

## DATALOGIC SMART-VS

Smart sensor based on machine learning

SMART-VS-MR-5-150-WH-O

Smart VS standard, M12 connector, 150m, 3 digital output

- The first smart sensor based on Machine Learning
- Ease of use and installation
- Up to 150mm operating distance
- AI enabled and MLAS - Machine Learning Assisted Setting
- **\*\*PLUS version now available\*\***



### Product description

The Smart vision sensor or Smart-VS is a new, unique and innovative product from Datalogic. Designed for automation applications, it can quickly, easily and reliably detect 'good' and 'not good' objects.

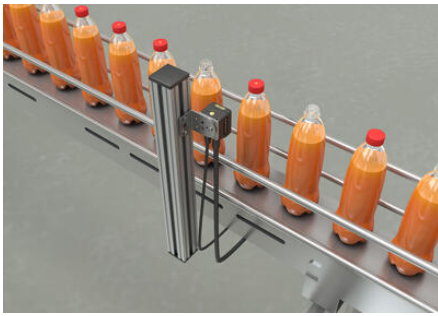
The Smart VS can easily be set up by simply pushing a button and following 3 easy steps, ease of use for all kinds of users and installers. There is no expert programming needed, no vision tool setting, and no external custom monitoring tools necessary to achieve object detection.

The Smart VS has a powerful 'System on Chip' and customised machine learning algorithms, making it reliable in response time which is deterministic in any detection condition. The features of the Smart VS make it the perfect solution for the following applications: the need to check the presence of labels and caps when filling bottles and vials; orientation of objects for proper labelling, independently by material, by color and format of the objects.

The versatility of the Smart VS makes it suitable for use in most varied sectors, such as automotive or automatic assembly of mechanical or electronic parts, but it also finds some of its greatest uses in the food and beverage, pharmaceutical and cosmetics packaging sectors.

Specifications

|                                    |  |
|------------------------------------|--|
| Dimension (mm)                     | 78 x 47 x 38                           |
| Distance Max                       | 150                                    |
| Distance Min                       | 50                                     |
| Integrated Communication Interface | Ethernet 10/100Mbit/s                  |
| IP Class                           | IP65, IP67                             |
| Light Type                         | White LED Polarised illuminator        |
| Max. images to handle              | 6 images                               |
| Output Data                        | Data valid, Good, No good              |
| Performance                        | 20pcs per second max                   |
| Power Consumption                  | 4.2                                    |
| Reading Field of View              | 22mm x 16mm @50mm, 55mm x 41mm @ 150mm |
| Resolution                         | 320 x 240 pixels                       |
| Response time                      | 50 ms                                  |
| Supply voltage                     | 10-30 V DC                             |
| Temperature range bearing, from    | -20                                    |
| Temperature range bearing, to      | 70                                     |
| Temperature range from             | -10                                    |
| Temperature range to               | 50                                     |
| Weight                             | 173                                    |
| Viewing angle                      | 19°                                    |

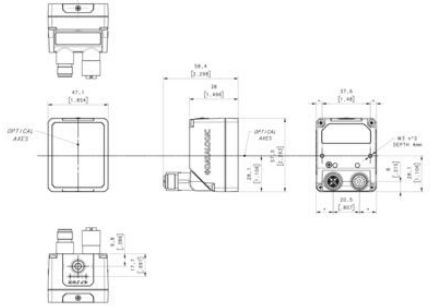
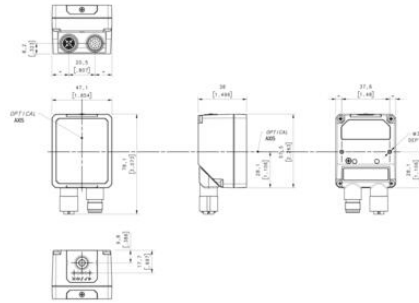


| Application name        | Solved cases (OK / NOT OK) |  |
|-------------------------|----------------------------|--|
| Check label presence    |                            |  |
| Cap orientation         |                            |  |
| Cap presence            |                            |  |
| Check printing on label |                            |  |



