EN

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OY2TA104P0150C

High-Performance Distance Sensor



EtherCAT®

Operating Instructions

Translation of the Original Operating Instruction
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wenglor.com

EN

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1. Proper Use

This wenglor product has to be used according to the following functional principle:
High-Performance Distance Sensors
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.

2.3. Approvals and IP Protection



3. Technical Data

Order Number	OY2TA104P0150C
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
EoE (Ethernet over EtherCAT)	✔
Control Panel No.	X2, T10
Interface	EtherCAT

Light Spot Diameter

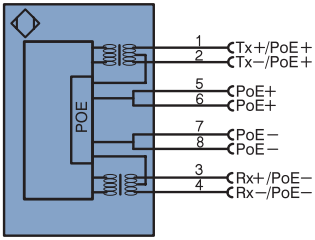
Working Distance	0	10 m
Light Spot Diameter	5 mm	< 20 mm

Table 1

3.1. Connecting the Sensors

OY2TA104P0150C

001



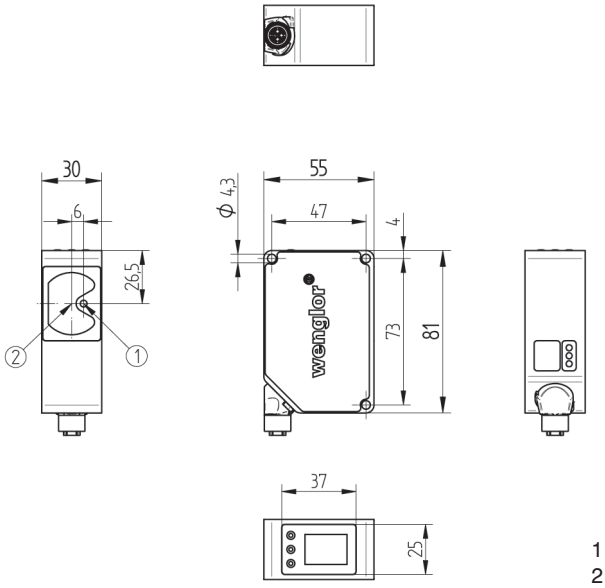
Legend

+	Supply Voltage +
–	Supply Voltage 0 V
~	Supply Voltage (AC Voltage)
A	Switching Output (NO)
Ā	Switching Output (NC)
V	Contamination/Error Output (NO)
V̄	Contamination/Error Output (NC)
E	Input (analog or digital)
T	Teach Input
Z	Time Delay (activation)
S	Shielding
RxD	Interface Receive Path
TxD	Interface Send Path
RDY	Ready
GND	Ground
CL	Clock
E/A	Output/Input programmable
	IO-Link
PoE	Power over Ethernet
IN	Safety Input
OSSD	Safety Output
Signal	Signal Output
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)
PT	Platinum measuring resistor
nc	not connected
U	Test Input
Ū	Test Input inverted
W	Trigger Input
W–	Ground for the Trigger Input
O	Analog Output
O–	Ground for the Analog Output
BZ	Block Discharge
AMV	Valve Output
a	Valve Control Output +
b	Valve Control Output 0 V
SY	Synchronization
SY–	Ground for the Synchronization
E+	Receiver-Line
S+	Emitter-Line
⏚	Grounding
SmR	Switching Distance Reduction
Rx+/–	Ethernet Receive Path
Tx+/–	Ethernet Send Path
Bus	Interfaces-Bus A(+)/B(–)
La	Emitted Light disengageable
Mag	Magnet activation
RES	Input confirmation
ENARS422	Encoder A/Ā (TTL)
ENBRS422	Encoder B/B̄ (TTL)
ENA	Encoder A
ENB	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
rsv	reserved

Wire Colors according to IEC 60757

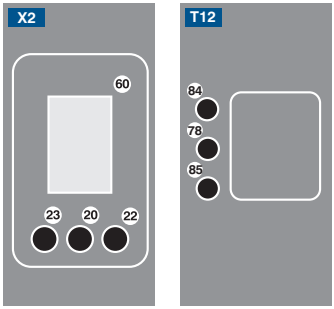
BK	Black
BN	Brown
RD	Red
OG	Orange
YE	Yellow
GN	Green
BU	Blue
VT	Violet
GY	Grey
WH	White
PK	Pink

