

# DNNP001

VisionApp 360 Software



## Operating Instructions

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# 1. General

## 1.1 Information Concerning these Instructions

- These instructions apply to the product with ID code DNNP001.
- They make it possible to use the product safely and efficiently.
- These instructions are an integral part of the product and must be kept on hand for the entire duration of its service life.
- Local accident prevention regulations and national work safety regulations must be observed before, during and after initial startup.
- The product is subject to further technical development, and thus the information contained in these operating instructions may also be subject to change. The current version can be found at [www.wenglor.com](http://www.wenglor.com) in the product's separate download area.



**NOTE!**

The operating instructions must be read carefully before using the product and must be kept on hand for later reference.

## 1.2 Explanations of Symbols

- Safety precautions and warnings are emphasized by means of symbols and attention-getting words.
- Safe use of the product is only possible if these safety precautions and warnings are adhered to.

The safety precautions and warnings are laid out in accordance with the following principle:



**ATTENTION-GETTING WORD**

**Type and Source of Danger!**

Possible consequences in the event that the hazard is disregarded.

- Measures for averting the hazard.

The meanings of the attention-getting words, as well as the scope of the associated hazards, are listed below:



**DANGER!**

This word indicates a hazard with a high degree of risk which, if not avoided, results in death or severe injury.



**WARNING!**

This word indicates a hazard with a medium degree of risk which, if not avoided, may result in death or severe injury.



**CAUTION!**

This word indicates a hazard with a low degree of risk which, if not avoided, may result in minor or moderate injury.



**ATTENTION!**

This word draws attention to a potentially hazardous situation which, if not avoided, may result in property damage.

**NOTE!**

A note draws attention to useful tips and suggestions, as well as information regarding efficient, error-free use.

### 1.3 Limitation of Liability

- The product has been developed in consideration of the current state-of-the-art, as well as applicable standards and guidelines. Subject to change without notice.
- A valid declaration of conformity can be accessed at [www.wenglor.com](http://www.wenglor.com) in the product's separate download area.
- wenglor sensorische elektronische Geräte GmbH (hereinafter referred to as "wenglor") excludes all liability in the event of:
  - Non-compliance with the instructions
  - Use of the product for purposes other than those intended
  - Use by untrained personnel
  - Use of unapproved replacement parts
  - Unapproved modification of products
- These operating instructions do not include any guarantees from wenglor with regard to the described procedures or specific product characteristics.
- wenglor assumes no liability for printing errors or other inaccuracies contained in these operating instructions, unless wenglor was verifiably aware of such errors at the point in time at which the operating instructions were prepared.

### 1.4 Copyrights

- The contents of these instructions are protected by copyright law.
- All rights are reserved by wenglor.
- Commercial reproduction or any other commercial use of the provided content and information, in particular graphics and images, is not permitted without previous written consent from wenglor.

## 2. For Your Safety

### 2.1 Use for Intended Purpose

VisionApp 360 software combines the profiles of several (variant-independent) 2D/3D profile sensors within a coordinate system to form an overall image. It's individually configurable and can also be expanded with the help of various modules.



#### **NOTE!**

Further information regarding the mode of operation of the 2D/3D profile sensors is included in the operating instructions of each respective sensor.

This product can be used in the following industry sectors:

- Special machinery manufacturing
- Heavy machinery manufacturing
- Logistics
- Automotive industry
- Food industry
- Packaging industry
- Pharmaceuticals industry
- Plastics industry
- Woodworking industry
- Consumer goods industry
- Paper industry
- Electronics industry
- Glass industry
- Steel industry
- Aviation industry
- Chemicals industry
- Alternative energy
- Raw materials extraction

### 2.2 Use for Other than the Intended Purpose

- Not a safety component in accordance with 2006/42/EC (Machinery Directive)
- The product is not suitable for use in potentially explosive atmospheres.
- The product may only be used with accessories supplied or approved by wenglor, or in combination with approved products. A list of approved accessories and products which have been approved for use in combination with the software is available on the product detail page at [www.wenglor.com](http://www.wenglor.com).



#### **DANGER!**

**Risk of personal injury or property damage in case of use for other than the intended purpose!**

Use for other than the intended purpose may lead to hazardous situations.

- Instructions regarding use for intended purpose must be observed.

## 2.3 Personnel Qualifications

- Suitable technical training is a prerequisite.
- In-house electronics training is required.
- Trained personnel who use the product must have uninterrupted access to the operating instructions.



### **DANGER!**

**Risk of personal injury or property damage in case of incorrect initial start-up and maintenance!**

Personal injury and damage to equipment may occur.

- Adequate training and qualification of personnel.

## 2.4 General Safety Precautions



### **NOTE!**

- These instructions are an integral part of the product and must be kept on hand for the entire duration of its service life.
- In the event of possible changes, the respectively current version of the operating instructions can be accessed at [www.wenglor.com](http://www.wenglor.com) in the product's separate download area.

