

# OY2TA104P0150E

High-Performance Distance Sensor



EtherNet/IP™

Operating Instructions

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## 1. Proper Use

This wenglor product has to be used according to the following functional principle:

High-performance distance sensors which use the principle of transit time measurement determine the distance between the sensor and the object according to the principle of transit time measurement. These sensors have a large working range and are therefore able to detect objects over large distances.

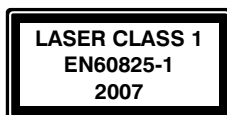
Selected sensors are distinguished by WinTec (wenglor interference free technology). This technology allows black or shiny surfaces to be reliably detected even in extremely inclined positions. It is possible to mount several sensors next to or across from each other without them influencing each other.

## 2. Safety Precautions

### 2.1. Safety Precautions

- This operating instruction is part of the product and must be kept during its entire service life.
- Read this operating instruction carefully before using the product.
- Installation, start-up and maintenance of this product has only to be carried out by trained personal.
- Tampering with or modifying the product is not permissible.
- Protect the product against contamination during start-up.
- These products are not suited for safety applications.

### 2.2. Laser/LED warning



**Class Laser 1 (EN 60825-1)**  
Observe all applicable standards and safety precautions.

## 3. EC Declaration of Conformity

The products are developed, constructed and manufactured according to the directive 2004/108/EC. The following international standards and specifications apply:

**EN 60947-5-2:2007 + A1:2012** Low-voltage switchgear and controlgear,  
Part 5-2: Control circuit devices and switching elements – proximity switches  
**EN 60825-1: 2007** Safety of laser devices  
**EN 61000-6-2:2005** Electromagnetic compatibility (EMC), Part 6-2: Generic standards – Immunity for industrial environments

Any additional standards which are applicable for the given application must be observed.



**RoHS**

Environmental Type 1

## 4. Technical Data

Order Number	OY2TA104P0150E
Working Range	0,1...10,1 m
Linearity Deviation	20 mm
Reproducibility	7 mm
Light Source	Laser (red)
Output Rate	330/s
Wave Length	660 nm
Service Life (Tu = 25 °C)	100000 h
Max. Ambient Light	5000 Lux
Laser Class (EN 60825-1)	1
Beam Divergence	< 2 mrad
Light Spot Diameter	see table 1
Port Type	100BASE-TX
PoE Class	1
Response Time	< 10 ms
Temperature Range	-25...50 °C
Reverse Polarity Protection	yes
Protection Class	III
Adjustment	Menu (OLED)
Housing	Plastic
Degree of Protection	IP68
Connection	M12×1, 8-pin
Webserver	yes
Control Panel No.	X2, T10
Interface	EtherNet/IP™

### Light Spot Diameter

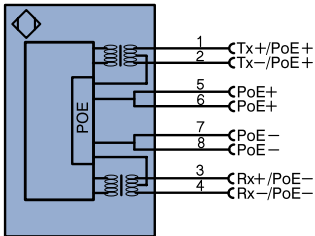
Working Distance	0	10 m
Light Spot Diameter	5 mm	< 20 mm

Table 1

4.1. Connecting the Sensors

OY2TA104P0150E

001

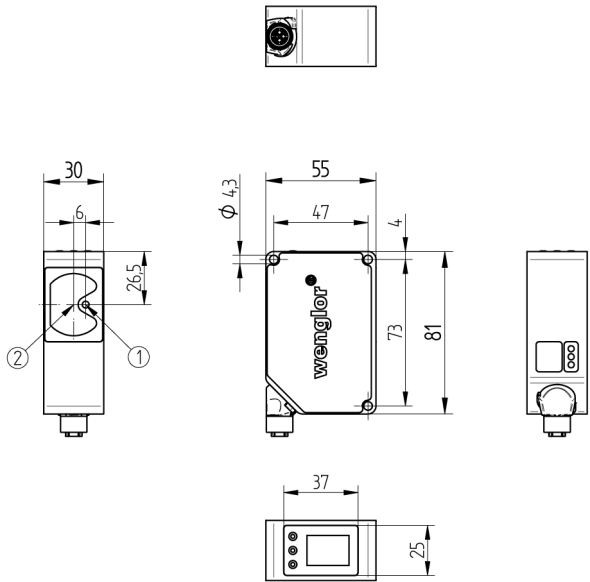


Legend

+	Supply Voltage +	nc	not connected
-	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	U	Test Input inverted
A	Switching Output (NO)	W	Trigger Input
A	Switching Output (NC)	O	Analog Output
V	Contamination/Error Output (NO)	O-	Ground for the Analog Output
V	Contamination/Error Output (NC)	BZ	Block Discharge
E	Input (analog or digital)	AWV	Valve Output
T	Teach Input	a	Valve Control Output +
Z	Time Delay (activation)	b	Valve Control Output 0 V
S	Shielding	SY	Synchronization
RxD	Interface Receive Path	E+	Receiver-Line
TxD	Interface Send Path	S+	Emitter-Line
RDY	Ready	≡	Grounding
GND	Ground	SnR	Switching Distance Reduction
CL	Clock	Rx+/-	Ethernet Receive Path
E/A	Output/Input programmable	Tx+/-	Ethernet Send Path
IO-Link		B <sub>us</sub>	Interfaces-Bus A(+)/B(-)
PoE	Power over Ethernet	La	Emitted Light disengageable
IN	Safety Input	Mag	Magnet activation
SSD	Safety Output	RES	Input confirmation
Signal	Signal Output	EDM	Contact Monitoring