3.2. Housing Dimensions



1 = Transmitter Diode
2 = Receiver Diode

3.3. Control Panel

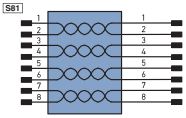


20 = Enter Button
22 = Up Button
23 = Down Button
60 = Display
78 = Module Status
84 = Communication Status
85 = Link/Act LED

Designation	Condition	Function
Status	Green off	ESM state: Initialisation
	Green flashing	ESM state: PRE - Operational
	Flashing green once	ESM state: SAFE - Operational
	Green on	ESM state: Operational
	Red off	No Error
	Red on	Application controller failure
	Flashing red once	Local Error
	Flashing red twice	Process Data Watchdog Timeout/ EtherCAT Watchdog Timeout
	Red flashing	Red blinking Invalid Configuration
MS (Module Status)	Off	—
	Green	Operate Status
	Red	Device Error
	Red flashing	—
L/A	Off	No Ethernet device has been connected to the port.
	Green	An Ethernet device is connected to the port.
	Green flashing	An Ethernet device is connected to the port and is currently communicating.

3.4. 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	

4. 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.

5. Initial Operation

5.1. Operation on a controller

If you want to place the device into service at a controller, please complete the following steps:

- Connect the Sensor to a switch with PoE using an appropriate cable M12×1; 8-pole. In the case of a switch without PoE, please use the Midspan Adapter (Z0029) for the appropriate voltage supply. When the voltage supply is present, the display on the Sensor starts.
- You will need the EtherCAT XML Device Description File (ESI-File EtherCAT Slave Information) which is available at **www.wenglor.com → Product World → Product search (Enter the product number) → Download → Product Description Files**.
- The files should always be stored in the ESI directory of the respective master. If the Twin-CAT software is used, it should be stored in the folder "...\IO\EtherCAT\" in the installation folder.
- The following example shows the steps that have to be carried out (example based on the TwinCat System Manager by Beckhoff):
- First, the list "Echtzeit Ethernet kompatible Geräte" (list of all real-time Ethernet-compatible devices) must be requested.
- Once the correct network card has been installed, new slave devices can be searched for in "E/A Geräte" (I/O devices). If all configurations are correct, the slave devices are now listed in the TwinCAT tree.
- The assemblies can now be switched into "Free Run" mode so that the local cycle runs independently of the pre-set master cycle.
- In the next step, the process data of the individual devices can be configured.

For a more detailed description of the different control systems and the installation of files or the network design, please refer to the help files of the corresponding control system.

