DataVS2-xx-RE-PRO-x
Vision Sensor

QUICK REFERENCE GUIDE

MINIMUM SYSTEM REQUIREMENTS

Check that your Personal Computer meets the following minimum requirements for system interfacing:

- Pentium 1.7 GHz processor
- 2 GB of RAM
- Monitor resolution 1280x768 at least
- Network Connection board 100 Mbps

60 MB Hard Disk drive free space

DESCRIPTION

The DataVS2 series of vision sensors offers the easiest way to solve the most common machine vision applications:

- Compact PS0 housing
- Integrated flood LED illuminator
- Selectable lens
- Focus ring
- Standard M12 connectors
- Teach button
- Image sensor 640x480 pixel

ELECTRIC CONNECTIONS

M12 4-pin Ethernet: (connectivity)

- pin 1: white/orange: Rx+
- pin 2: white/green: Tx+
- pin 3: orange: Rx-
- pin 4: green: Tx-

M12 8-pin (Power and I/O)

- pin 1: white: RS-232 Rx
- pin 2: brown: 24 Vdc
- pin 3: green: Output 4 / Ext. Illuminator Strobe
- pin 4: yellow: Output 1
- pin 5: grey: Output 2
- pin 6: pink: RS-232 Tx
- pin 7: blue: Ground
- pin 8: red: External Trigger

INDICATORS

- Power, green;
- Output 1, orange;
- Output 2, orange;
- Network connection, green.

CONFIGURATION

Easy Graphic User Interface – Starting Configuration

DataVS2 sensor requires a preliminary setting: this is made in 3 steps by using the Easy GUI interface.

Step 1: Image Setup

The first step allows handling the connection to the sensor and sets the parameters related to the image quality. Once the desired result is achieved, the image can be saved and set as the reference for the sensor operations.

- Online/Offline selection
- Task Selection: create a new inspection or open an existing inspection from the PC or from the sensor
- Set Reference Image: save the image as reference for the following steps

Step 2: Teach

In this step you may configure the desired control:

- Select Locator: a locator is a special Tool allowing the sensor to find the object inside the image. It is possible to add at most one locator to current inspection
- Select Control: it allows selecting the controls that will be added to the inspection process. It is possible to add more than one control to current inspection
- Output Setup: configuration of the 3 digital outputs.

After selecting the control, it is necessary to position it on the reference image, by clicking in the working area and by moving and resizing the ROI. The Control Panel displays the controls’ parameters, initialized to default values; it is possible to modify them by using the corresponding controls on control panel. The STATUS indicator, as well as the ROI contour, reveals the result of control application by assuming red (bad result) or green (good result) colouring.

Step 3: Run

- VSM 1 Run Settings: configure VSM options and running options for the current inspection.
- Test: verification on the PC (Online or Offline) of the selected controls.
- Run: store and launch the inspection on the sensor.

CONTROL PANEL

Control
- Brightness
- Contrast
- Width
- Counting
- Position
- OV
- Barcode
- Colorbar

Functioning
- Brightness calculation
- Contract calculation
- Counting of objects along a line
- Position verification of object edges
- Checks presence of characters on barcode

Applications
- Presence of cap and stop on bottles.
- Verification of label overprinting
- Counting of stacked blisters for pharmaceutical industry
- Controls the level of liquids in bottles
- Identification

INDICATORS

1. Power, green;
2. Output 1, orange;
3. Output 2, orange;

OPERATING DIMENSION

- Width: 170 mm
- Height: 119 mm
- Depth: 88 mm

OPERATING TEMPERATURE

- -25 °C to 75 °C
- Vibrations: 14 mm (2 to 10 Hz);
- Shock: 15 mm (15 to 55 Hz);
- 2 g @ 70 to 200 Hz

HARDWARE CONNECTIONS

M12 8-Pin (Power and I/O)

Note: it is not permitted to disconnect the cable at the connector Power and I/O while it is under power.

Input:
- Voltage: 24 Vdc ± 10%
- Current: 100 mA max
- Input ON: > 20 Vdc
- Input OFF: < 2 Vdc

Output:
- 3 x 3 pin connectors with short circuit protection
- Output Current: 100 mA max
- Output Saturation Voltage: < 2 V

NOTE:
- Output 4 is configurable as External Illuminator Strobe.

Supply Voltage (Vdc):
- 24 Vdc ± 10%
- 1 Vpp max if illuminator
- 2 Vpp max if illuminator

Current draw of illuminator: (depends on how long illuminator stays on)
- max 200 mA at 24 VDC

Outputs:
- 3 PNP outputs (short circuit protection)
- (Output 4 is configurable as External Illuminator Strobe)

IP Address: 172.27.101.208
Subnet mask: 255.255.0.0

TECHNICAL DATA

DataVLS-xx-RE-PRO-x

600 x 400

78 x 58

40 x 28

16 x 12

54 x 41

78 x 58

53 x 40

35 x 26

78 x 58

53 x 40

35 x 26

78 x 58

53 x 40

35 x 26

78 x 58

53 x 40

35 x 26

For software compatibility purposes, the DataVLS-xx-RE-PRO-x should be configured in the same way as as DataVS2-xx-RE-PRO-x.

There are no functionalities or capabilities that are not compatible between DataVS2-xx-RE-PRO-x and DataVLS-xx-RE-PRO-x. The only difference is the mechanical characteristics.

For detailed information, visit www.datalogic.com.