



**VISION**

**VSM – Vision Sensor Monitor**



## 1. General Overview

Dear Sirs,  
we are glad to announce the official release of **VSM** (Vision Sensor Monitor), the new monitoring device compatible with all DataVS2 vision sensor models.



**VSM** is a device able to display elaborated images together with inspection results. It also allows to change the running inspection as well as to fine-tune the vision sensor functioning parameters on-the-fly.

The device integrates a 3.5” LCD color display and 8 push buttons. It features a standard TCP/IP Ethernet interface thus it can be connected either directly to a specific vision sensor or to a Local Area Network (LAN) where more DataVS2 have been previously installed. Thanks to the accessories included in the package, the monitor can be easily installed on a DIN rail or in a panel.

**VSM** can store up to 20 different inspections in its built-in memory. These slots can be used in order to backup sensor configurations or to extend the DataVS2 capability to manage different product typologies.

Thanks to this wide range of functionalities, **VSM** represents an excellent and complete Human-Machine Interface (HMI) ideal for automated production lines attended by operators.



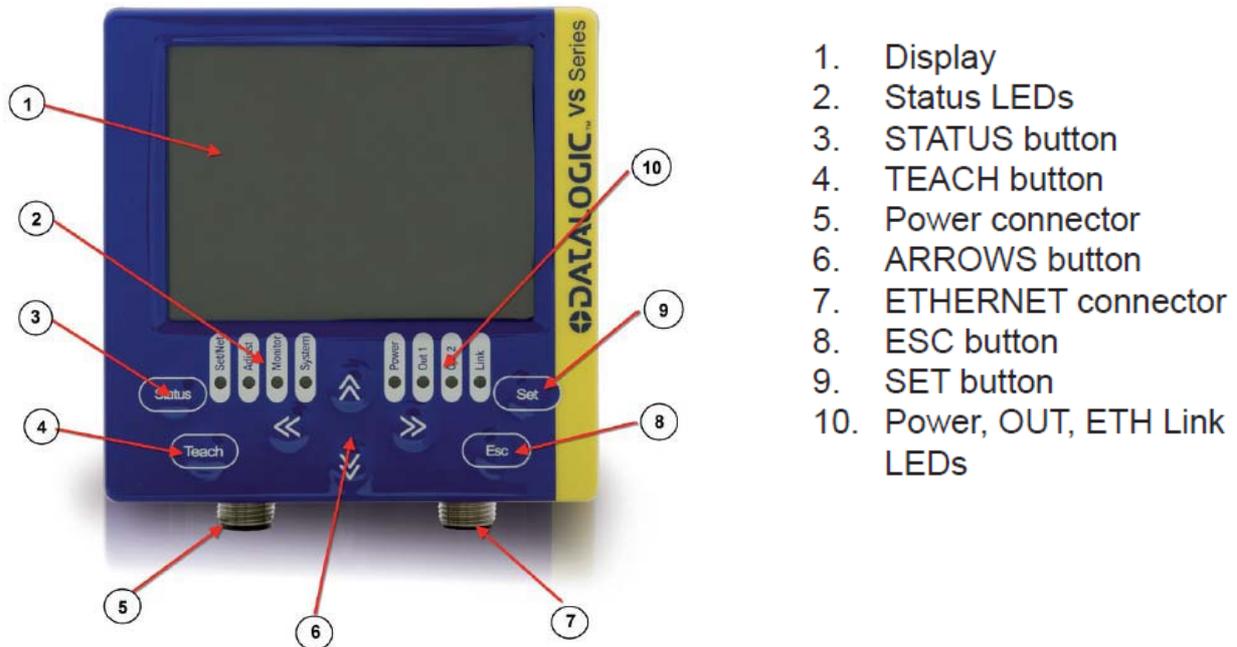
## 1.1 Product Highlights

- Compatibility with all DataVS2 vision sensors  
VSM can be connected with every DataVS2. OBJ (Basic), AOR (Advanced) and ID (Identification) models are all compatible with the monitor. Customers have just to make sure that the firmware installed on the vision sensor is ST2.3.0.10 or higher.
- 3.5" LCD color display  