## 3. Technical Data

Order Number	DNNP001
<b>Technical Data</b>	
<b>Function</b>	
Display software	Yes
Evaluation software	Yes
<b>Operating system</b>	
Windows	Yes
<b>Interface</b>	
Ethernet	Yes
<b>General data</b>	
Usage	For 2D/3D profile sensors as of firmware version 1.1.0
Languages	EN
Licensing model	Yes

# 4. System Overview

## 4.1 Overview of Order Numbers






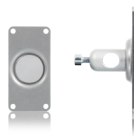





Image	Order Number	Description	Additional Information	No.
	BB1C005	Control unit		2
Control Unit Mounting System				
	ZB1E001	Mounting kit for wall mounting	Replacement part (included with BB1C005)	3
	ZB1Z001	Mounting system for 35 mm H-rail mounting		4
2D/3D Profile Sensors				
	MLSLxxx	2D/3D profile Sensors		1
	MLWLxxx	2D/3D profile Sensors		1
Mounting System for 2D/3D Profile Sensors				
	ZLSZ001, ZLSZ002	Aluminum mounting system, plastic mounting system		9

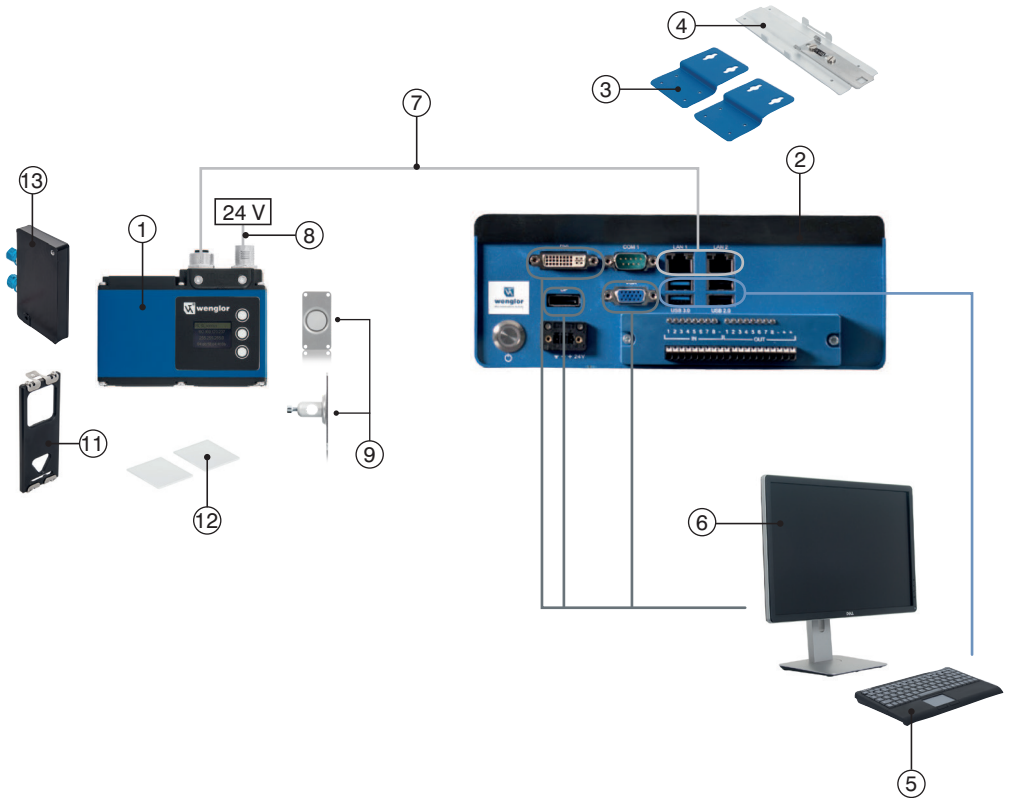


Image	Order Number	Description	Additional Information	No.
<b>Connector Cable (M12, 8-pin to RJ45)</b>				
	ZC1V001, ZAV50R502, ZC1V002	2 m connection cable, 5 m connection cable, 10 m connection cable		7
<b>Connector Cables (12-pin M12)</b>				
	ZDCL001, ZDCL002, ZDCL003	2 m straight connector cable, 5 m straight connector cable, 10 m straight connector		8
	ZDCL004, ZDCL005, ZDCL006	2 m angled connector cable, 5 m angled connector cable, 10 m angled connector cable		8
<b>Connector Cable (12-pin M12 to 12-pin M12)</b>				
	ZDCV001, ZDCV002, ZDCV003	2 m connector cable, 5 m connector cable, 10 m connector cable		8
<b>Accessories for Control Unit</b>				
	ZNNG026	Monitor with VGA and DisplayPort cable		6
	Z0044	Keyboard		5

Image	Order Number	Description	Additional Information	No.
<b>Accessories for 2D/3D Profile Sensors</b>				
		Protective disc retainer	Available for all modules	11
		Protective disc set, glass, protective disc set, plastic	Available for all modules	12
		Cooling unit	Available for all modules	13
	ZNNG013	Micro SD card	Replacement part (included with MLSLxxx)	—
<b>Switch</b>				
	EHSS001	Switch with 5 Ethernet ports		10