5.2. 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

6. Functional Overview OLED-Display

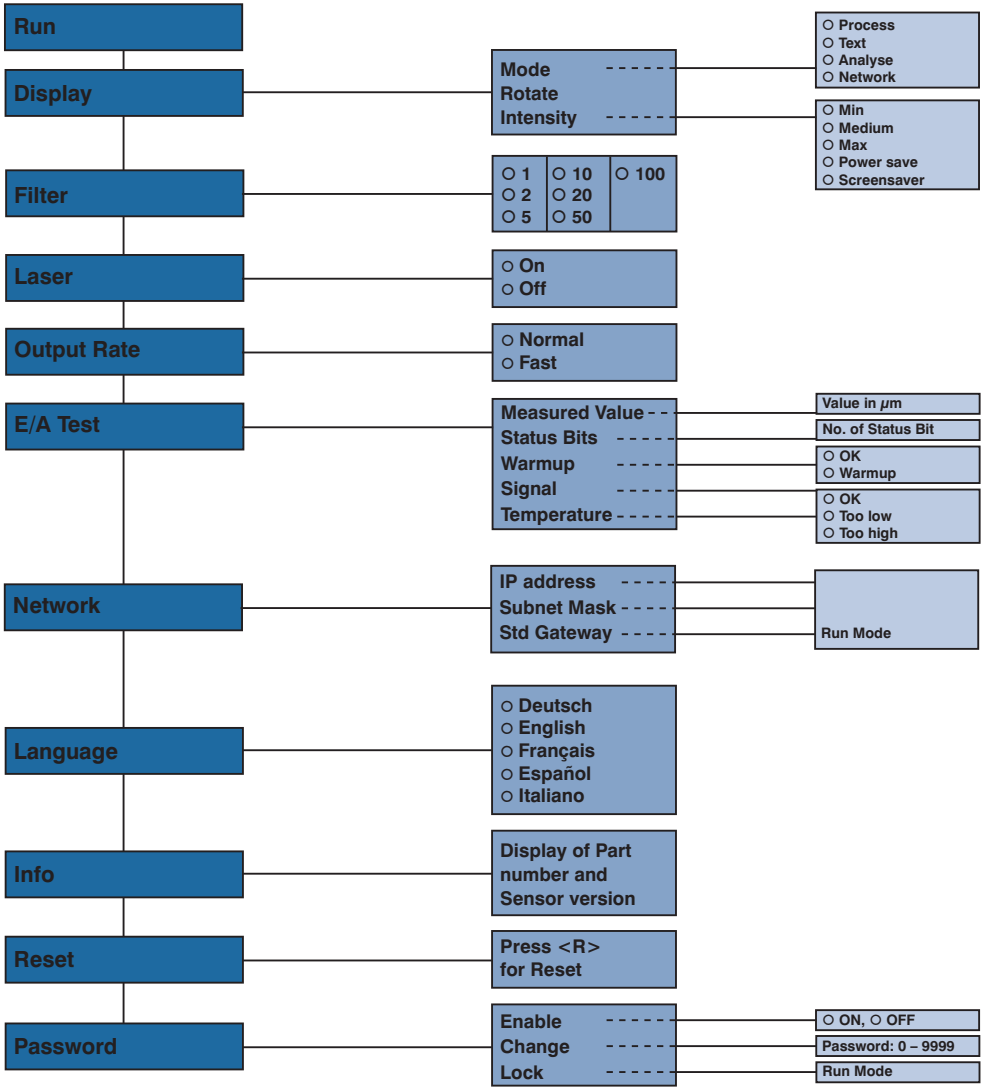




Fig. 1: Set language menu

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.

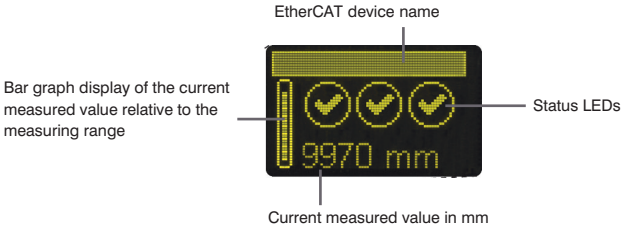
Note: If no setting is made in the configuration menu for a period of 30 s, the Sensor returns automatically to the display view.
Pressing the button again returns the Sensor to the last menu view used. If a setting is made, it becomes active once you leave the configuration menu.

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.

6.1. Run

The Sensor switches into 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

6.2. Display

Display	Adjust the display device	
Mode Rotate Intensity ◂ Back ◂◂ Run	**Mode:** **Rotate:** **Intensity:**	Select display mode (see chapter 7.2.1) Rotate display by 180°. By pressing the "↵" button the display is rotated by 180°. The rotation is canceled by pressing this button again. Set the display intensity (see chapter 7.2.2)

6.2.1. Display Mode

The measured value in mm and the order number always appear at the sensor's display. Selection can be made amongst the following additional displays using the "Display Mode" menu option:

Mode	Adjust the display device	
O Process O Text O Analysis O Network	**Process:** **Text:** **Analysis:** **Network:**	Display of status LEDs for warm-up, signal strength and temperature. Display of a free text that can be sent to the Sensor via the control. Display of signal strength in percent and measuring rate in 1/s. Display of the EtherCAT LEDs MS, CS and L/A. For the function of these LEDs, see "4.3. Control Panel" on page 8.

6.2.2. Display Intensity

Intensity	Set the display intensity	
○ Min	**Min:**	The intensity of the display is set to a minimum value.
○ Normal	**Normal:**	The intensity of the display is set to a medium value.
○ Max	**Max:**	The intensity of the display is set to a maximum value.
○ Power save	**Power save:**	The display switches off after one minute without a button being pressed and automatically switches back on when a button is pressed.
○ Screensaver	**Screensaver:**	The colors of the display are inverted every minute.

6.3. 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
○ 1 ○ 2 ○ 5 ○ 10 ○ 20 ○ 50 ○ 100 ◂ Back ◂◂ Run	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.