The 3.5" display is able to visualize good quality images together with inspection results and ROIs. This feature allows to get an immediate and intuitive feedback about the quality verification and the device behavior.
- Standard TCP/IP Ethernet connectivity  
The Ethernet interface based on TCP/IP addressing allows to easily install the device in a LAN or to connect it directly to a single DataVS2. Moreover, it also permits to link the monitor to a PC in order to update the firmware or to download/upload inspections from/to VSM.
- Image and result visualization  
Several displaying modes are available on VSM. The user can select the preferred solution among different options (e.g. all the pictures with results, statistics, zoom mode, display on condition, etc...)
- Inspection switching and parameter fine-tuning  
VSM is not just a monitoring device but it also allows either to change the running inspection or to adjust the settings of the current configuration. This simplifies the management of production changes which now can be done directly by the operator with no need of external PC or PLC.
- 20 memory slots  
In the VSM built-in memory up to 20 different inspections can be stored. These slots can be used in order to completely backup DataVS2 configurations or to extend the device capability to manage different product types.

## 2. Technical Data and Parameters

### 2.1 VSM at a glance

VSM features a 3.5" LCD color display, 8 push buttons and 8 signalling LEDs.



In the bottom part, two industrial M12 4-pole connectors are available: one is for power supply whereas the second is for Ethernet communication.

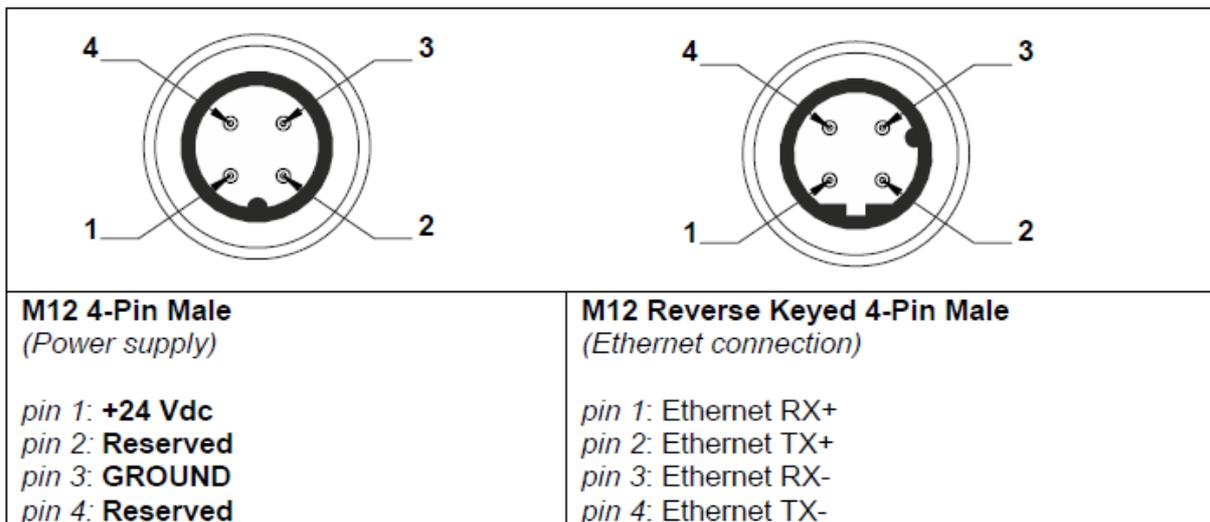




Two white clips positioned in the back part of the monitor allow to mount the device either on a DIN-rail or in a panel.