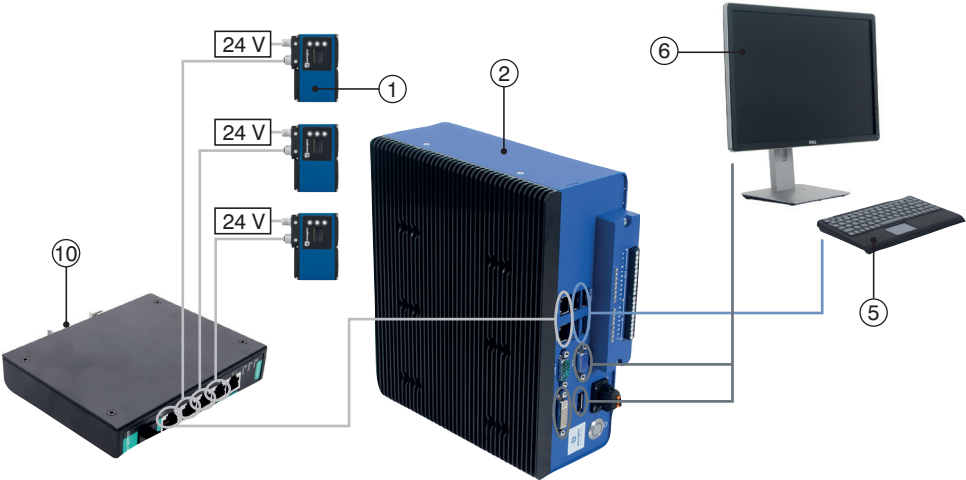
## 4.2 One 2D/3D Profile Sensor per Control Unit

The following illustration shows the setup when using one 2D/3D profile sensor at a control unit.



### 4.3 Several 2D/3D Profile Sensors per Control Unit

Up to 16 2D/3D profile sensors it can be connected to a single control unit in the individual trigger mode.



## 4.4 Synchronization of Several 2D/3D Profile Sensors

Synchronization of several 2D/3D profile sensors is required when the sensors' laser lines are located within the same scanning range and thus influence each other.



### NOTE!

A 2D/3D profile sensor with red laser light and a 2D/3D profile sensor with blue laser light do not influence each other.

### Procedure for Synchronizing Two 2D/3D Profile Sensors:

Wire the two 2D/3D profile sensors to each other so that one of the I/O pins of the first sensor (master) is connected to one of the I/O pins of the second sensor (slave).

**Example:** I/O #3 at the master is connected to I/O #4 at the slave.



Configure one I/O pin at the master as an output with time delay. Delay should be at least as long as the master's exposure time. The output signal may not be any longer than the slave sensor's exposure time.

### Connector Pin Assignments:

Pin	Input/output	Function	Color
5	I/O3	Sync out	Pink
6	I/O4	Sync in	Yellow

Comprehensive operating instructions with an exact description of connector pins assignments can be found in the download area for the 2D/3D profile sensors at [www.wenglor.com](http://www.wenglor.com).

Information concerning the connection of several sensors can be found in section 6.3 of the operating instructions.

### Example for the master:

- Exposure time 200  $\mu$ s
- I/O: #3
- Trigger: INT
- Trigger delay: 0  $\mu$ s



### NOTE!

The master sensor can be triggered as desired.

Configure one of the slave's I/O pins as an input.

**Example for the slave:**

- Exposure time 200  $\mu$ s
- I/O: #4
- Trigger: HW
- Trigger delay: 200  $\mu$ s

**NOTE!**

If the master is triggered internally, trigger delay at the master must be at least as long as the slave sensor's exposure time.

**NOTE!**

Times are set automatically (delay).

## 5. General Information Regarding Individual Profile Evaluation

2D/3D profile sensors ascertain the height profile along a laser line. This results in a point cloud. The cloud consists of numerous points with X and Z coordinates. Ascertained data are transmitted to the control unit for evaluation where they are displayed as points with coordinates in mm.

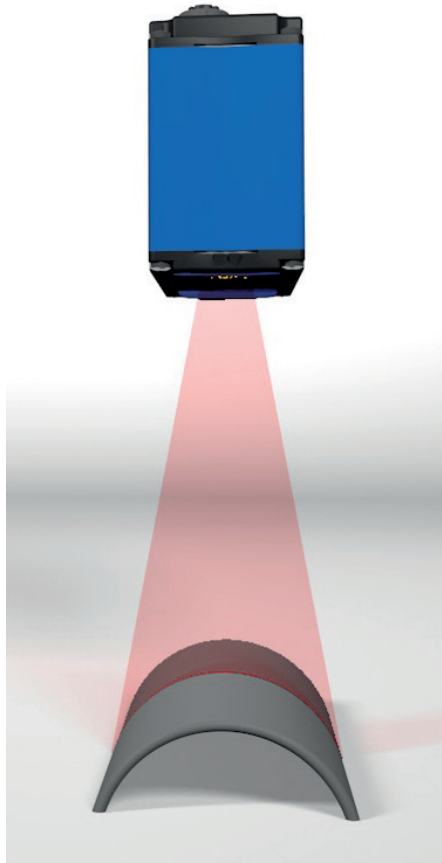
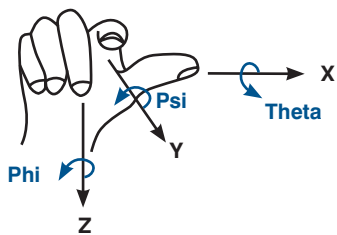


Figure 1: Individual Profile Evaluation

The origin of the coordinate system is in the sensor – in the middle of the laser line. The height or distance from the sensor is specified as the Z value. The larger the Z value, the greater the distance from the sensor. Height information for an individual profile evaluation is always within the X-Z plane.

<b>X coordinate</b>	In the direction of the laser line
<b>Y-coordinate</b>	In the conveyor belt's advancing direction or in the direction of sensor motion
<b>Z coordinate</b>	Distance from the sensor (height information)



**NOTE!**  
Assignment of the coordinates only applies to the individual profile evaluation. If several sensors are combined with each other, they're aligned to the calibration object.