6.4. Output Rate

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

Output Rate	Adjust Output Rate	
○ Normal	**Normal:**	The normal output rate is 100/s. This means that a new measured value is read out every 10 ms.
○ Fast	**Fast :**	The fast output rate is 330/s. This means that a new measured value is read out every 3 ms. **Note:** 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.
◂ Back		
◂◂ Run		

6.5. Laser

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

Laser	Switch transmitted light on or off	
○ On ○ Off ◂ Back ◂◂ Run	**ON:** **OFF:**	Switch transmitted light on Switch transmitted light off; the Sensor no longer supplies measured values

6.6. 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	
Measured value Statusbits Warm-up Signal Strength Temperature ◂ Back ◂◂ Run	**Measured value:** **Statusbits:** **Warm-up:** **Signal strength:** **Temperature:**	Default of a measured value in µm The number of the status bit to be set can be selected by pressing the “+” or “–” button. (see list of Statusbits) Default of the warm-up on “ok” or “warm-up” Default of the signal strength on “ok”, “too low” or “too high” Default of the temperature on “ok”, “too low” or “too high”

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

6.7. Network

Network	Settings of the Network Parameters	
IP-Address	**IP-Address:**	Display of the set IP-Address
Subnet Mask	**Subnet Mask:**	Display of the set Subnet Mask
DHCP	**DHCP:**	Display DHCP ON or DHCP OFF
Std Gateway	**Std Gateway:**	Display of the set standard gateway
MAC Address	**MAC Address:**	Display of the default MAC Address
Net Reset	**Net Reset:**	Reset network settings to the default settings
◂ Back		
◂◂ Run		

6.8. 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
O Deutsch	The menu appears in the selected language immediately after selection.
O English	
O Francais	
O Espanol	
O Italiano	
◂ Back	
◂◂ Run	

6.9. Info

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

Info	
Order number	
Software version	
Serial number	

6.10. 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.

6.11. Password

Password protection prevents against changing the set data unintentionally.

Password	Set password functionality	
Activate Change Block ◂ Back ◂◂ Run	**Enable:**	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.
	Change:	Change password.
	Lock:	Locking Sensor causes an immediate disabling of operation if activate Password is set to “on”.

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**.

7. Information on EtherCAT

You can find the ESI file for download at **www.wenglor.com → Product World → Product search (Enter the product number) → Download**.

Index	Sub index	Name	Data Type	Access right	PDO mapped	Default Settings	Value range	Description
1000h	00h	**Device type**	Unsigned 32	Ro	No	00000191h		
1008h	00h	**Device name**	STRING	Ro	No	OCPxxxP0150C		12 character
1009h	00h	**Hardware version**	STRING	Ro	No	V1.0.0		6 character
100Ah	00h	**Software version**	STRING	Ro	No	V1.0.5		6 character
1010h		**Store parameters**						
	00h	Highest subindex supported	Unsigned 8	Ro	No	1		1
	01h	Store all parameters	Unsigned 32	Rw	No	0		65766173h = store any other = don‘t store
1011h		**Restore default parameters**						
	00h	Highest subindex supported	Unsigned 8	Ro	No	1		1
	01h	Restore all parameters	Unsigned 32	Rw	No	0		64616F6Ch = restore any other = don‘t rest.
1018h		**Identity Object**						
	00h	Highest subindex supported	Unsigned 8	Ro	No	4		4
	01h	Vendor ID	Unsigned 32	Ro	No	0000059Bh		
	02h	Product code	Unsigned 32	Ro	No	02011D0xh		OCP662P0150C OCP352P0150C OCP162P0150C OCP801P0150C
	03h	Revision number	Unsigned 32	Ro	No	01000500h		
	04h	Serial number	Unsigned 32	Ro	No	nnnnnnnnh		
10F8h		**Local time stamp**	Unsigned 64	Ro	Optional			
1600h		**RxPDO**						
	00h	Highest subindex supported	Unsigned 8	W in PreOp, R in Op		0		0 …7 objects
1A00h		**TxPDO**						
	00h	Highest subindex supported	Unsigned 8	W in PreOp, R in Op		2		2 …4 objects
	01h	SubIndex 001	Unsigned 32	W in PreOp, R in Op		21300020h		
	02h	SubIndex 002	Unsigned 32	W in PreOp, R in Op		24270010h		
1C00h		Sync manager type						