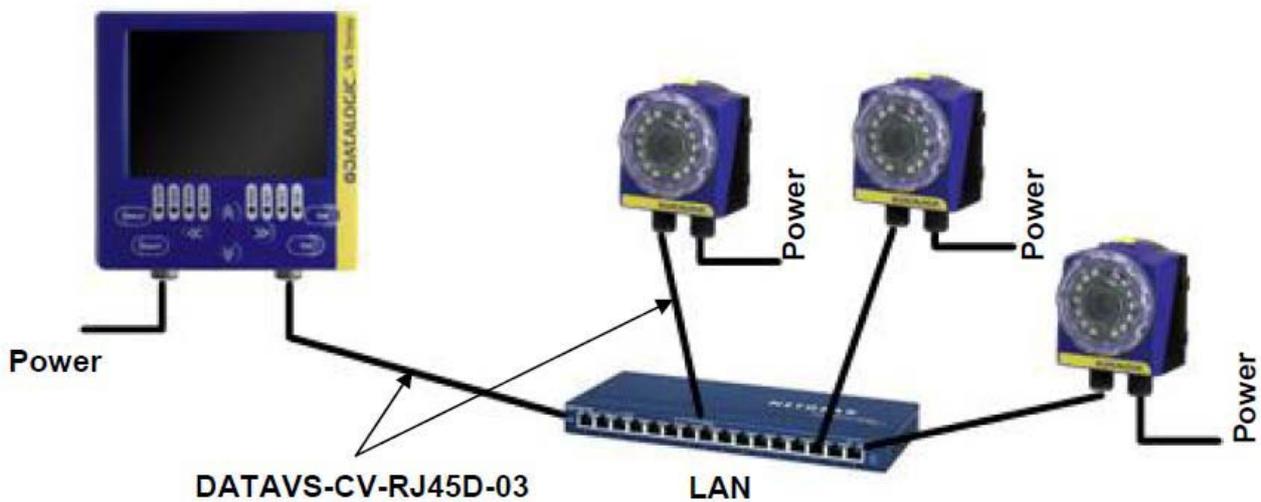
## 2.2 Connection



VSM can be connected either directly to a DataVS2 or to a LAN where more vision sensors have been previously installed.



*Point-to-point direct connection*



*LAN connection*



### Connection note

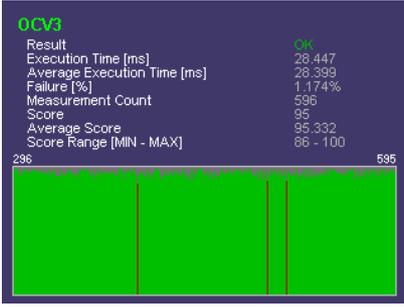
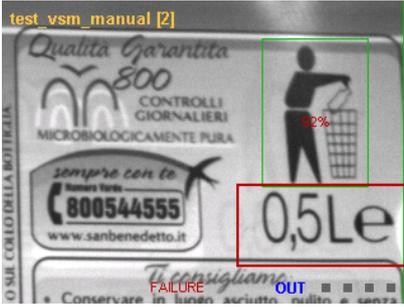
The communication between DataVS2 and VSM is based on Ethernet TCP/IP interface. When DataVS2 is connected to a VSM, it is not able to manage the communication (either sending results or receiving commands) with another client (e.g. PC, PLC) contemporaneously.

## 2.3 Main functionalities

The VSM main functionalities are basically three:

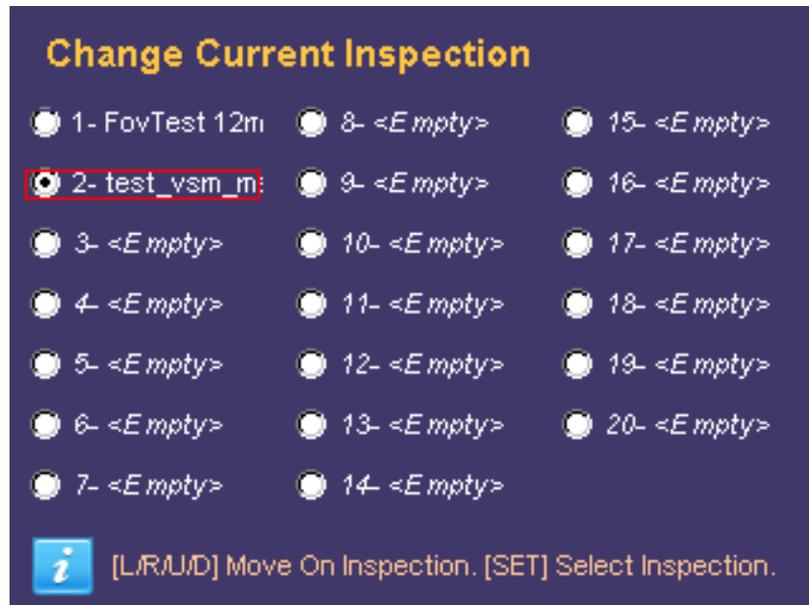
a. Image and result visualization

VSM is able to display all the pictures acquired and elaborated by the connected DataVS2. Several different monitoring options are available, e.g.:

Name	Picture	Description
<b>Standard</b>	 <p>The image shows a product label for 'San Benedetto' water. It features a barcode with the number '6666 7036', a volume indicator '0,5Le', and a status indicator 'OUT'. A red box highlights the volume text, and a green box highlights the barcode area. The word 'FAILURE' is visible at the bottom left.</p>	<p>Acquired picture with ROIs, results and OUTPUT status.</p>
<b>Statistics</b>	 <p>The image displays a statistics window titled 'OCV3'. It lists the following metrics:</p> <ul style="list-style-type: none"> <li>Result: OK</li> <li>Execution Time [ms]: 28.447</li> <li>Average Execution Time [ms]: 28.399</li> <li>Failure [%]: 1.174%</li> <li>Measurement Count: 595</li> <li>Score: 95</li> <li>Average Score: 95.332</li> <li>Score Range [MIN - MAX]: 86 - 100</li> </ul> <p>Below the text is a green bar chart with a scale from 296 to 595.</p>	<p>Statistics about inspection results and execution time.</p>
<b>Display on condition</b>	 <p>This image is identical to the 'Standard' view, showing the product label with ROIs and status indicators.</p>	<p>Acquired picture with ROIs, results and OUTPUT status. <i>(Only condition compliant pictures are displayed)</i></p>
<b>Zoom</b>	 <p>The image is a 2x zoomed-in view of the product label, focusing on the '0,5Le' volume indicator and the 'OUT' status indicator.</p>	<p>2x Zoom mode</p>

b. Inspection switching

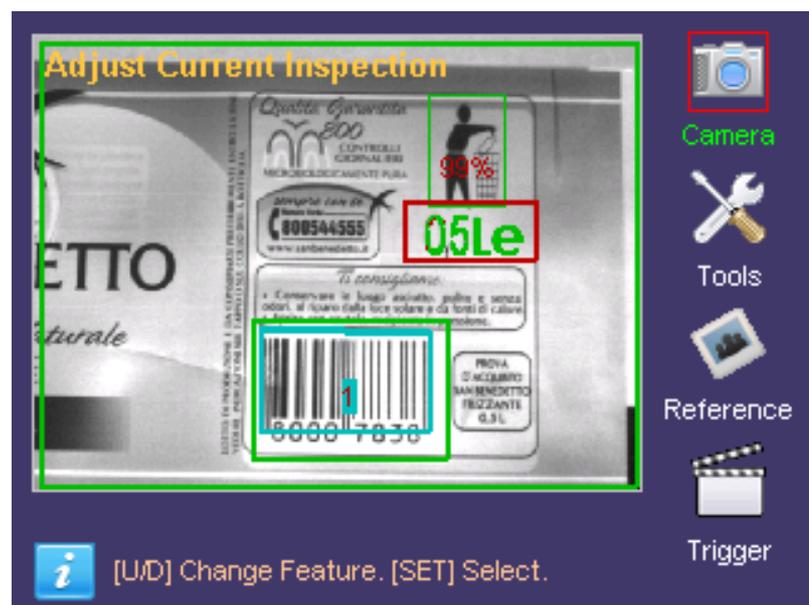
VSM allows to switch the running inspection on the connected DataVS2.



Through a dedicated panel, the operator can easily recall a configuration previously stored on DataVS2 memory and make it run. This functionality is very useful especially when vision sensors are installed on machines which have to manage different products or lots that require different configurations.

c. Parameter fine-tuning

VSM also allows to change parameters of the running inspection on-the-fly.





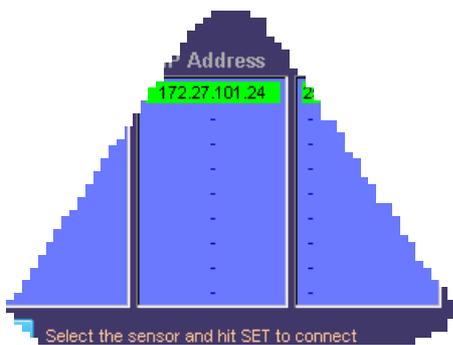
Operators have the possibility to adjust and fine-tune the DataVS2 configuration directly from the VSM with no need of an external PC. All the inspection parameters can be easily modified through dedicated panels.