## 6. General Information Concerning the System

### 6.1 Browser

As a standard feature, the sensor's website is accessed with the Firefox browser.



#### NOTE!

Further information concerning settings are included in the operating instructions of the respective sensor.

### 6.2 SOS wenglor MEL Support

In the event of technical questions or problems, wenglor's technical support department can establish a connection to the control unit via remote access. The control unit must be equipped with Internet access and active approval for remote access is required to this end.

The Team Viewer for SOS wenglor MEL Support can be downloaded from [www.wenglor.com](http://www.wenglor.com). Enter article number "DNNF016" as a search term to access the download.



#### NOTE!

Enter customer name and a description of your question.

### 6.3 System Requirements

The following system requirements must be fulfilled in order to use VisionApp 360 software:

- Intel Core i3
- 4 GB RAM
- 64 GB HDD
- 1 Gbit network card
- Windows 7
- Windows 10

### 6.4 Software Installation

The software can be downloaded by clicking the respective link in the download tab when you're logged on as a customer. The license for enabling the software can be ordered from your wenglor sales partner or by contacting our customer service department.

# 7. Licensing

In order to activate the software, enter your data to the lines provided for this purpose and activate the check-box next to the desired module (see figure 2). Click “Generate request”, save the displayed license request key to your PC and send it by e-mail to **order@wenglor.com**.



**NOTE!**  
Please make sure that the licensing process is executed at the PC which will actually be used in the application, because the license is restricted to the respective PC.

License Dialog

License Request

Product Activation

Activation setup:

User:

Max Mustermann

Organization:

Muster AG

Info:

Options:

Module	License	Status
<input type="checkbox"/> Module ProofCheck 1.0	lifetime activation	not licensed
<input checked="" type="checkbox"/> Module TCP/IP Server 1.0	lifetime activation	not licensed

Generate request

Figure 2: License Request

You'll receive your license activation key without delay. Save it to your PC. Select the “Product Activation” tab in the license dialog box and open the corresponding file. Click “Activate License” in order to enable the software.

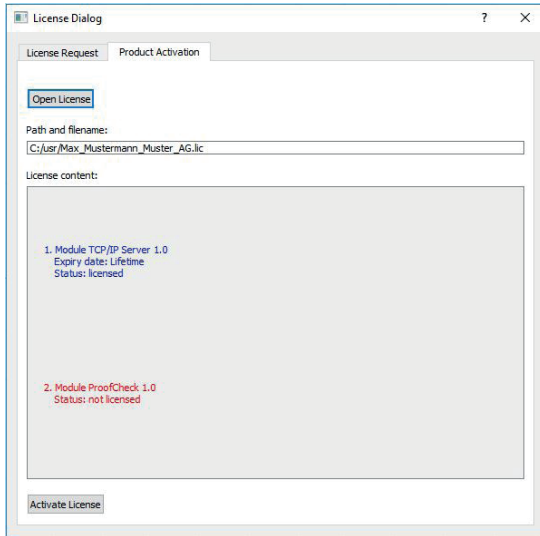


Figure 3: Product Activation

# 8. User Interface

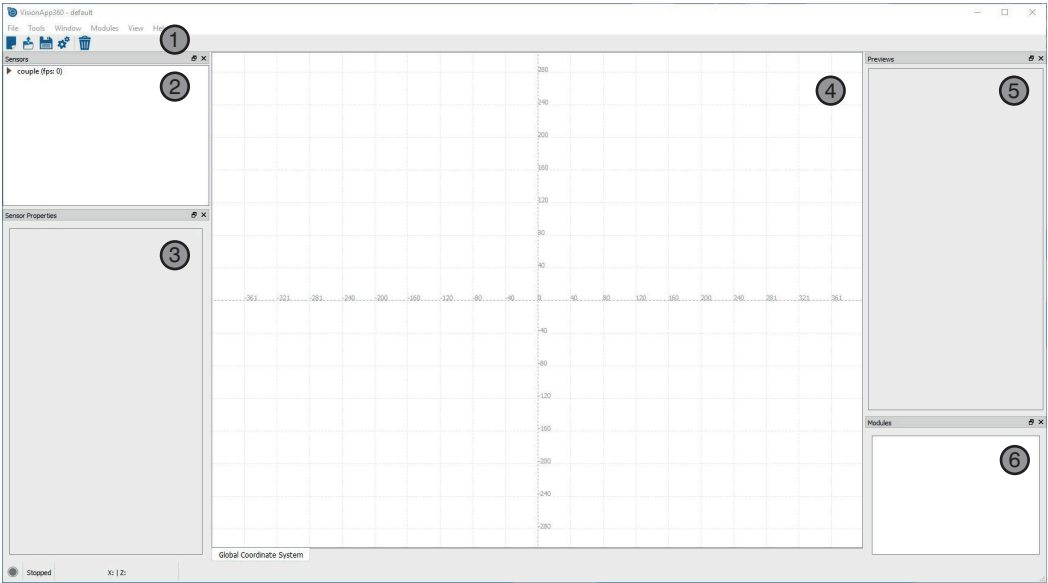


Figure 4: User Interface

- ① = menu bar and icons (see sections 8.1 and 8.2)
- ② = sensors: previously set up sensor group / sensors are displayed (see section 8.3)
- ③ = sensor properties: properties of the selected sensor (see section 8.4)
- ④ = global coordinate system: main window with coordinate system (see section 8.5)
- ⑤ = previews: display of measured profiles and intensity distribution (see section 8.6)
- ⑥ = modules: activated software modules (see section 8.7)

## 8.1 The Menu Bar

The following functions are made available by the menu bar:

### 8.1.1 File

Open	Opens a stored project.
Save	Saves the current project.
Exit	Closes the program.