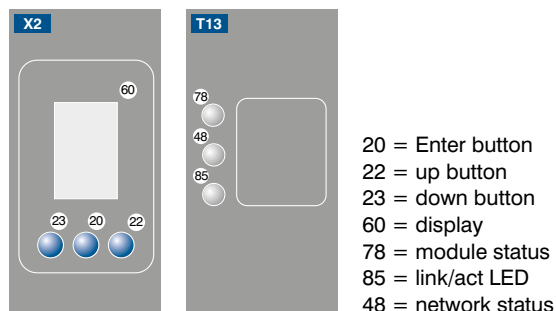
ENa	Encoder A
ENa	Encoder B
AMIN	Digital output MIN
AMAX	Digital output MAX
AOK	Digital output OK
SY In	Synchronization In
SY OUT	Synchronization OUT
OLT	Brightness output
M	Maintenance
Wire Colors according to DIN IEC 757	
BK	Black
BN	Brown
RD	Red
OG	Orange
YE	Yellow
GN	Green
BU	Blue
VT	Violet
GY	Grey
WH	White
PK	Pink
GNYE	Green Yellow

4.2. Housing Dimensions



1 = Transmitter Diode  
2 = Receiver Diode

### 4.3. Control Panel



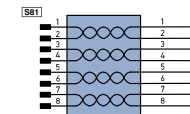
Description	Status	Function
MS (Module Status)	Off	–
	Green off	Operate status
	Green flashing	Standby
	Red	Serious error
	Red flashing	Device error
NS (Network Status)	Off	No IP address
	Green off	CIP connection
	Green flashing	IP configured, no CIP connection
	Red	Duplicated IP address
	Red flashing	CIP connection timeout
L/A	Off	No connection established
	Green	Device connected, connection established
	Green flashing	Device connected, connection established, communication active

### 4.4. Complementary Products

wenglor offers Connection Technology for field wiring.

Suiting Mounting Technology No. **340**

Suiting Connection Technology No. **50**



Protection Housing Set ZST-NN-02

Midspan Adapter Z0029

Switch with PoE ZAC50xN0x

## 5. Mounting Instructions

When using the Sensor, follow the corresponding electrical and mechanical regulations, standards and safety rules. The Sensor must be protected against mechanical influence. The Sensor has optimum extraneous light qualities when the background is within the working range.

## 6. Initial Operation

### 6.1. Operation using a controller without EDS file use

If you want to commission the device when connected to a control system, please perform the following steps as described by means of example:

- Connect the sensor to a switch with PoE using a suitable cable M12×1; 8-pin. If using a switch without PoE please use the adapter (Z0029) for the adequate supply voltage. Once the supply voltage has been established the display at the sensor will start.
- Create a new project in the controller
- Add a new module to this project
- When selecting the communication module “General Ethernet module” should be used
- The properties of the new module should match the connection parameters of the relevant product. In the example of the sensor the communication format selected should be “Data SINT”. To be able to access the sensor in the network an IP address must be assigned in addition. In delivery condition this is requested by the product via a DHCP server.
- Creating the Config Assembly (not mandatory). Default Config = I/O ports to input, active performance monitoring, all ports are released for PoE
- After the program has been created, connect to the controller and load program

For a detailed description for different controllers and for installation of the files or project planning of the network refer to the help files of the relevant controller. wenglor provides a short exemplary instruction for commissioning of an EtherNet/IP™ device ([www.wenglor.com](http://www.wenglor.com) → **Product World** → **Product search (Enter the product number)** → **Download** → **General instructions**).

## 6.2. Default Settings

OCPxxxP0150P		
Display	Mode	Process
	Intensity	Screensaver
Filter		1
Output Rate		Normal
Laser		ON
Network	IP-Address	192.168.100.1
	Subnet Mask	255.255.255.0
	DHCP	DHCP OFF
	Std Gateway	192.168.100.254
	MAC Address	(See type plate on the product)
Language		English
Password	Activate	Off
	Change	0

