

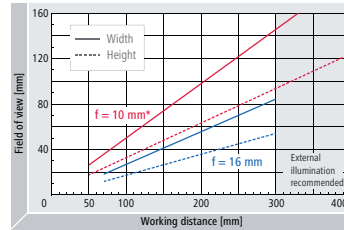
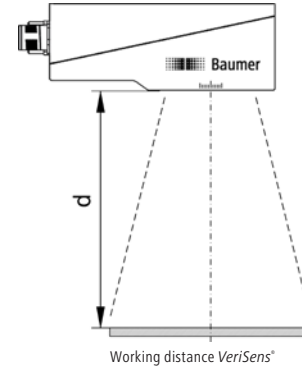


Quick installation guide
VeriSens® ID / CS / XF / XC Series

Latest software version and technical documentation are available at www.baumer.com/vision/login

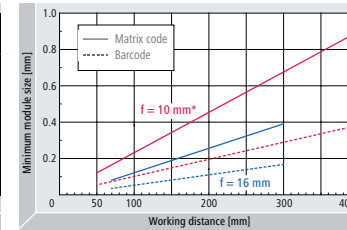
Mechanical setup

NOTE
Separate mounting brackets are available as accessories. For reflective objects, the VeriSens® can be tilted approx. 5° to 15° to avoid reflections.
The field of view and the minimum module size for the XC-100 / XC-200 depend on the lens installed (further information available at www.baumer.com/vision/login).



Fields of view VeriSens® (ID / CS / XF Series)

*Working distances > 400 mm possible



Minimum modul sizes VeriSens® (ID / XF Series)

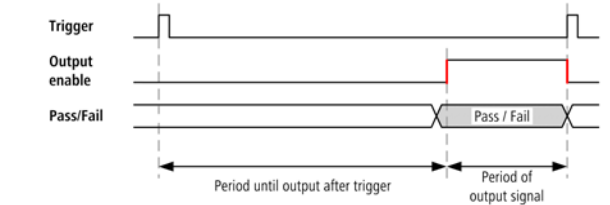
Installation and timing

ATTENTION!
Incorrect voltage will destroy the device: Pin 1: Power (+18...30 VDC) Pin 2: Ground

Electrical connection* M12 / 12-pin			Ethernet* M12 / 4-pin		Electr. connection illumination* M8 / 4-pin (XC only)**	
1: PWR (+18...30VDC)	Brown	7: OUT3	Black	1: TD+	1: +24V bzw. +48V Flash	
2: Ground	Blue	8: IN3	Gray	2: RD+	2: +12V bzw. +24V Flash	
3: IN1 (Trigger)	White	9: OUT4/RS485+	Red	3: TD-	3: Ground	
4: OUT1	Green	10: IN4	Violet	4: RD-	4: Flash Sync	
5: IN2	Pink	11: IN5	Gray-Pink			
6: OUT2	Yellow	12: OUT5/RS485-	Red-Blue			

* on device

** Voltage outputs configurable by software



The duration of the output signals and the time of output are adjusted by software and depend on the current job.

Important safety instructions

WARNING!

VeriSens® emits bright, pulsed light (Risk group 1). Bright, pulsed light can cause damage to the eyes and seizures. Never look directly into the pulsed light from the LEDs!

ATTENTION!

For optimum electrical noise immunity, the use of shielded cables is recommended.

The appropriate cables can be obtained from Baumer.

Detailed safety instructions can be found in technical documentation, chapter 3.

Conformity:
CE, FCC, RoHS (device dependent)



Operating conditions	
Storage temp.	-20 °C ... +70 °C
Operating temp.	+5 °C ... +50 °C
Housing temp.	max. +50 °C
Humidity	0 % ... +90 % (non-condensing)

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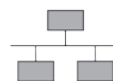
Getting started



Place the enclosed CD in the CD drive and follow the instructions on the screen. After successful installation, links to the Application Suite are placed on the desktop.

You can now start the program. Connect the VeriSens® to the Ethernet interface of your computer and log on both the VeriSens® and your PC within the same network.

Ethernet connection



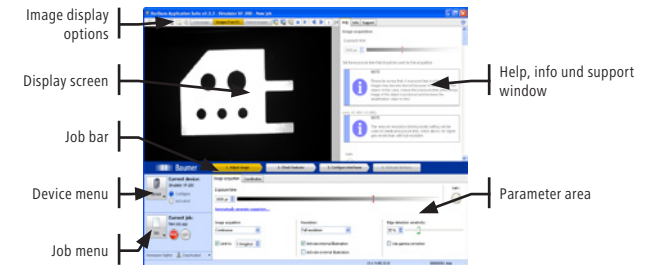
By default, the use of DHCP is enabled. If a DHCP server is not found within 15 seconds, the following network configuration is used:

IP address: 192.168.0.250
Subnet mask: 255.255.255.0

NOTE
To avoid network malfunctions, ensure that each IP address is unique within your network!

Application Suite

The Application Suite helps you to create, manage and test jobs and to configure them for Real-time mode.