## 8.1.2 Tools

<b>Undo Chart</b>	Undoes the last entry.
<b>Redo Chart</b>	Repeats the last entry.
<b>Preferences</b>	Opens the options window ( <a href="#">see figure 5</a> ).

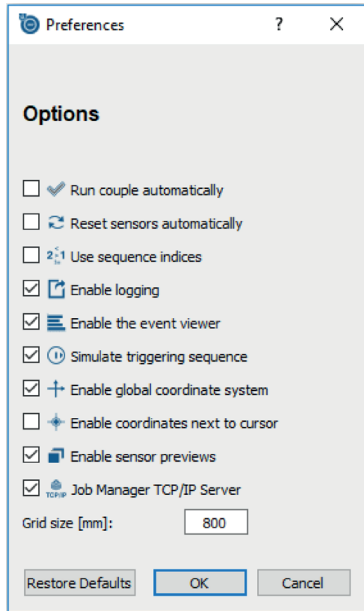


Figure 5: Options

<b>Run couple automatically</b>	The sensor group is started automatically.
<b>Reset sensors automatically</b>	Automatically resets the selected sensors.
<b>Use sequence indices</b>	Sequence indices are displayed (see description, "Edit Sensor").
<b>Enable logging</b>	A log file is saved to the VisionApp 360 directory.
<b>Enable the log terminal</b>	The log terminal can be displayed when activated ( <a href="#">see section 8.1.3</a> ).
<b>Simulate triggering sequence</b>	Triggering is displayed by means of a blinking visual field of a sensor.
<b>Enable global coordinate system</b>	The coordinate system is displayed with installed sensors.
<b>Enable coordinates next to cursor</b>	The cursor's coordinates are displayed.
<b>Enable sensor previews</b>	Measured profiles with the intensities of all sensors are displayed in the "Previews" window.
<b>Job Manager TCP/IP Server</b>	LIMA commands can be forwarded via port 62232 (without feedback) ( <a href="#">see also section 11.1</a> ).
<b>Grid size</b>	Indicates width X of the coordinate system in mm.
<b>Restore Defaults</b>	Resets all options selected in "Preferences" to their default settings.

### 8.1.3 Window

Full Screen/Windowed	Switch back and forth between full screen and window mode.
Log Terminal	Display of various commands which are transmitted to the sensors.

### 8.1.4 Modules

Module Viewer	Overview of all available software modules.
VisionApp 360 Modules	Is activated after licensing ( <a href="#">see section 11</a> ).





















### 8.1.5 View

Various sections of the screen can be displayed or hidden.

### 8.1.6 Help

Licensing	Opens the license dialog box (licensing and product activation, <a href="#">see section 7</a> ).
Manual	Opens the operating instructions.
About	Displays the installed software version.

## 8.2 Icons

Icon	Function
	"New": Deletes the current configuration and starts over again.
	"Open Configuration": Opens a stored project.
	"Save Configuration": Saves the current project.
	"Preferences": Activation/deactivation of various options ( <a href="#">see section 8.1.2</a> ).
	"Remove all": All previously set up sensor groups, including sensors, are removed.
	"Run": Measurement is started.
	"Stop": Measurement is stopped.
	"Update all": The display is updated.
	"Reset all": All settings are returned to their default values.
	"Rename": Entry/editing of the group name (only possible in the stop mode).
	"Edit": Adjust sensor settings ( <a href="#">see section 8.2.1</a> , only possible in the stop mode).
	"Remove": The selected group is removed.
	"Add new sensor": Adds a new sensor.
	"Remove sensor": Removes the selected sensor.
	"Perform calibration": The entire group is calibrated ( <a href="#">see section 10.4</a> , only possible in the run mode).
	"Delete calibration parameters": Cancels calibration for the entire group (only possible in the run mode).
	"Perform sensor calibration": The selected sensor is calibrated( <a href="#">see section 10.4</a> , only possible in the run mode).
	"Delete sensor calibration parameters": Cancels calibration for the selected sensor (only possible in the run mode).
	"Define sensor ROI": The region of interest is defined ( <a href="#">see section 10.4</a> , only possible in the run mode).
	"Define sensor ROI finish": Ends the procedure for defining the sensor's ROI.

8.2.1 Rename/Edit

The “Edit” icon has two functions: If the sensor group has been selected, it can be used to change the group name. If a single sensor has been selected, the “Edit sensor” window is displayed.