## 7. Functional Overview OLED-Display

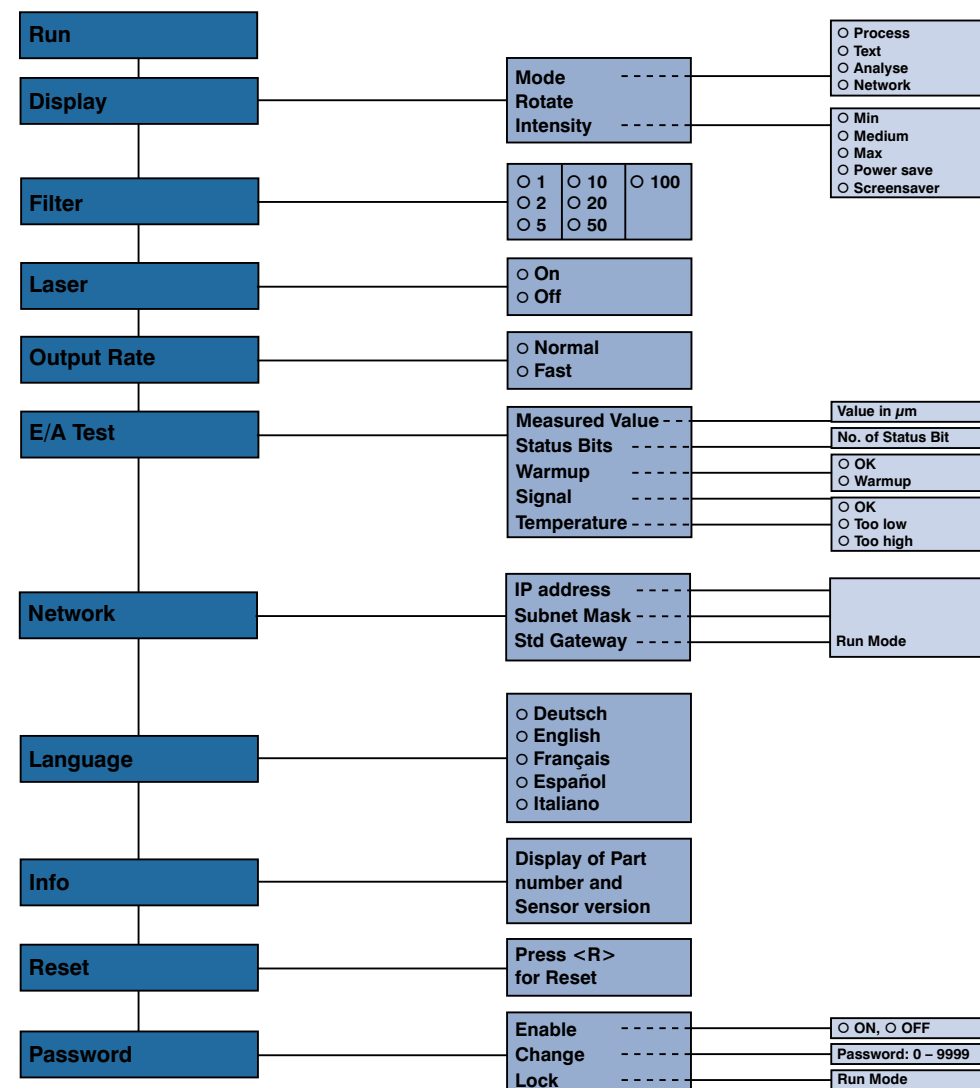




Fig. 1: Set language menu

**Navigation by pressing the button:**

- ▲ : Navigation up.
- ▼ : Navigation down.
- ↵ : Enter Button.

The selection is confirmed by pressing the Enter button.

**Meaning of the menu items:**

- ◀ Back : one level higher in the menu.
  - ◀◀ Run : Switch to display mode.
- Change to the configuration menu by pressing any button.

**Note:** If no setting is made in the configuration menu for a period of 30 s, the Sensor returns automatically to the display view.

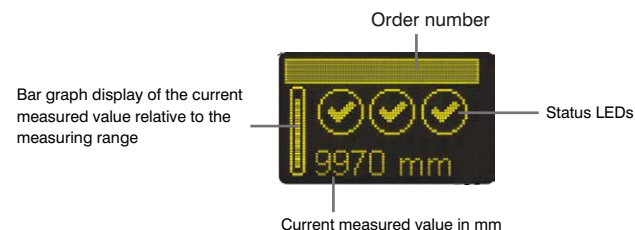
Pressing the button again returns the Sensor to the last menu view used. If a setting is made, it becomes active once you leave the configuration menu.

**Important:** To prevent any damage to the buttons, please do not use any pointed objects for setting.

The following explains the functions behind the individual menu items.

**7.1. Run**

Sensor switches to display mode.



Symbol descriptions of status LEDs:

Symbol	Significance	State 1	State 2	State 3
Symbol 1	Warm-up	☑ ok	⌚ wait	–
Symbol 2	Signal Strength	☑ ok	⚙ too low (dirty)	⚙ too high
Symbol 3	Temperature	☑ ok	🔥 too high	❄ too low

**7.2. Display**

Display	Adjust the display device
Mode	<b>Mode:</b> Select display mode (see chapter 7.2.1)
Rotate	<b>Rotate:</b> Rotate display by 180°. By pressing the “↵” button the display is rotated by 180°. The rotation is canceled by pressing this button again.
Intensity	<b>Intensity:</b> Set the display intensity (see chapter 7.2.2)
◀ Back	
◀◀ Run	

**7.2.1. Display Mode**

The sensor display always shows the measured value in mm and the order number. In the menu item “Display mode” the following additional displays can be selected:

Mode	Adjust the display device
○ Process	<b>Process:</b> Display of status LEDs for warm-up, signal strength, and temperature.
○ Text	<b>Text:</b> Display of a free text which can be sent to the sensor via the controller.
○ Analysis	<b>Analysis:</b> Display of signal strength in percent and measurement rate in 1/s.
○ Network	<b>Network:</b> Display of EtherNet/IP™-LED's, NS, MS, and L/A. For the function of these LEDs see chapter “4.3. Control Panel” on page 8.

### 7.2.2. Display Intensity

Intensity	Set the display intensity
<ul style="list-style-type: none"> <li>○ Min</li> <li>○ Normal</li> <li>○ Max</li> <li>○ Power save</li> <li>○ Screensaver</li> </ul>	<p><b>Min:</b> The intensity of the display is set to a minimum value.</p> <p><b>Normal:</b> The intensity of the display is set to a medium value.</p> <p><b>Max:</b> The intensity of the display is set to a maximum value.</p> <p><b>Power save:</b> The display switches off after one minute without a button being pressed and automatically switches back on when a button is pressed.</p> <p><b>Screensaver:</b> The colors of the display are inverted every minute.</p>

### 7.3. Filter

The filter (filter size) is the number of measured values over which the Sensor takes an average. The larger the filter selected, the slower the response time of the Sensor becomes when there is a change in the measured values. A larger filter improves the reproducibility of the Sensor.

Filter	Number of values for averaging
<ul style="list-style-type: none"> <li>○ 1</li> <li>○ 2</li> <li>○ 5</li> <li>○ 10</li> <li>○ 20</li> <li>○ 50</li> <li>○ 100</li> <li>◀ Back</li> <li>◀ Run</li> </ul>	If 1 is selected, each measured value is output directly without averaging. Whenever a value greater than 1 is selected, the Sensor takes an average over the selected number of x measured values.

### 7.4. Output Rate

The output rate indicates how often the measured value is refreshed per second at the output.

Output Rate	Adjust Output Rate
<ul style="list-style-type: none"> <li>○ Normal</li> <li>○ Fast</li> <li>◀ Back</li> <li>◀ Run</li> </ul>	<p><b>Normal:</b> The normal output rate is 100/s. This means that a new measured value is read out every 10 ms.</p> <p><b>Fast :</b> The fast output rate is 330/s. This means that a new measured value is read out every 3 ms.</p> <p><b>Note:</b> If this mode is activated, the OLED display is switched off as soon as a PROFINET controller goes online. It's switch back on automatically when the controller goes offline again.</p>

### 7.5. Laser


In the menu item "Laser", the emitted light can be switched on or off.