1C12h		RxPDO assign						
	00h	Highest subindex supported	Unsigned 8	W in PreOp, R in Op	No	1		0 … 1
	01h	SubIndex 001	Unsigned 16	W in PreOp, R in Op	No	1600h		
1C13h		TxPDO assign						
	00h	Highest subindex supported	Unsigned 8	W in PreOp, R in Op	No	1		1
	01h	Subindex 001	Unsigned 16	W in PreOp, R in Op	No	1A00h		
1C32h		SM output parameter						
1C33h		SM input parameter						
2040h		Device Access						
	00h	Highest subindex supported	Unsigned 8	Ro	No	2	0 – 254	2
	01h	Webserver Access	BOOL	Rw	No	0: Enabled	0 – 1	0: Enabled 1: Disabled
	02h	Key disabling	BOOL	Rw	No	0: Enabled	0 – 1	0: Enabled 1: Disabled
2100h		Display settings						
	00h	Highest subindex supported	Unsigned 8	Ro	No	5	0 – 254	5
	01h	Display mode	Unsigned 8	Rw	No	0: Process	0 – 3	0: Process 1: Analysis 2: Text 3: Network
	02h	Rotate display	BOOL	Rw	No	0: Not rotated	0 – 1	0: Not rotated 1: Rotated
	03h	Display intensity	Unsigned 8	Rw	No	4: Screensaver	0 – 4	0: Minimum 1: Normal 2: Maximum 3: Energy saving mode 4: Screensaver
	04h	Display language	Unsigned 8	Rw	No	1: English	0 – 4	0: Deutsch 1: English 2: Français 3: Español 4: Italiano
	05h	Display text	STRING	Rw	Optional	-		Displayable text 18 characters

2110h		Measured value settings						
	00h	Highest subindex supported	Unsigned 8	Ro	No	6	0 – 254	6
	01h	Laser ON-OFF	Unsigned 8	Rw	Optional	0: Laser ON	0 – 1	0: Laser On 1: Laser Off
	02h	Output rate	Unsigned 8	Rw	Optional	0: normal	0 – 1	0: Normal 1: Fast
	03h	Filter value	Unsigned 8	Rw	Optional	0: Filter size 1	0 – 6	0: Filter size 1 1: Filter size 2 2: Filter size 5 3: Filter size 10 4: Filter size 20 5: Filter size 50 6: Filter size 100
2130h	00h	Measured value	Unsigned 32	Ro	Yes			Distance value
2427h	00h	Status	Unsigned 16	Ro	Yes			1: General 2: Object distance too small 3: Object distance too great 4: No signal 5: Contamination 6: Signal too high 7: Warm-up procedure 8: Over-temperature 9: Under-temperature
8000h	00h	Measured value timestamp	Unsigned 64	Ro	Optional			FFFFFFFFFFFFFFFFh
2990h		InternalObj2						
	00h	Highest subindex supported	Unsigned 8	Rw	No	2	0 – 254	
	01h	SubIdx1	Unsigned 8	Ro	No			Internal use
	02h	SubIdx2	ARRAY	Rw	No			Internal use
6131h		Physical unit						
	00h	Highest subindex supported	Unsigned 8	Ro	No	1	0 – 254	
	01h	AI Instance 1	Unsigned 32	Ro	No	FD010000h		