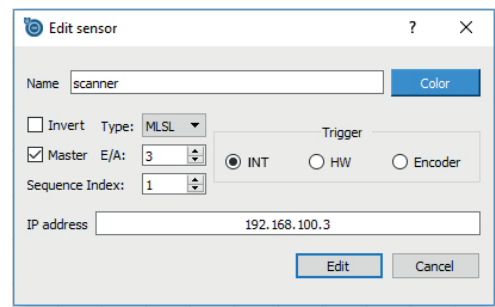


Figure 6: Sensor Settings

Name	Enter the desired sensor designation.
Color	Colors can be assigned to the individual sensors for the purpose of differentiation at the display.
Invert	Reverses the sensor’s alignment (see section 9).
Type	Enter the sensor type (MLSL or MLWL).
Master	Set up the sensor as the master (see section 4.4).
I/O	In the case of synchronization or if a hardware trigger is used, the sync in/out which is wired in the hardware must be entered here.
Sequence Index	Only visible if the corresponding option is activated (see section 8.1.2). Assignment to a position within the measuring sequence.
Trigger	Selection of the trigger type: <ul style="list-style-type: none"><li>• INT: independent, internal trigger via software</li><li>• HW: Hardware trigger (must be selected when slave sensors are used, for example)</li><li>• Encoder: external trigger via (incremental) encoder</li></ul>
IP address	Enter the sensor’s IP address.

8.3 “Sensors” Display Area

The previously set up group is displayed in the “Sensors” area with its associated sensors. One group (couple) with one sensor is previously set up at the factory. This sensor’s properties can be changed or adapted after clicking the “Edit” icon (see section 8.2). Additional sensors can be set up after clicking the “Add new sensor” icon.



## 8.4 “Sensor Properties” Display Area

Current sensor properties are displayed in this area. A detailed description can be found in the operating instructions for the respective sensor in the product area at [www.wenglor.com](http://www.wenglor.com).

Sensor Properties	
Property	Local Value
Type	MLSL124
Serial Number	42
Z-Range start [mm]	100.00
Z-Range [mm]	400.00
X-Range Start [mm]	70.00
X-Range End [mm]	280.00
Firmware Version	1.1.0
Exposure Time [us]	150
Laser Active	1
Measurement Rate [Hz]	200
Pulse width [us]	1000
Trigger Delay [us]	0
ROI X-Width [px]	1280
ROI X-Offset [px]	0
ROI X-Step [px]	0
ROI Z-Height [px]	1024
ROI Z-Offset [px]	0

Figure 7: Sensor Properties

<b>Type</b>	Sensor type
<b>Serial Number</b>	Serial number
<b>Z-Range Start</b>	Beginning of the measuring range in the Z direction
<b>Z-Range</b>	Measuring range in the Z direction
<b>X-Range Start</b>	Visual field width at the beginning of the measuring range in the Z direction
<b>X-Range End</b>	Visual field width at the end of the measuring range in the Z direction
<b>Measurement Rate</b>	Indicates the current measuring frequency.
<b>Exposure Time</b>	Indicates current exposure time.
<b>Pulse Width</b>	Displays pulse width (minimum width: 10 $\mu$ s).
<b>Trigger Delay</b>	Indicates delay time after which the trigger is tripped.
<b>Laser Active</b>	1: laser activated, 0: laser deactivated.
<b>ROI Z-Height</b>	Indicates the number of CMOS lines in the Z direction.
<b>ROI Z-Offset</b>	Shifts the ROI in the Z direction by the selected number of CMOS lines.
<b>ROI X-Width</b>	Indicates the number of CMOS lines in the X direction.
<b>ROI X-Offset</b>	Shifts the ROI in the X direction by the selected number of CMOS lines.
<b>ROI X-Step</b>	Only a portion of the existing CMOS lines in the X direction are taken into consideration. <b>Example:</b> An entry of “20” means that only every 20 <sup>th</sup> line is taken into consideration.

## 8.5 “Global Coordinate Systems” Display Area

The “Global Coordinate System” main window shows all of the components involved in the measurement and makes it possible to calibrate the entire measuring system. The measured profiles from the individual sensors can be seen in the run mode as long as the object to be measured is within the visual field of the respective sensor.

## 8.6 “Previews” Display Area

The measured profiles and signal strengths of all active sensors are displayed in the “Previews” area in the run mode.

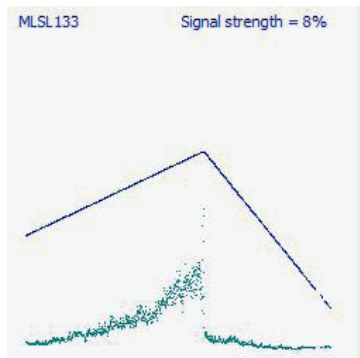


Figure 8: Display of the Measured Profile and Signal Strengths

After double-clicking a sensor area, a new tab appears in the main window at which the sensor’s visual field and scanned profile are displayed.

## 8.7 “Modules” Display Area

A list of all available modules is displayed. Descriptions of the software modules can be found in [section 11](#).

## 9. Layout of the Measuring System

Correct profile evaluation is only possible if the sensors have been correctly aligned to the direction of motion of the object to be measured (see figures 9 and 10).

If corresponding arrangement is not possible, the sensors have to be inverted with the software (see section 8.2.1).



### NOTE!

Sensors inverted by means of the software are displayed in the coordinate system without logo (see figures 17 and 18).

