DATALOGIC

Smart-VS

QUICK REFERENCE GUIDE

Download the Smart-VS Product Reference Guide by reading the QR code here or see the paragraph below.

SUPPORT THROUGH THE WEBSITE

Datalogic provides several services as well as technical support through its website.
Log on to www.datalogic.com.

For quick access, from the home page click on the search icon, and type in the name of the product you're looking for. This allows you access to download Data Sheets, Manuals, Software & Utilities, and Drawings. Hover over the Support & Service menu for access to Services and Technical Support.

INSTALLATION PROCEDURE

1. Physically mount the Smart-VS device.
2. Make the necessary electrical connections.
3. Configure the device using the embedded HMI or the Smart-VS WebApp by connecting to the device via Ethernet. The WebApp is accessible opening an Internet browser (Google Chrome is recommended) and entering the device IP address 192.168.3.100 in the address bar.

HMI INTERFACE

NO GOOD object
- in Teach phase: blinking, NO GOOD object teaching
- in Run phase: NO GOOD object detected

- for future use

Trigger
- in Teach phase: trigger input status
- in Run phase: trigger received

GOOD object
- in Teach phase: blinking, GOOD object teaching
- in Run phase: GOOD object detected

Run
- steady: device in Run phase
- blinking: Teaching required

BUTTON TEACHING PROCEDURE

The Run LED will blink until the Teaching procedure is entered (e.g. device factory default).
Long press (> 4s, until the red LED on HMI lights up) the HMI Button to enter the Teaching procedure.

1. GOOD objects required to be taught (green LED and green spot blink).

2. Place the GOOD object in front of the Aiming System.

3. Place the trigger sensor properly. The Trigger LED indicates object detection.

4. Short press (< 1s) the HMI Button to acquire the image. More than one GOOD object can be acquired. It is suggested to acquire one image per GOOD object instance. Camera parameters are auto-adjusted on the first acquisition only.

5. Long press (> 4s, until the red LED on HMI lights up) the HMI Button to start acquiring NO GOOD objects. Red LED and red spot start blinking.

6. Place the NO GOOD object in front of the Aiming System. Check the Trigger LED.

7. Short press (< 1s) the HMI Button to acquire the image. More than one NO GOOD object can be acquired.

8. Long press (> 4s, until the red LED on HMI lights up) the HMI Button to enter the automatic learning procedure (LEDs game). At the end, the device will enter the Run Phase.

NOTE *The Teaching procedure can also be entered when in Run phase: press the HMI Button for 2s (yellow LED on HMI) for incremental teaching or 4s (red LED on HMI) to cancel and re-teach. Refer to the Product Reference Guide for more details.*

1. Bracket Mounting Holes (2)
2. Power On LED
3. Ethernet Connection LED
4. 90° Rotating Connector Block
5. HMI Interface
6. Ethernet Connector
7. Power - I/O Connector
8. Lens
9. LED Aiming System
10. Red Spot (NO GOOD)
11. Green Spot (GOOD)
12. White Polarized Illuminators
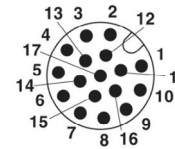
M12 17-pin Power, and I/O Connector Pinout

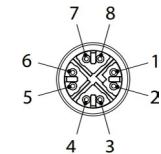| Pin	CAB-GDxx wires color	Name	Function
1	Brown	Vdc	PWR supply input voltage +
2	Blue	GND	PWR supply input voltage -
6	Yellow	I1A *	Trigger Input A
5	Pink	I1B *	Trigger Input B
13	White/Green	I2A *	Remote Teach A
3	White	I2B *	Remote Teach B
9	Red	O1 **	Data Valid (default is Push-Pull)
8	Gray	O2 **	GOOD Output (default is Push-Pull)
16	Yellow/Brown	O3 **	NO-GOOD Output (default is Push-Pull)

* Polarity insensitive
** Short-circuit protected and software programmable

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

WARNING *Trim out all unused wires to avoid electrical problems.*

TECHNICAL FEATURES

Electrical Features	
Power Supply Voltage (Vdc) Consumption (A) Max.	10 to 30 Vdc 0.40 - 0.14 A (4.2 W)
Communication Interfaces	
Ethernet [1]	10/100 Mbit/s
Inputs:	Opto-coupled and polarity insensitive (see Product Reference Guide)
Max. Voltage	30 Vdc
Max. Input Current	10 mA
Outputs:	PP, NPN or PNP short circuit protected (see Product Reference Guide)
Max. Output Voltage Drop	3V
V_{OUT} HIGH (Max. / Min.)	V_{supply} / V_{supply} - 3V
V_{OUT} LOW (Max. / Min.)	3V / 0V
I_{LOAD} Max.	100 mA
GOOD and NO GOOD output response time	50 ms ± 1 ms from input trigger
Optical Features	
Operating Distance	50 - 150 mm
View Angle	19°

See Product Reference Guide for details

Physical Features	
Dimensions Std Smart-VS connector at 0° Std Smart-VS 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 PMMA protective window cover

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 EN 60068-2-6	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 EN 60068-2-27	30 g; 11 ms; 3 shocks on each axis
Protection Class [3] EN 60529	IP65 and IP67

[1] *The embedded Ethernet interface is intended for configuration only through connection to the device IP address 192.168.3.100.*
  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.*

PATENTS

See www.patents.datalogic.com for patent list.
Smart-VS is covered by one or more of the following patents:

Design patents: EP004735694

Utility patents: EP0996284B1, EP0999514B1, EP1014292B1, EP1128315B1, EP1396811B1, EP1413971B1, EP2517148B1, EP2649555B1, JP4435343B2, JP4571258B2, US6512218, US6616039, US6808114, US6997385, US7053954, US7387246, US7433590, US8058600, US8368000, US8888003, US8915443, US9268982, US9430689, US9798948, ZL200980163411.X

COMPLIANCE

In order to meet the EMC requirements, connect device chassis to the plant earth ground by means of a flat copper braid shorter than 100 mm.

CE COMPLIANCE

CE marking states the compliance of the product with essential requirements listed in the applicable European directive. Since the directives and applicable standards are subject to continuous updates, and since Datalogic promptly adopts these updates, therefore the EU declaration of conformity is a living document. The EU declaration of conformity is available for competent authorities and customers through Datalogic commercial reference contacts. Since April 20th, 2016 the main European directives applicable to Datalogic products require inclusion of an adequate analysis and assessment of the risk(s). This evaluation was carried out in relation to the applicable points of the standards listed in the Declaration of Conformity. Datalogic products are mainly designed for integration purposes into more complex systems. For this reason, it is under the responsibility of the system integrator to do a new risk assessment regarding the final installation.

Warning
This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

FCC COMPLIANCE

Modifications or changes to this equipment without the expressed written approval of Datalogic could void the authority to use the equipment.

This device complies with PART 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference which may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

EAC COMPLIANCE

Customs Union:
The CU Conformity certification has been achieved; this allows the Product to bear the Eurasian mark of conformity.

LED SAFETY

LED emission according to EN 62471.

POWER SUPPLY

This product is intended to be installed by Qualified Personnel only.

This product is intended to be connected to a UL Listed Direct Plug-in Power Unit marked LPS or "Class 2".

LEGAL NOTICES