Laser	Switch transmitted light on or off
<ul style="list-style-type: none"> <li>○ On</li> <li>○ Off</li> <li>◀ Back</li> <li>◀ Run</li> </ul>	<p><b>ON:</b> Switch transmitted light on</p> <p><b>OFF:</b> Switch transmitted light off; the Sensor no longer supplies measured values</p>

### 7.6. I/O Test

This function manually changes the output of the Sensor. As a result, it possible to test whether the further process is working as desired. The test is automatically terminated once you leave the test menu.

I/O Test	Test of the Sensor outputs
<ul style="list-style-type: none"> <li>Measured value</li> <li>Statusbits</li> <li>Warm-up</li> <li>Signal Strength</li> <li>Temperature</li> <li>◀ Back</li> <li>◀ Run</li> </ul>	<p><b>Measured value:</b> Default of a measured value in <math>\mu\text{m}</math></p> <p><b>Statusbits:</b> The number of the status bit to be set can be selected by pressing the "+" or "-" button. (see list of Statusbits)</p> <p><b>Warm-up:</b> Default of the warm-up on "ok" or "warm-up"</p> <p><b>Signal strength:</b> Default of the signal strength on "ok", "too low" or "too high"</p> <p><b>Temperature:</b> Default of the temperature on "ok", "too low" or "too high"</p>

If the Sensor returns to the display view after 30 seconds without pressing the button while the test is still active, this is indicated by a  in the display view.

#### List of status bits:

Number	Function	Description of when the bit is set	Measured value read-out
1	General error	One of the following bits is set.	—
2	Distance to object too small	The current measured value is below the working range.	Measuring range lower limit
3	Distance to object too large	The current measured value is above the working range.	Measuring range upper limit
4	No signal	The sensor does not detect an object within its working range.	Measuring range upper limit
5	Signal too weak	Too little light is reflected back to the sensor from the object (e.g. very dark surface). The quality of the measured value is reduced as a result.	Current measured value
6	Signal too strong	Too much light is reflected back to the sensor from the object (e.g. reflector) The quality of the measured value is reduced as a result.	Current measured value



7	Warm-up procedure	The sensor is currently in the warm-up phase and the quality of the measured value does not yet comply with the specified technical data. See page 5 below.	Current measured value
8	Temperature too high	The sensor is at the upper limit of its temperature range. If temperature continues to rise, the sensor may be destroyed.	Current measured value
9	Temperature too low	The sensor is at the lower limit of its temperature range. If temperature continues to drop, the sensor may be destroyed.	Current measured value

## 7.7. Network

Network	Network parameter settings	
IP address	IP address:	Display of the IP address set.
Subnet mask	Subnet mask:	Display of the Subnet mask set.
Std gateway	Std gateway:	Display of the standard gateway set.
◀ Back		
◀◀ Run		

## 7.8. Language

The menu language can be changed in the menu item “Language”. The user is automatically prompted for his desired language at initial operation and after each reset.

Language	Set menu language
<input type="radio"/> Deutsch <input type="radio"/> English <input type="radio"/> Francais <input type="radio"/> Espanol <input type="radio"/> Italiano <input type="radio"/> Back <input type="radio"/> Run	The menu appears in the selected language immediately after selection.

## 7.9. Info

In the menu item “Info” the following information about the Sensor is displayed:

Info
Order number
Software version
Serial number

## 7.10. Reset

All Sensor settings, with the exception of the network settings, can be reset to the default settings in the menu item “Reset”. The settings of the default settings can be found in Chapter “6.2. Default Settings” on page 10.

Reset	Reset to the default settings
Press <R> for Reset	The Sensor settings that have been made can be reset to the default settings by pressing the “R” button.

## 7.11. Password

Password protection prevents against changing the set data unintentionally.

Password	Set password functionality	
Activate	<b>Enable:</b> Turn password protection on or off. If password protection is activated, the operation of the Sensor is disabled after supply power has been interrupted and is only enabled after successfully entering password.  <b>Change:</b> Change password. <b>Lock:</b> Locking Sensor causes an immediate disabling of operation if activate Password is set to “on”.	
Change		
Block		
◀ Back		
◀◀ Run		

If the password functionality is activated, the password must be entered before each operation of the Sensor. After correctly entering the password by means of the “+” and “-” button, the menu is activated and the Sensor is operational.

- The password functionality is deactivated in the default settings.
- The value range of the password number ranges from 0000...9999

It is necessary to note the newly defined code before changing the password. A forgotten password can only be overwritten by a general password. The general password can be requested by sending an e-mail to [support@wenglor.com](mailto:support@wenglor.com).

## 8. Detailed description of the object models for EtherNet/IP™ devices

### 8.1. Identity object (0x01)

This object provides the identification of the device.

Identity object (object class ID 0x01)		
Class attributes		
ID	Name	Access
1	Revision	Get
2	Max instance	Get
3	Number of instances	Get
6	Maximum ID number class attributes	Get
7	Maximum ID number instance attributes	Get
Class services		
Code	Name	
0x01	Get_Attribute_All	
0x0E	Get_Attribute_Single	
Instance attributes		
ID	Name	Access
1	Vendor ID	Get
2	Device type	Get
3	Product code	Get
4	Revision	Get
5	Status	Get
6	Serial number	Get
7	Product name	Get
Instance services		
Code	Name	
0x01	Get_Attribute_All	
0x0E	Get_Get_Attribute_Single	
0x05	Reset	

### 8.2. Message router object (0x02)

The message router defines the connection paths to other objects and allows access to the objects via these paths.