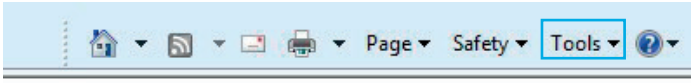
8. Web-based configuration

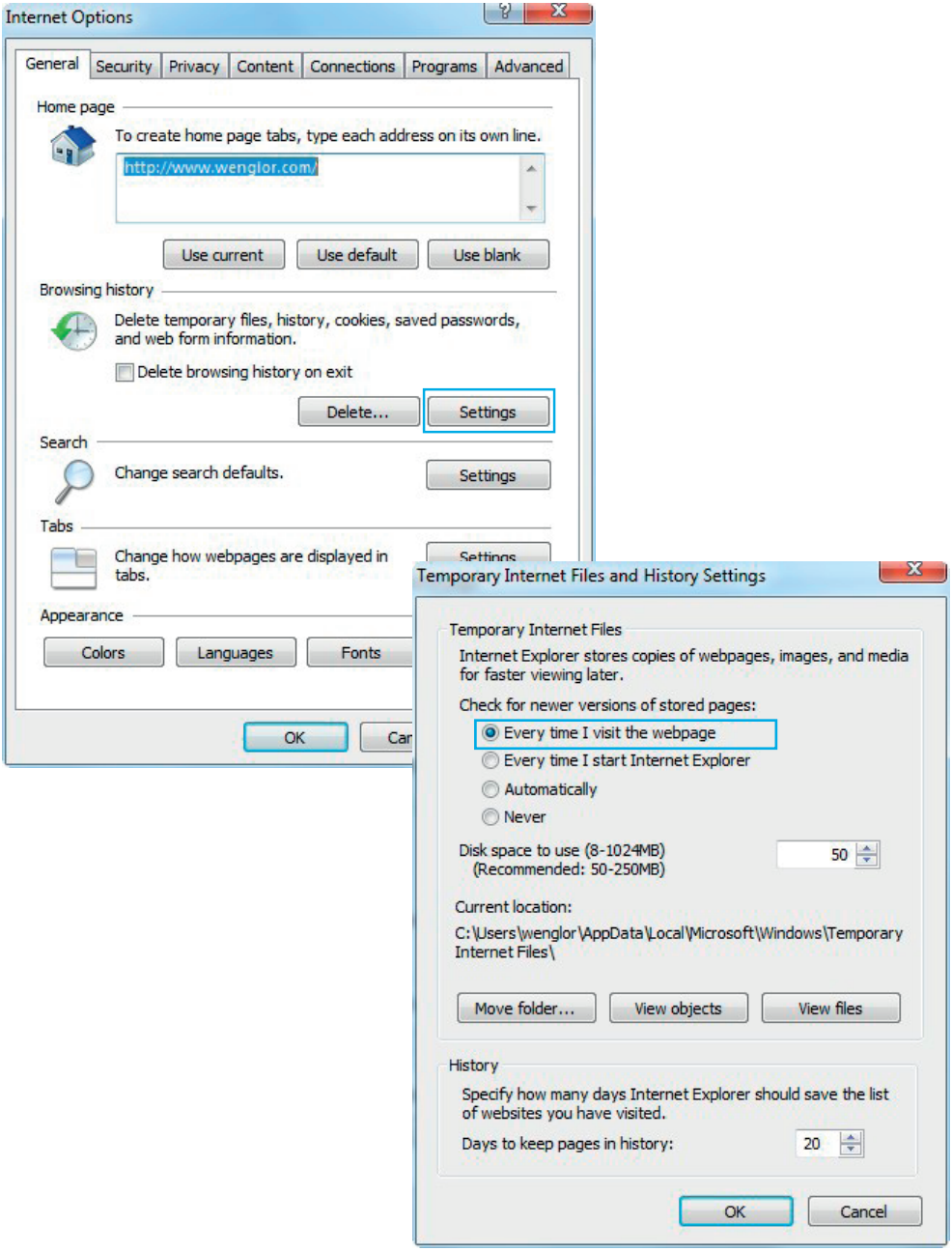
The Device is equipped with a web-based set-up interface which operates independent of the operating system. Parameterizing of the Device can conveniently be done using a standard web browser. The web server allows control-independent monitoring or creation of a test environment. The web server allows control-independent monitoring or a test environment to be set up. It is not needed for normal operation on the controller.

NOTE!
Communication via EoE (Ethernet over EtherCAT) is required in order to be able to access the integrated webserver's website. This is only possible via the mailbox communication of a PLC or a PC-based controller software such as TwinCAT®. All website settings can be made, if the product is in Pre-OP mode. For information on how to configure the network parameters please refer to the instructions "Start-Up-EtherCAT-Device" **(www.wenglor.com → Download → Operating Instructions → Product Search (Order Number) → General instructions)** in the chapter "Displaying and working with the integrated web server".
All further steps require an active mailbox and network communication.
When operated with a controller, settings which have been changed via the website are overwritten by the controller or changes are only possible in the pre-op mode.

Call up the Administration Interface

Launch a web browser. Enter the preset IP address of the Device in the address bar of your browser and press enter To ensure that the browser displays the current website settings, the website in question must always be refreshed automatically in case of change. This setting must be changed browser-specific and is demonstrated here by means of Internet Explorer as an example. Under **Extras → Internet Options → Browsing history → Settings** the selection should be set to **Every time I visit the webpage.** Otherwise, any changes to the homepage might be displayed incorrectly.