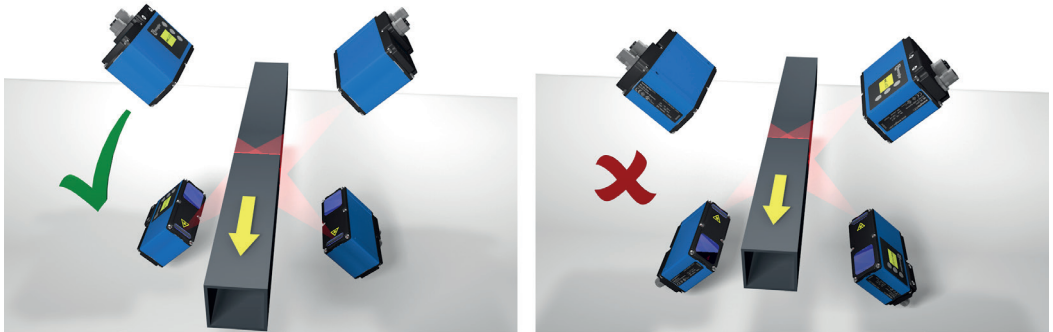


Figure 9: Arrangement of the Sensors for Measurement of Square Tubing



Figure 10: Direction of Motion



### NOTE!

The sensors must be positioned such that the object to be measured moves in the direction in which the laser beam is emitted.

# 10. Calibrating the Measuring System

The measuring system has to be calibrated in order to generate an overall image from the obtained individual images. A calibration object with an angular cross-section is required to this end. The number of corners must coincide with the number of utilized sensors. The calibration object is positioned such that each sensor is aligned to one corner of the calibration object. The sensors' laser lines must all be at the same height. This arrangement is then transferred to the coordinate system as described below.

## 10.1 The Calibration Object

The calibration object must be appropriately laid out depending on whether the object to be measured will be measured at one level only (e.g. width measurement) or over its entire cross-section (e.g. tubing measurement).

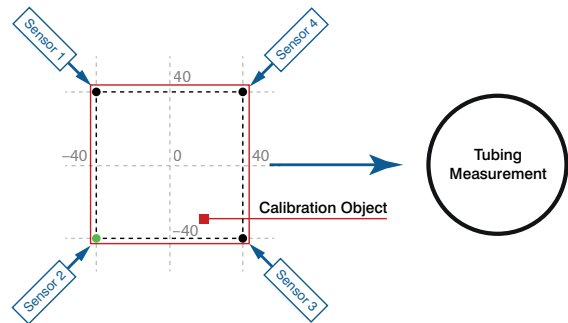


Figure 11: Calibration Object for Measurement All the Way Around with 4 Sensors, e.g. Tubing Measurement (closed profile)

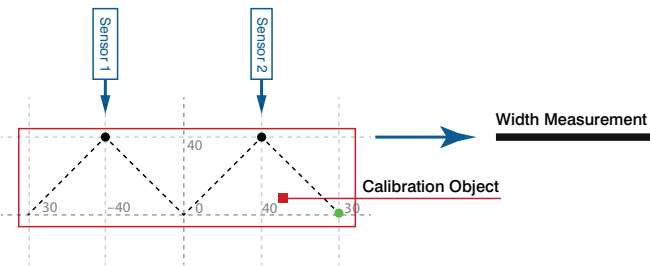


Figure 12: Calibration Object for Measurement at One Level with 2 Sensors, e.g. Width Measurement (open profile)

## 10.2 Setting Up the Calibration Object

The coordinates of the calibration object are entered first of all. Click into the coordinate system with the right mouse key, select the “Add a new point” option and then enter all X and Y coordinates of the calibration object’s corner points, one after the other. Alternatively, the court points can be entered by double-clicking with the left mouse key.

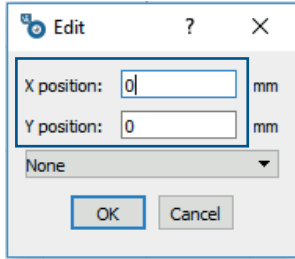


Figure 13: Entering the Coordinates



### NOTE!

A corner point is the point at which the extended sides of two neighboring edges intersect (see figure 14).

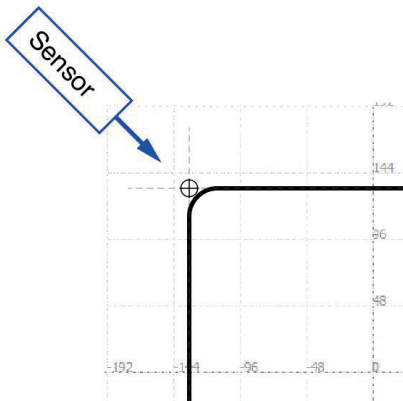


Figure 14: Determining the Corner Point of a Calibration Object

### 10.3 Positioning the Sensors

The sensors are added after setup of the calibration object has been completed. Position the cursor at one of the calibration object's corner points, right click and select to the "Edit point" option (the activated corner point turns red). Then select the associated sensor in the combination field and confirm your entry by clicking "OK". Repeat this procedure until all of the sensors have been assigned to their corner points.

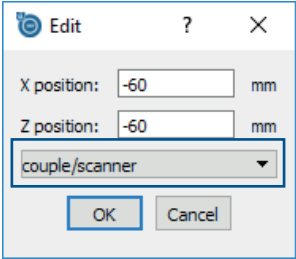


Figure 15: Sensor Selection



**NOTE!**  
Only sensors which have been previously set up can be selected ([see section 8.3](#)).



**NOTE!**  
Arrangement of the sensors in the software must coincide with reality.

After all of the corner points have been set and the sensors have been assigned, a display appears in the run mode with all visual fields and individual profiles ([see figure 16](#)). In order to obtain a contiguous profile, the sensors must be calibrated as described in [section 10.4](#).