Message router object (object class ID)		
Class attributes		
ID	Name	Access
1	Revision	Get
2	Max instance	Get
3	Number of instances	Get
4	Optional attribute list	Get
5	Optional service list	Get
6	Maximum ID number class attributes	Get
7	Maximum ID number instance attributes	Get
Class services		
Code		Name
0x01	Get_Attribute_All	
0x0E	Get_Attribute_Single	
Instance attributes		
ID	Name	Access
1	Object_list	Get
2	Number available	Get
Instance services		
Code		Name
0x01	Get_Attribute_All	
0x0E	Get_Attribute_Single	

### 8.3. Assembly object (0x04)

The assembly object links attributes of different objects to allow for their transmission as a whole via a single connection

The following assemblies are available:

- Input assembly (producing) 0x65
- Config assembly 0x64

Assembly object (object class ID 0x04)		
Class attributes		
ID	Name	Access
1	Revision	Get
2	Max instance	Get
3	Number of instances	Get
6	Maximum ID number class attributes	Get
7	Maximum ID number instance attributes	Get
Class services		
Code		Name
0x0E		Get_Attribute_Single
Instance attributes		
ID	Name	Access
3	Data	Get/set
4	Size	Get
Instance services		
Code		Name
0x0E		Get_Attribute_Single
0x10		Set_Attribute_Single
0x18		Get_Member
0x19		Set_Member

### 8.4. Connection manager object (0x06)

This object manages internal resources for maintaining explicit and implicit connections.

Connection manager object (object class ID 0x06)		
Class attributes		
ID	Name	Access
1	Revision	Get
2	Max instance	Get
3	Number of instances	Get
4	Optional attribute list	Get
6	Maximum ID number class attributes	Get
7	Maximum ID number instance attributes	Get
Class services		
Code		Name
0x01		Get_Attribute_All
0x0E		Get_Attribute_Single
Instance attributes		
ID	Name	Access
1	Open requests	Get/set
2	Open format rejects	Get/set
3	Open resource rejects	Get/set
4	Open other rejects	Get/set
5	Close requests	Get/set
6	Close format rejects	Get/set
7	Close other rejects	Get/set
8	Connection timeouts	Get/set
Instance services		
Code		Name
0x01		Get_Attribute_All
0x0E		Get_Attribute_Single
0x54		Forward_Open
0x4E		Forward_Close
0x52		Unconnected_Send

### 8.5. Port object (0xF4)

This object describes the existing CIP ports of the device.

Port object (object class ID 0xF4)		
Class attributes		
ID	Name	Access
1	Revision	Get
2	Max instance	Get
3	Number of instances	Get
6	Maximum ID number class attributes	Get
7	Maximum ID number instance attributes	Get
8	Entry port	Get
9	Port instance info	Get
Class services		
Code	Name	
0x01	Get_Attribute_All	
0x0E	Get_Attribute_Single	
Instance attributes		
ID	Name	Access
1	Port type	Get
2	Port number	Get
3	Link object	Get
4	Port name	Get
7	Node address	Get
Instance services		
Code	Name	
0x01	Get_Attribute_All	
0x0E	Get_Attribute_Single	

### 8.6. TCP/IP interface object (0xF5)

This object implements mechanisms for configuration of the TCP/IP layer such as, for example, IP address, subnet mask, and gateway address.

TCP/IP interface object (object class ID 0xF5)		
Class attributes		
ID	Name	Access
1	Revision	Get
2	Max instance	Get
3	Number of instances	Get
6	Maximum ID number class attributes	Get
7	Maximum ID number instance attributes	Get
Class services		
Code		Name
0x01	Get_Attribute_All	
0x0E	Get_Attribute_Single	
Instance attributes		
ID	Name	Access
1	Status	Get
2	Configuration capability	Get
3	Configuration control	Get/set
4	Physical link object	Set
5	Interface configuration	Get/set
6	Host name	Get/set
10	Select ACD	Get/set
11	LastConflictDetected	Get/set
Instance services		
Code		Name
0x01	Get_Attribute_All	
0x0E	Get_Attribute_Single	
0x02	Set_Attribute_All	
0x10	Set_Attribute_All	

### 8.7. Ethernet link object (0xF6)

This object configures the connection-specific properties (MAC-ID, Transmission rate etc.) of the Ethernet interfaces.

Ethernet link object (object class ID 0xF6)		
Class attributes		
ID	Name	Access
1	Revision	Get
2	Max instance	Get
3	Number of instances	Get
6	Maximum ID number class attributes	Get
7	Maximum ID number instance attributes	Get
Class services		
Code		Name
0x01	Get_Attribute_All	
0x0E	Get_Attribute_Single	
Instance attributes		
ID	Name	Access
1	Interface speed	Get
2	Interface flags	Get
3	Physical address	Get
6	Interface control	Get/set
7	Interface type	Get
8	Interface state	Get
10	Interface label	Get
Instance services		
Code		Name
0x01	Get_Attribute_All	
0x0E	Get_Attribute_Single	
0x10	Set_Attribute_Single	

### 8.8. QoS object (0x48)

The QoS (Quality of Service) object can be used to configure the DSCP values of the different outgoing message priorities.

QoS object (0x48)		
Class attributes		
ID	Name	Access
1	Revision	Get
2	Max instance	Get
3	Number of instances	Get
6	Maximum ID number class attributes	Get
7	Maximum ID number instance attributes	Get
Class services		
Code		Name
0x01	Get_Attribute_All	
0x0E	Get_Attribute_Single	
Instance attributes		
ID	Name	Access
4	DSCP urgent	Get/set
5	DSCP scheduled	Get/set
6	DSCP high	Get/set
7	DSCP low	Get/set
8	DSCP explicit	Get/set
Instance services		
Code		Name
0x0E	Get_Attribute_Single	
0x10	Set_Attribute_Single	

## 8.9. Vendor-specific object (0x64)

### 8.9.1. Configuration assemblies

Configuration assembly (assembly instance ID 0x64) for OCP								
Byte	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
0	Filter							
1	Reserved			Display rotate	Button lock	Webserver lock	Output rate	Emitted light
2	Display intensity							
3	Display mode							
4	Display language							
5	Display text (string length)							
6	Display text (char 1 of 19)							
n	...							
24	Display text (char 19 of 19)							
25	Reserved <sup>1</sup>							

<sup>1</sup>) The reserved byte at position 25 is required as padding. The length field of the connection path is word based thus only allowing an even number of bytes for the configuration assembly.

### 8.9.2. Static input assembly

The input assembly (input from the point of view of the controller) contains the process data of the sensors.