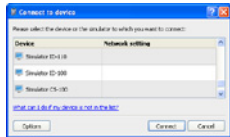


Commissioning is usually conducted in Live image mode or Images from PC on the basis of sample images. You can select the mode with the buttons alternatively.

- LOAD IMAGE
- SAVE CURRENT IMAGE
- START LIVE IMAGE RECORDING
- NAVIGATING IN LOADED IMAGES

Jobs are created in three main steps, using the Job bar.





Launch of VeriSens® Application Suite

Choose your device in the selection list. With CONNECT button, you connect with the selected VeriSens® vision sensor.

1. Adjust image



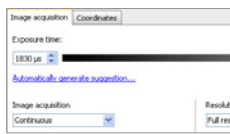
To implement reliable inspection with the VeriSens® vision sensor, the features to be inspected must be clearly visible.

Set the image focus with an inbus key on the VeriSens® vision sensor installed at the testing site. The corresponding inbus screw can be found on the sensor's LED panel.

Set the trigger to CONTINUOUS IMAGE CAPTURE. Use the option Automatically generate suggestion... Enter the speed of the object and the distance to object between the sensor and the object (see front page, Mechanical setup). The Application Suite calculates the corresponding parameters automatically.

Manual fine adjustments of image brightness can be made with the slider bar EXPOSURE TIME. Adjust the image so that the object is seen to be bright enough without the need to override.

NOTE
For the XC series, the image focus is set on the installed lens.



2. Check features

2. Add new feature checks

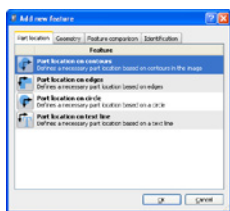
Now you can determine which features of the object to be checked.

The command to link new feature checks is located in the right hand corner of the parameter area. With the ADD button, you can create a new feature check for your job.

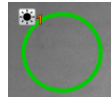
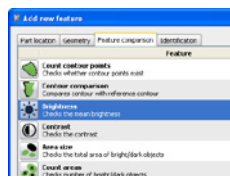
As each inspection process has tolerances with regard to the position of the test object, most jobs begin with part location. The part location searches for the reference edges of the test object and aligns all subsequent feature checks to these reference edges.

After selection of a feature check you can parametrize the feature to be checked. Each feature is optimized for just one inspection task and supplies a Pass (OK) or Fail (NOK) result.

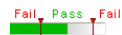
The description of feature checks in detail is found in the information window of the Application Suite and in the technical documentation.



2. Check features



Brightness: 79



2. Add new feature checks

Example: Setting of feature check BRIGHTNESS

For this example, select the feature check BRIGHTNESS on the tab FEATURE COMPARISON. Confirm selection of this feature check with OK.

In the example, the working area is dragged as a circle. Adjust it by clicking on area's center and holding the left mouse button depressed.

Brightness: 79

The mean gray-value currently measured in the working area is indicated as BRIGHTNESS.

The associated switching thresholds for Pass/Fail may be adjusted by graphic input or by directly entering the MIN/MAX values.

Confirm your settings with the OK button.

3. Configure interfaces

Select the appropriate settings on the tabs.

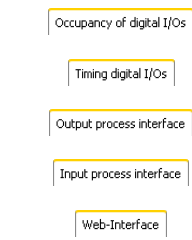
Output assignment, Flexible result conjunction (VeriSens® XF-100 / XF-200 / XC-100 / XC-200 only)

Output time, Duration of output signal

Settings, as the data is transferred (excluding VeriSens® CS-100)

Inputs about the process interface (excluding VeriSens® CS-100)

Configuration web interface



4. Activate VeriSens®

You can now activate VeriSens®. The Application Suite displays the current statistics of each feature check, the entire evaluation and live images

No.	Name	Result	Number OK / FAIL	Calculator time	Statistics	Alarm
1	Brightness 1	OK	17 / 0 (100,00%)	0,28 ms		

Current job:	
1 New job-app	
Number of parts:	17 3,0parts
Number of OK:	17 100,00%
Number of FAIL:	0 0,00%
Number of alarm:	0 0,00%
Image acquisition:	17,0 ms
Calculation time:	<0,5 ms

Part location

- Part location on contours
- Part location on edges
- Part location on circle
- Part location on text line

Geometry

- Distance
- Circle
- Angle
- Count edges
- Point position

Feature comparison

- Count contour points
- Contour comparison
- Brightness
- Contraste
- Area size
- Count areas
- Pattern comparison

Identification

- Barcode
- Matrix code
- Text

Commissioning of Ethernet interface

To use VeriSens® in your network, you must assign the device a unique IP address. The default factory configuration is:

- If your network has an DHCP server, the IP address will request from that server. You do not need any further manual adjustments.
- If a valid IP address can not be determined within 15 seconds, the following network configuration is used:
Default IP address: 192.168.0.250 (Subnet mask: 255.255.255.0)

My device is not located in the selection list after launching the Application Suite?

- Check that the power cable of VeriSens® is connected correctly.
- Make sure that your PC and VeriSens® are connected in the same network.
- Check the network settings of your PC, especially the IP address and subnet mask. Contact your administrator possibly.
- Make sure that each IP address is unique in your network!