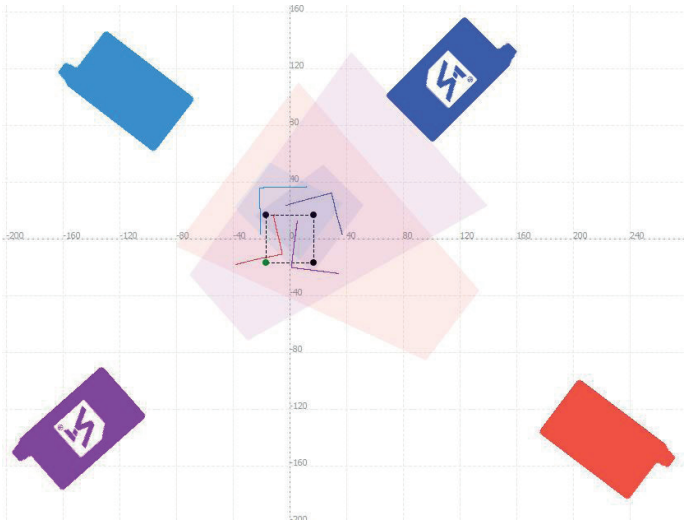


Figure 16: Display of the Sensor Profiles **Before** Calibration

## 10.4 Calibrating the Sensors

Actual calibration is conducted after all of the components have been entered. An entire sensor group, as well as individual sensors, can be calibrated.

**Entire sensor group:** Select the group while in the run mode, click the “Perform calibration” icon and acknowledge your entry.

**Individual sensors:** Select a sensor while in the run mode, click the “Perform sensor calibration” icon and acknowledge your entry. Repeat this procedure until all of the sensors have been calibrated.

A magnifying glass appears in the icon field after calibration. The magnifying glass can be clicked in order to switch back and forth between the profile views before and after calibration.

After successful calibration, the measuring profile and the calibration object are congruent ([see figure 17](#)).

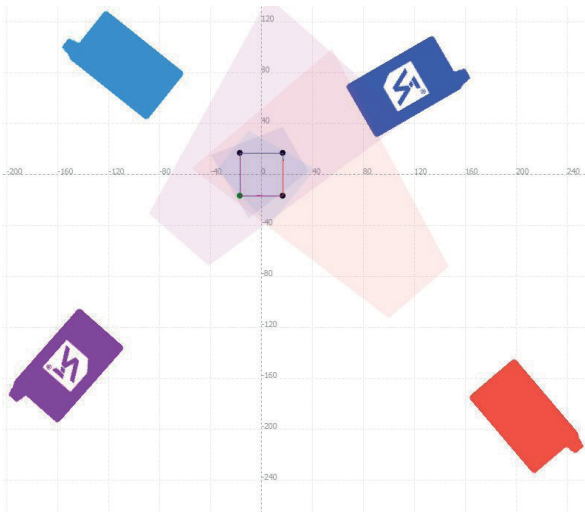


Figure 17: Display of the Sensor Profiles **After** Calibration

If calibration of one or more sensors is not successful, calibration must be conducted again with the help of an ROI. Select the sensor in question to this end and undo the calibration procedure (click the “Delete sensor calibration parameters” icon and acknowledge your entry). Then click the “Define sensor ROI” icon. Set up an appropriate ROI around the profile by setting corner points by means of double clicking ([see figure 18](#)). End the procedure by clicking “Finish sensor ROI”. Calibration must then be performed once again.

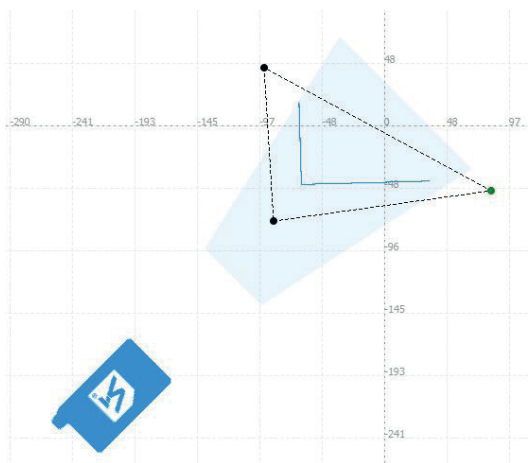


Figure 18: ROI



## 11. Modules

Add-on software modules can be obtained with the help of the licensing procedure described in [section 7](#).

### 11.1 VisionApp 360 Module

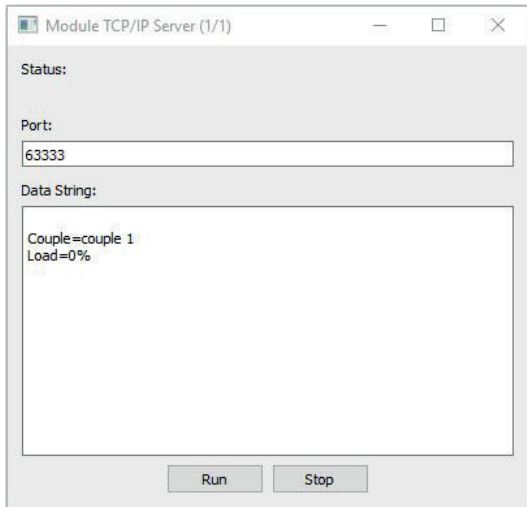


Figure 19: TCP/IP Server Module

Measurement data can be received via preset port 63333 with the VisionApp 360 module.

## 12. Change Index

Version	Date	Description/Change	Software Version
1.0.0	30 May 2018	Initial version of documentation	1.0.0.0