Internet Options
General
Security
Privacy
Content
Connections
Programs
Advanced
Home page
To create home page tabs, type each address on its own line.
http://www.wenglor.com/
Use current
Use default
Use blank
Browsing history
Delete temporary files, history, cookies, saved passwords, and web form information.
Delete browsing history on exit
Delete...
Settings
Search
Change search defaults.
Settings
Tabs
Change how webpages are displayed in tabs.
Settings
Appearance
Colors
Languages
Fonts
OK
Temporary Internet Files and History Settings
Temporary Internet Files
Internet Explorer stores copies of webpages, images, and media for faster viewing later.
Check for newer versions of stored pages:
Every time I visit the webpage
Every time I start Internet Explorer
Automatically
Never
Disk space to use (8-1024MB)
(Recommended: 50-250MB)
50
Current location:
C:\Users\wenglor\AppData\Local\Microsoft\Windows\Temporary Internet Files\
Move folder...
View objects
View files
History
Specify how many days Internet Explorer should save the list of websites you have visited.
Days to keep pages in history:
20
OK
Cancel

Invoking the Management Interface
Start the web browser. Enter the IP-Address of the device in the address line of your browser, and press the Enter button. The IP-Address is preset to 192.168.100.1.

Example: http:\\192.168.100.1

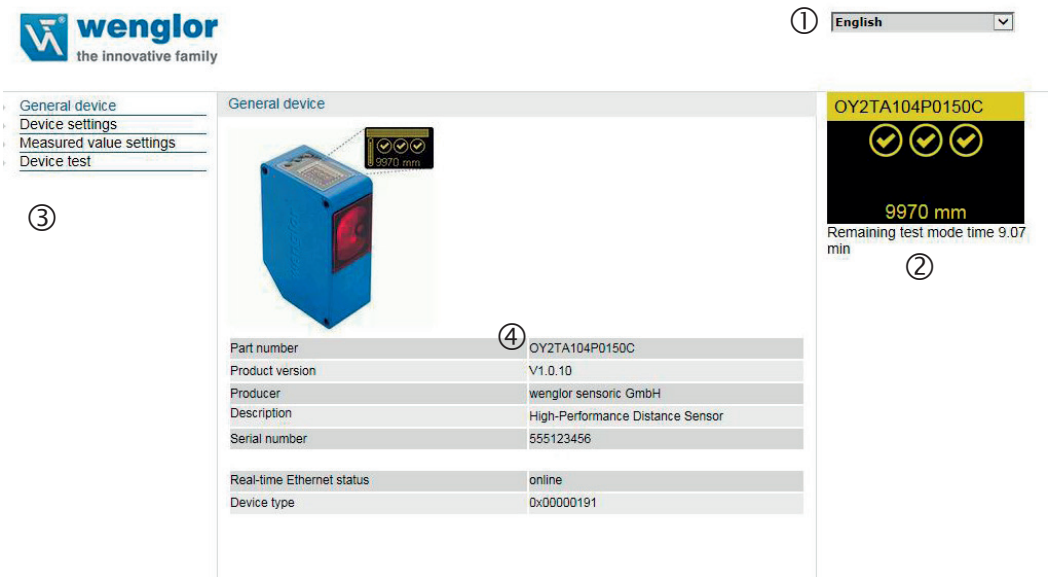


The overview page “Device general” is not password protected. If other pages are accessed, a password request appears. The following user data is preset in the default settings:

User name: admin
Password: admin

The password can be changed on the “Device settings” page.