## Application name

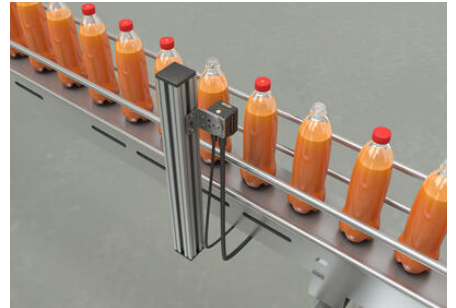
|                         |  |  |
|-------------------------|--|--|
| Check label presence    |  |  |
| Cap orientation         |  |  |
| Cap presence            |  |  |
| Check printing on label |  |  |



| Pin | Name    | Colors       | Function   |
|-----|---------|--------------|--|
| 1   | VCC     | Mastone      | Power supply input voltage +                                 |
| 2   | GND     | Blue         | Power supply input voltage -                                 |
| 3   | Chassis |              | Connector case provides electrical connection to the chassis |
| 4   | 1/A     | Yellow       | 1/A Trigger Input A (Polarity Insensitive)                   |
| 5   | 1/B     | Pink         | 1/B Trigger Input B (Polarity Insensitive)                   |
| 13  | 2/A     | White/Green  | 2/A Remote Touch A (Polarity Insensitive)                    |
| 3   | 2/B     | White        | 2/B Remote Touch B (Polarity Insensitive)                    |
| 9   | 01*     | Red          | Data Valid PP  |
| 8   | 02*     | Grey         | GOOD Output PP   |
| 14  | 03*     | Yellow/Brown | NO-GOOD Output PP  |



| Pin | Name | Function                     |
|-----|------|------------------------------|
| 1   | TX+  | Transmit data (positive pin) |
| 2   | TX-  | Transmit data (negative pin) |
| 3   | Rx+  | Receive data (positive pin)  |
| 4   | Rx-  | Receive data (negative pin)  |
| 5   | nc   | Not Connected                |
| 6   | nc   | Not Connected                |
| 7   | nc   | Not Connected                |
| 8   | nc   | Not Connected                |



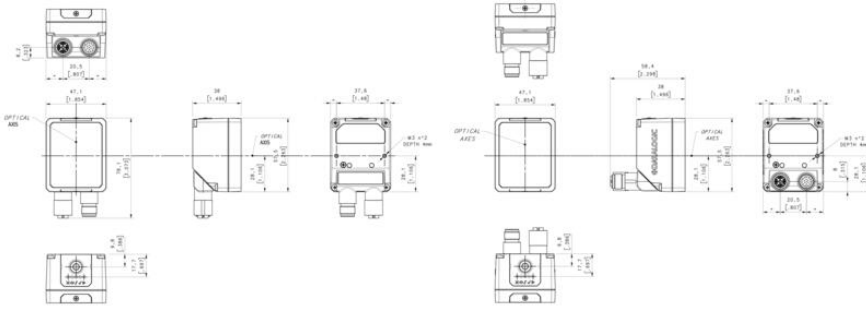
## Application name

|                         |  |  |
|-------------------------|--|--|
| Check label presence    |  |  |
| Cap orientation         |  |  |
| Cap presence            |  |  |
| Check printing on label |  |  |



## Application name

|                         |  |  |
|-------------------------|--|--|
| Check label presence    |  |  |
| Cap orientation         |  |  |
| Cap presence            |  |  |
| Check printing on label |  |  |



| M12 17-pin Power, COM, and I/O Connector Pinout |         |              |  |
|---|---------|--------------|--|
| Pin   | Name    | Color        | Function   |
| 1   | US      | Marine       | Power supply input voltage +                                 |
| 2   | GN      | Blue         | Power supply input voltage -                                 |
| Connector Case                                  |         |              |  |
| 3   | Chassis |              | Connector case provides electrical connection to the chassis |
| 4   | IIA     | Yellow       | IIA Trigger Input A (Polarity Insensitive)                   |
| 5   | IIB     | Pink         | IIB Trigger Input B (Polarity Insensitive)                   |
| 13  | SA      | White/Green  | SA Remote Touch A (Polarity Insensitive)                     |
| 3   | SB      | White        | SB Remote Touch B (Polarity Insensitive)                     |
| 7   | DI*     | Red          | Data Valid PP  |
| 9   | DI*     | Grey         | 5000 Output PP   |
| 14  | DI*     | Yellow/Black | NO-5000 Output PP  |



| M12 8-pin Standard Ethernet Network Connector Pinout |      |                              |
|--|------|------------------------------|
| Pin  | Name | Function                     |
| 1  | TX+  | Transmit data (positive pin) |
| 2  | TX-  | Transmit data (negative pin) |
| 3  | RX+  | Receive data (positive pin)  |
| 4  | RX-  | Receive data (negative pin)  |
| 5  | NC   | Not Connected                |
| 6  | NC   | Not Connected                |
| 7  | NC   | Not Connected                |
| 8  | NC   | Not Connected                |