Static input assembly (assembly instance ID 0x65) for OCP and OY2TA								
Byte	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
0	Measured value (bit 0-7)							
1	Measured value (bit 8-15)							
2	Measured value (bit 16-23)							
3	Measured value (bit 24-31)							
4	Status (bit 0-7)							
5	Status (bit 8-15)							

### 8.9.3. Vendor object

This object allows for access to all sensor-specific data.

Vendor object (object class ID 0x64)					
Class attributes					
ID	Name	Access			
No class instance available. Attribute 1 not required due to revision == 1					
Class services					
Code	Name				
No class instance available.					
Instance attributes					
ID	Name	NV	EIP data type	Access	Values/default
1	Measured value	V	DINT (32bit)	Get	(Little Endian encoded)
2	Status	V	WORD (16bit)	Get	Bit is “1” = status is active Bit1: General error Bit2: Dist. to object too small Bit3: Dist. to object too big Bit4: No signal Bit5: Signal too weak Bit6: Signal too strong Bit7: Warm-up procedure Bit8: Temperature too high Bit9: Temperature too low (Little Endian encoded)
3	Filter	V	USINT (8bit)	Get/set	0 = Filter size 1 (dflt) 1 = Filter size 2 2 = Filter size 5 3 = Filter size 10 4 = Filter size 20 5 = Filter size 50 6 = Filter size 100
4	Emitted light	V	BOOL (8bit)	Get/set	0 = ON (dflt) 1 = OFF
5	Display text	V	SHORT_STRING (20byte)	Get/set	default: empty (all zeros) Max length: 19 Characters Byte 0: Length of string
9	Output rate	V	BOOL (8bit)	Get/set	0= normal (display on) (dflt) 1= fast

10	Webserver lock	V	BOOL (8bit)	Get/set	0 = enabled (dflt) 1 = blocked
11	Button lock	V	BOOL (8bit)	Get/set	0 = enabled (dflt) 1 = blocked
12	Display rotate	V	BOOL (8bit)	Get/set	0 = not rotated (dflt) 1 = rotated
13	Display intensity	V	USINT (8bit)	Get/set	0 = Min 1 = Normal 2 = Max 3 = Power saver mode 4 = Screensaver (dflt)
14	Display mode	V	USINT (8bit)	Get/set	0 = Process (dflt) 1 = Analysis 2 = Text 3 = Network
15	Display language	V	USINT (8bit)	Get/set	0 = Deutsch 1 = English (dflt) 2 = Francais 3 = Espanol 4 = Italiano
16	Physical unit	V	ENGUNIT (16bit)	Get	Constant: 0x2204 ( $\mu\text{m}$ ) <sup>3</sup> (Little Endian encoded)

Instance services	
Code	Name
0x01	Get_Attribute_All
0x0E	Get_Attribute_Single
0x10	Set_Attribute_Single

## 9. Web-based configuration

The device is equipped with a web-based set-up interface which operates independent of the operating system. Parameterizing of the device can conveniently be done using a standard web browser. In delivery condition the device expects the IP address from a DHCP server. The web-based set-up interface is not required for normal operation on the controller.

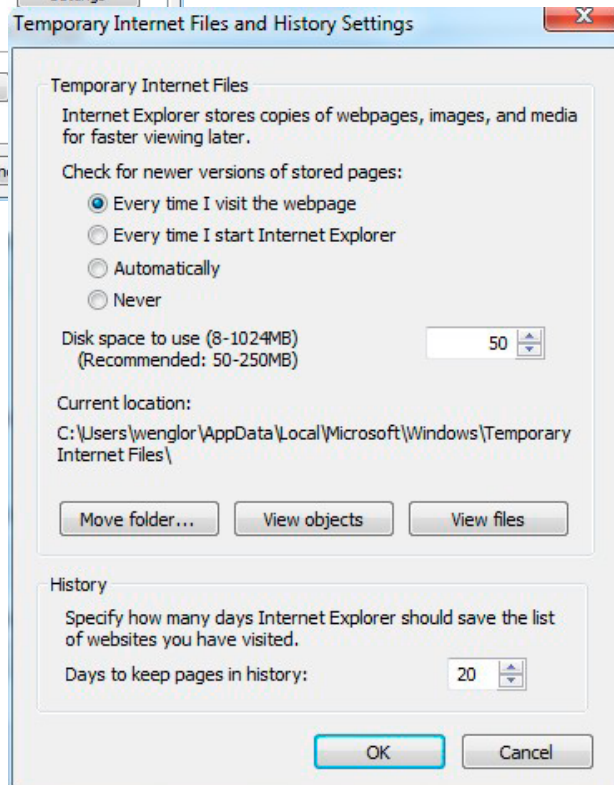
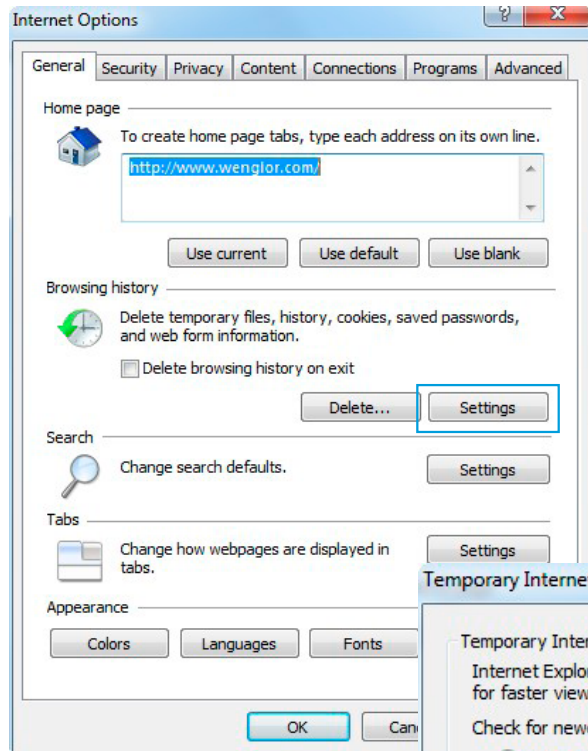
### Note:

If operated on a controller the settings changed via the website will be overwritten by the controller.

