Smart-VS

The new vision for your smart manufacturing
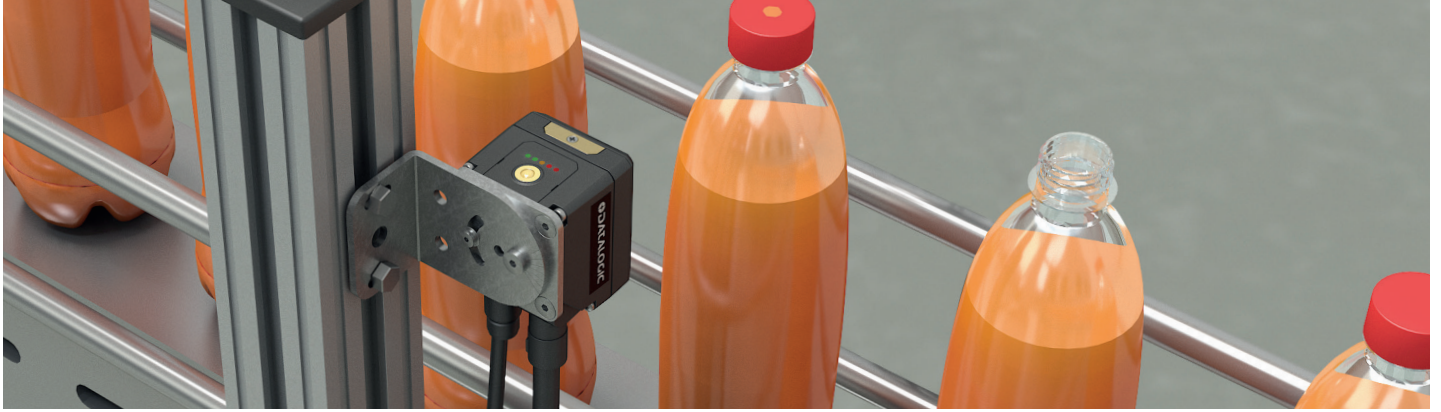
Fast and easy Settings such as Standard Photosensor

Deterministic response time 50 ms (6 images)

TEACH Button and comprehensive User Interface with 5 status LEDs

Bright and visible Red LED pointer

No inspection threshold Adjustment required

Electronic focus control

50 to 150 mm operating distance

Powerful white polarized light illuminator

Green/Red LED Spot for GOOD/NO GOOD reads

Ethernet point-to-point communication available

Easy and Intuitive WEB Server GUI for maintenance and job setting

Machine Learning Assisted Setting

No vision Tools programming required

AI enabled
MLAS - Machine Learning Assisted Setting

Flawless object classification with extreme reliability

The Smart-VS can detect the presence of parts, like cap or label on bottles, vials, on any material or surface (glass, plastic, metal, dark, shiny...) like in filling, closing and packaging machines. Designed for all kinds of users and installers, the Smart-VS can be easily set by just pushing a button, like a photoelectric sensors. No vision tools for programming and monitoring are required. The cost of ownership improves thanks to innovative and unique Artificial intelligence technology and Machine Learning Algorithm. The Smart-VS is also equipped with Ethernet communication and a user-friendly WEB Server Graphic User Interface (GUI) which can be easily accessed by a standard internet browser.

TECHNICAL DATA

Electrical Features

Power *Supply Voltage (Vdc)* *Consumption (A) Max.*	10 to 30 Vdc 0.40 - 0.14 A (4.2 W)
Communication Interface Ethernet [1]	10/100 Mbit/s
Inputs	Opto-coupled and polarity insensitive
Max. Voltage	30 Vdc
Max. Input Current	10 mA
Output Type	Push-pull, NPN or PNP, short circuit protected
Outputs	3 Outputs (DATA VALID, GOOD, NO GOOD)
V_{OUT} (I_{LOAD} = 0 mA) **Max.**	30 Vdc
V_{OUT} (I_{LOAD} = 100 mA) **Max.**	3 Vdc
I_{LOAD} **Max.**	100 mA

Optical and Detection Features

Operating distance	50...150 mm
View angle	19°
FOV area @ 50 mm	22 mm (H) x 16 mm (V)
FOV area @ 150 mm	55 mm (H) x 41 mm (V)
Response Time	50 ms
Max. Image to handle (GOOD+NO GOOD)	6 images
Max pcs per second	20 pcs per second
Active Area Resolution	320x240 pixels
Illuminator	White LED polarized

Phisical Features

Dimensions *Std SPH connector at 0°* *Std SPH connector at 90°*	H x W x L 78 x 47 x 38 mm (3.1 x 1.9 x 1.5 in) 58 x 47 x 58 mm (2.3 x 1.9 x 2.3 in)
Weight	173 g (6.1 oz)
Material	Aluminum with plastic PMMA protective window

Environmental Features

Operating Temperature [2]	-10 to 50 °C (14 to 122 °F)
Storage Temperature	-20 to 70 °C (-4 to 148 °F)
Max. Humidity	90% non-condensing
Vibration Resistance	14 mm @ 2 to 10 Hz; 1.5 mm @ 13 to 55 Hz; 2 g @ 70 to 500 Hz; 2 hours on each axis
Shock Resistance	30 g; 11 ms; 3 shocks on each axis
Protection Class [3]	IP65 and IP67

1 The embedded Ehternet interface is intended for configuration only through connection to the device IP. Point-to-Point connection is recommended.
2 High ambient temperature applications should use metal mounting bracket for heat dissipation.
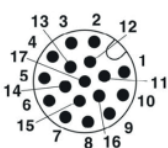3 When correctly connected (fully tightened) to IP67 cables with seals.

APPLICATIONS

- Food & Beverage
- Pharma and Cosmetics
- Packaging machinery
- Bottling lines
- Automotive, Electronics

Application example

Check label presence	
Cap orientation	
Cap presence	
Check printing on label	

CONNECTIONS

M12 17-pin Power, COM, and I/O Connector Pinout			
Pin	**Name**	**Color**	**Function**
1 2	Vdc GND	Brown Blue	Power supply input voltage + Power supply input voltage -
Connector case	Chassis		Connector case provides electrical connection to the chassis
6	I1A	Yellow	I1A Trigger Input A (Polarity Insensitive)
5	I1B	Pink	I1B Trigger Input B (Polarity Insensitive)
13	I2A	White/Green	I2A Remote Teach A (Polarity Insensitive)
3	I2B	White	I2B Remote Teach A (Polarity Insensitive)
9	O1*	Red	Data Valid PP
8	O2*	Grey	GOOD Output PP
16	O3*	Yellow/Brown	NO-GOOD Output PP
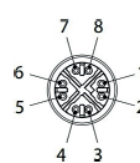
M12 8-pin Standard Ethernet Network Connector Pinout		
Pin	**Name**	**Function**
1	TX+	Transmit data (positive pin)
2	TX-	Transmit data (negative pin)
3	RX+	Receive data (positive pin)
4	RX-	Receive data (negative pin)
5	nc	Not Connected
6	nc	Not Connected
7	nc	Not Connected
8	nc	Not Connected

MODEL SELECTION

MODEL	DESCRIPTION	OPTIC	ILLUMINATOR	I/O	ORDER N°
Smart-VS-MR-5-150-WH-O	SVS WP 150mm OUT	7mm	White polarized	3Out + 2In + ETH	959971320