 **Important note**

VSM does not allow to create a brand new configuration from scratch. The very first DataVS2 configuration MUST be carried out through the PC Graphical User Interface. On the contrary, VSM allows only to modify an already existing configuration.

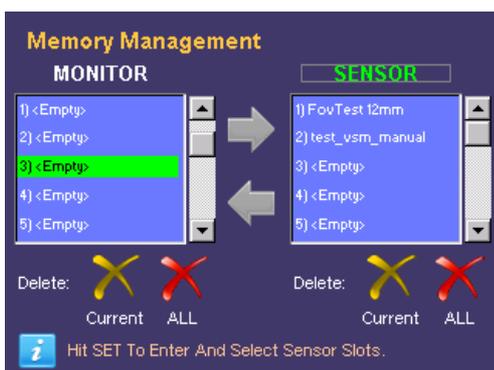
### 2.4 Additional functionalities

VSM features several additional functionalities among which:



#### Sensor discovery

Thanks to the sensor discovery function the user can easily detect all the vision sensors present in the network and select the one to use.



#### Memory management

On the VSM, 20 memory slots are available. This space can be used in order to fully backup the sensor memory or to extend the device capability to manage different configurations.



#### Account selection

Three different user accounts can be set in order to protect the device configuration from accidental or unauthorized modifications.



### Language selection

All the information and messages can be displayed in two different languages: English and Italian. In the next releases German and French languages will be added as well.

## 2.5 Technical Data

Item	Description
Supply voltage	24 Vdc $\pm$ 10%
Ripple voltage	2.4 Vpp max
Current draw	Max 150 mA @ 24 Vdc max
Dimensions	96 x 96 x 39 mm
Indicators	8 LEDs + 3.5" colour LCD monitor
Data retention	Non-volatile FLASH memory
Operating temperature	-10 °C ... +55 °C
Storage temperature	-20 °C ... +70 °C
Vibrations (EN60068-2-6)	14 mm @ 2 to 10 Hz; 1.5 mm @ 13 to 55 Hz; 2 g @ 70 to 200 Hz; 2 hours on each axis
Shock resistance (EN60068-2-27)	11 ms (30 G) 6 shock for each axis
Housing material	ABS
Mechanical protection	IP20 (IP40 when panel mounted)
Connection	2 x M12 4-pole
Weight	180 g



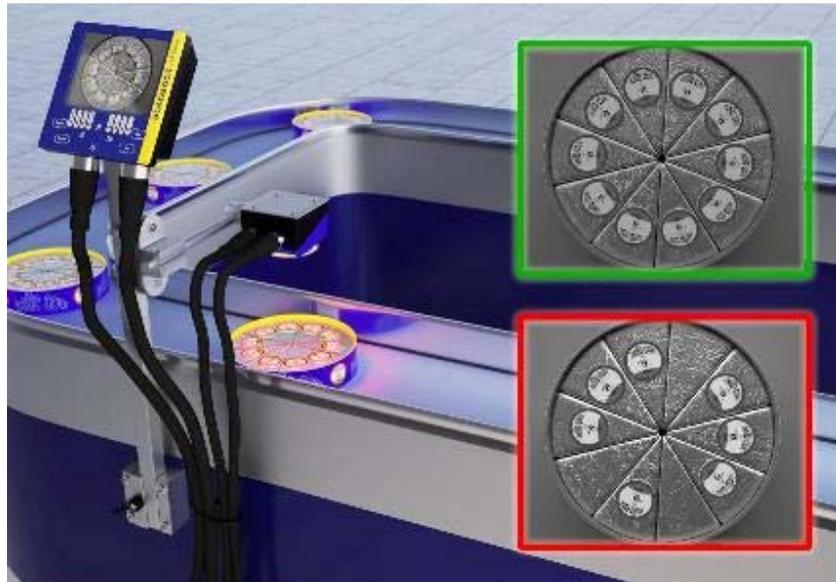
### 3. Target Market

#### 3.1 Target markets

VSM is targeting both End User and OEM market segments mainly in the following industries:

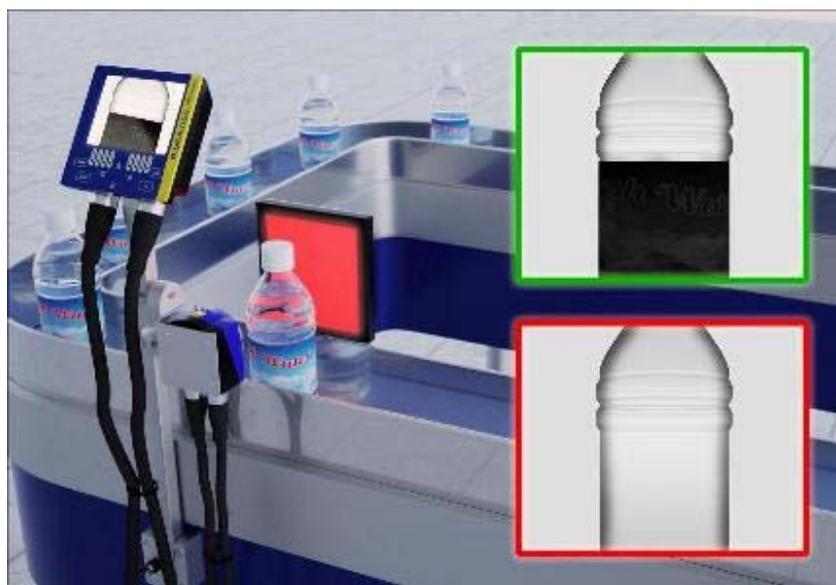
- *Industry:*

#### Food



- *Industry:*

#### Bottling & Beverages





▪ *Industry:*

**Packaging**





## 5. List of models and product availability

### 5.1 Order Information

Order No.	Model	Description
95A901480	DataVS2-VSM	VSM monitor for DataVS2

### 5.2 Accessories

Order No.	Model	Description
95A252790	CV-A1-32-B-03	M12 4pin shielded cable 3m
95A252800	CV-A1-32-B-05	M12 4pin shielded cable 5m
95A901700	DataVS-CV-VSM-02	Connection cable 2m
95A901710	DataVS-CV-VSM-04	Connection cable 4m
95A901340	DataVS-CV-RJ45C-03	3m ethernet crossed cable
95A901350	DataVS-CV-RJ45D-03	3m ethernet straight cable

### 5.3 Product availability

VSM and all related accessories are available for sales starting from today.

## 6. Communication Tools and Marketing Materials

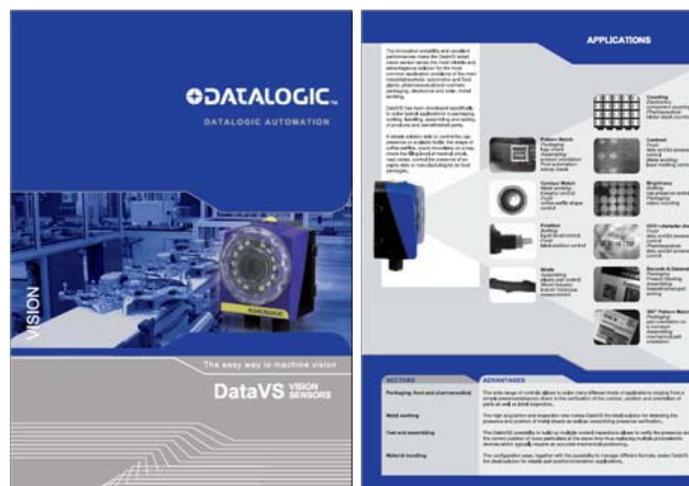
### VSM Datasheet



Today is available the VSM datasheet in English and Italian versions. Others versions in local language can be provided, with the cooperation of each subsidiary that has to take care of the text translation and send it to Bologna to create the final document.

Mrs. Flavia Arena is responsible for this activity.

### DataVS Leaflet



The updated DataVS leaflet is now available on Datalogic Automation website in English and Italian languages. It can be easily downloaded either from the specific product section or from the general download area.

The leaflet is also available as printed document (only English version) and can be ordered by using the following part number: 9C501627E - LEAFLET DataVS ENG.