### 9.1. Opening the administration interface

Launch the web browser. Enter the manually configured IP address of the switch in the address bar of your browser and press the enter button. In order to ensure that the browser displays the current webpage settings the corresponding webpage must always be reloaded automatically in case of changes. This setting must be changed individually for every browser and is explained using the example of Internet Explorers. For this purpose go to **Tools → Internet options → Browsing history → Settings** and select **Every time I visit the webpage**. Otherwise changes to the homepage may not be displayed correctly.





In order to now be able to open the website of the device (in the example OY2TA104P0150E), the IP address must be entered in the address bar of the browser as described



The overview page **Device general** is not password protected. If the pages of the device or port settings are opened a password query appears.

The following user data are preset in delivery condition:

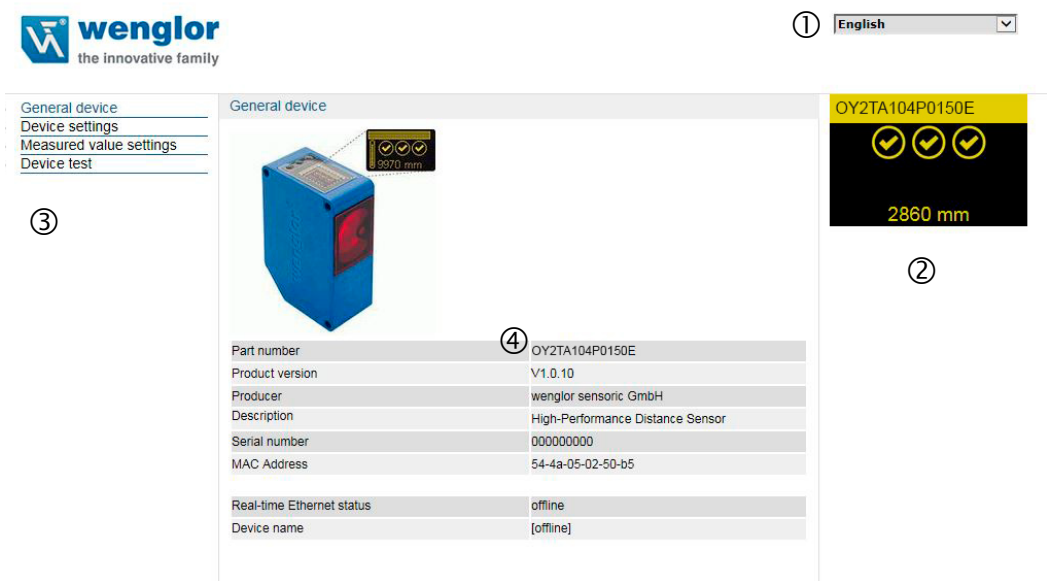
User name: admin

Pass word: admin

The password can be changed on the page **Device settings**, but not permanently stored.



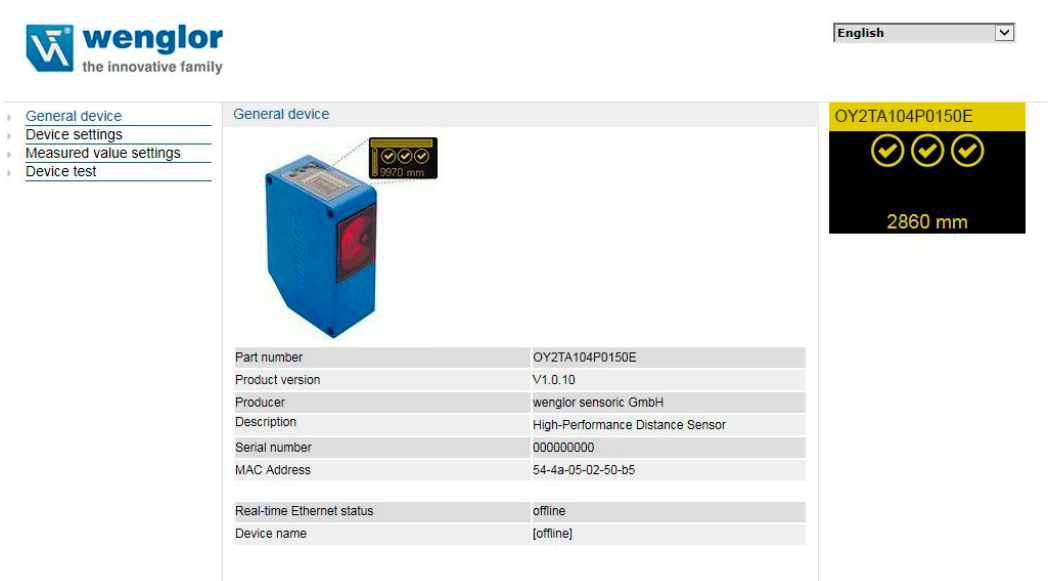
9.2. Page layout



The website is divided into the following 4 areas:

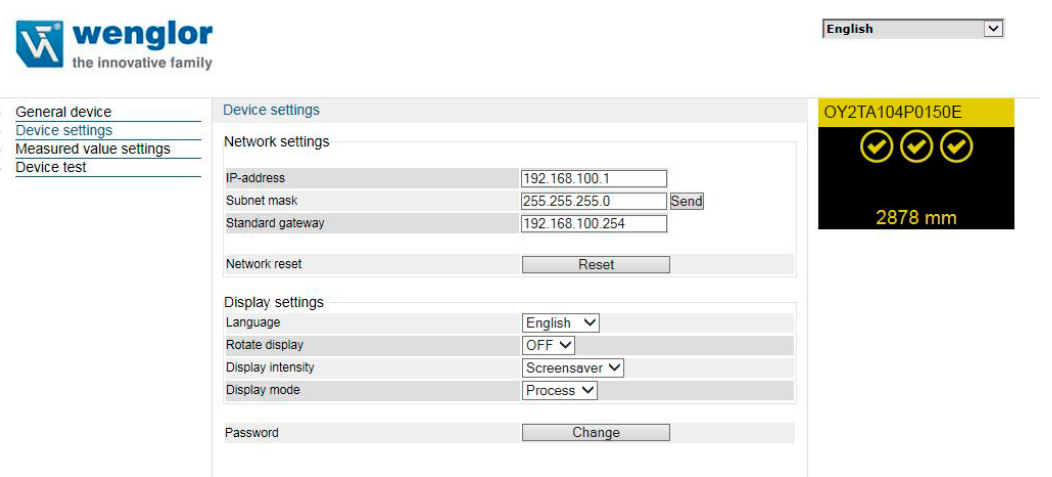
- 1. Language selection:** The website can be changed from English (default setting) to German, French, Spanish or Italian via the language selection.
- 2. Display:** On each page, the current display is represented exactly like on the device itself.
- 3. Category selection:** The web-based settings are divided into four categories:
  - **Device general:** Overview page with general information about the device
  - **Device settings:** Network and display settings of the device
  - **Measured value settings:** Settings for influencing the measured value of the device
  - **Device Test:** Manual change of the Sensor output in order to test the process
- 4. Page content:** Depending on which category is selected, the relevant page content is displayed.

9.3. General device



After the connection has been established, the overview page “General device” is displayed.

9.4. Device Settings



### Network settings

If the device is not operated on a controller it is possible to change the network settings. By default, IP address assignment is done via a DHCP server. In delivery condition, the network setting is set to “Obtain IP address automatically”. If an individually set IP address is to be used the menu item “Use the following IP address” must be selected. The network settings are saved by pressing the button “Send”. For the changes to the network settings to be applied it is necessary to disconnect the sensor from the power supply for a short time.

**WARNING: Only be entering the correct network settings error-free operation of the product can be ensured. Any incorrect entry of values may result in the device no longer being accessible in the network.**

**It must be ensured that supply power is not interrupted while making changes to network settings. Furthermore, supply power must maintained for at least an additional 5 minutes after the network settings have been saved to memory.**

### Display settings

For a functional description of display settings see “7.2. Display” on page 13



### Changing the password

<input type="password"/>	<input type="button" value="Change"/>
--------------------------	---------------------------------------

An additional window opens where the new password can be entered.

**Please note: The password is not permanently stored.**

## 9.5. Measured Value Settings

		<div>English</div>						
<ul style="list-style-type: none"> <li>General device</li> <li>Device settings</li> <li>Measured value settings</li> <li>Device test</li> </ul>	<div>Measured value settings</div> <table border="1"> <tr> <td>Filter</td> <td>1</td> </tr> <tr> <td>Emitted light</td> <td>ON</td> </tr> <tr> <td>Reset sensor settings</td> <td><input type="button" value="Reset"/></td> </tr> </table>		Filter	1	Emitted light	ON	Reset sensor settings	<input type="button" value="Reset"/>
Filter	1							
Emitted light	ON							
Reset sensor settings	<input type="button" value="Reset"/>							
	<div>OY2TA104P0150E</div> <div>  </div> <div>2880 mm</div>							

### Filter

For a functional description of the filter see chapter “7.3. Filter” on page 14



### Exposure

For a functional description of the exposure see chapter “7.5. Laser” on page 15

### Sensor settings reset

A reset restores the factory settings of the display and measured value settings.

## 9.6. Device Test

		<div>English</div>												
<ul style="list-style-type: none"> <li>General device</li> <li>Device settings</li> <li>Measured value settings</li> <li>Device test</li> </ul>	<div>Device test</div> <table border="1"> <tr> <td>Simulation of</td> <td></td> </tr> <tr> <td>Measured value</td> <td><input type="text"/> mm <input type="button" value="Apply"/></td> </tr> <tr> <td>Warmup</td> <td>Off</td> </tr> <tr> <td>Signal</td> <td>Off</td> </tr> <tr> <td>Temperature</td> <td>Off</td> </tr> <tr> <td>Test mode</td> <td>Switch off</td> </tr> </table>		Simulation of		Measured value	<input type="text"/> mm <input type="button" value="Apply"/>	Warmup	Off	Signal	Off	Temperature	Off	Test mode	Switch off
Simulation of														
Measured value	<input type="text"/> mm <input type="button" value="Apply"/>													
Warmup	Off													
Signal	Off													
Temperature	Off													
Test mode	Switch off													
	<div>OY2TA104P0150E</div> <div>  </div> <div>2884 mm</div>													

For a functional description of the device test see chapter “7.6. I/O Test” on page 15

The test is activated if at least one parameter is changed.

The duration of the test is limited to 10 minutes. After this time the test is terminated automatically. The remaining duration of the test is shown below the “Switch off” button and below the display window. The test can be terminated prematurely by clicking on “Switch off”.

**Please note: Settings are also preserved in the online state.**

## 10. Maintenance Instructions

- This wenglor Sensor is maintenance-free.
- It is recommended to clean the lens and the display regularly and to check the socket connections.
- Do not use any solvents or cleaning agents to clean the Sensor, which could damage the device.

## 11. Proper Disposal

wenglor sensoric gmbh does not take back unusable or irreparable products. When disposing of the products, the relevant national regulations for waste disposal apply.

The wenglor sensoric GmbH hereafter called wenglor for short, points out that notes and information in this operating manual may be subject to constant development and technical changes and are therefore only published under reservation.

This operating manual does not represent a promise by wenglor with regard to the described processes or specific product characteristics. wenglor does not assume liability for printing errors or textual errors. wenglor shall only assume liability if it can be proved that wenglor had knowledge about for the errors in question at the time of creating the operating manual. This operating manual is only a general description of technical processes whose implementation does not apply to every individual application. If you have specific questions regarding this, you can always contact our technical support.

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