ | 4 outputs |
| DATAVS2-16DEOBJ | 16 mm lens, OBJ | 4 outputs |
| DATAVSCVRJ45D03 | Ethernet cable 3m | |

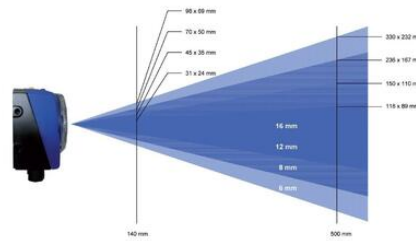
Download

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

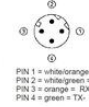
Specifications

| | |
|-------------------------------|---|
| 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 |
| Temperature range from | -10 |

| | |
|----------------------|-----|
| Temperature range to | 50 |
| Voltage DC max | 24 |
| Voltage DC min | 24 |
| Voltage Tolerance | 10% |

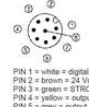


M12 4-pole Ethernet



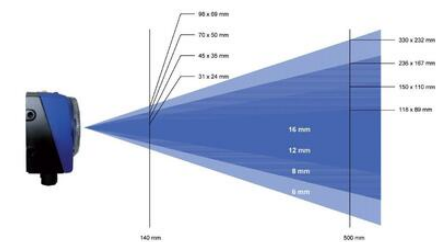
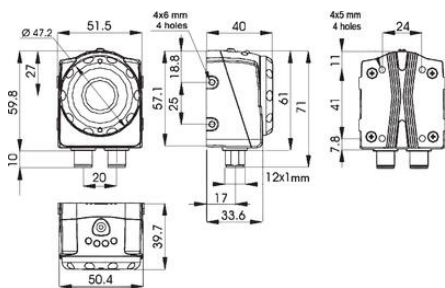
PIN 1 = white/orange = RX+
PIN 2 = white/green = TX+
PIN 3 = orange = RX-
PIN 4 = green = TX-

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



PIN 1 = 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

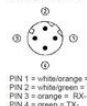
- Step 1: Image Setup**
The first step consists in connecting the sensor and configuring the image quality parameters. When the desired results are obtained, the user can memorize the image that will be used as a template during sensor functioning.
- Step 2: Teach**
The second step establishes the acceptance criteria to distinguish objects from wastes. One or more controls 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 diagnosis.



- 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 memorize 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 controls 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 diagnosis.

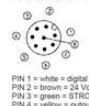


M12 4-pole Ethernet



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 1 = 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