8.1. Page layout



The website is divided into the following 4 areas:

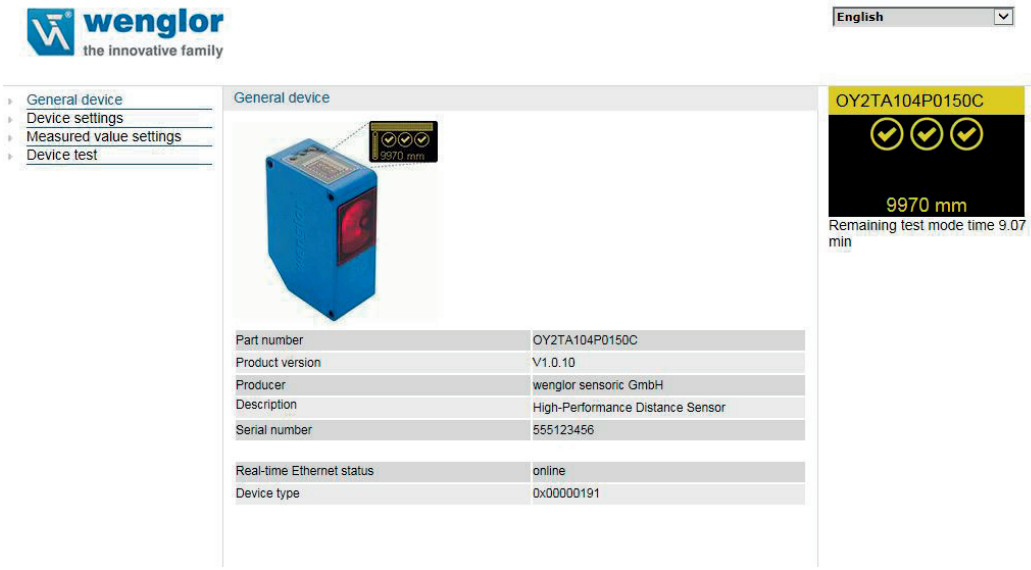
1. Language selection: The website can be changed from English (default setting) to German, French, Spanish or Italian via the language selection.

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

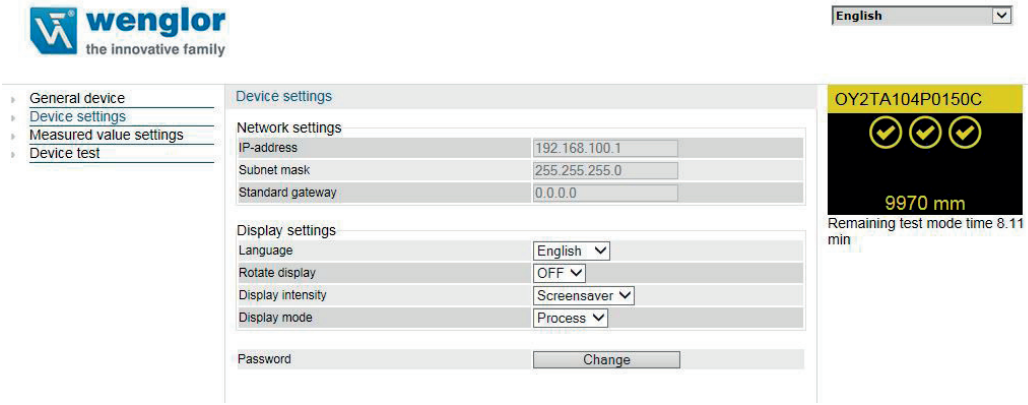
4. Page content: Depending on which category is selected, the relevant page content is displayed.

8.2. General device



After establishing the connection, the overview page “General device” is displayed.

8.3. Device Settings



Network Settings
Display of network settings

Display Settings
For functional description of display settings see chapter „7.2. Display“ auf Seite 13.

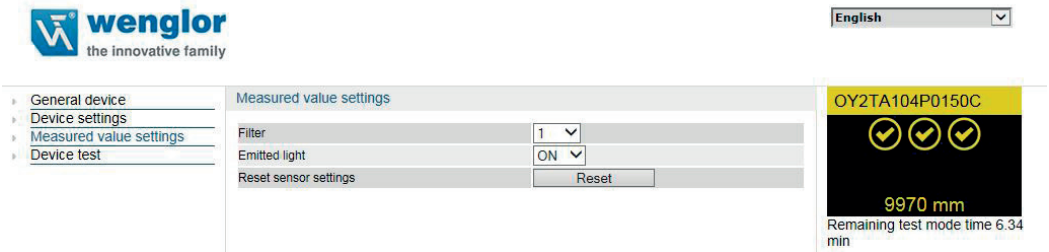
Change password:



An additional window opens, in which the new password can be entered.

Note: If the password is forgotten, it’s only possible to return the device to its default settings by means of a reset at the controller.

8.4. Measured Value Settings



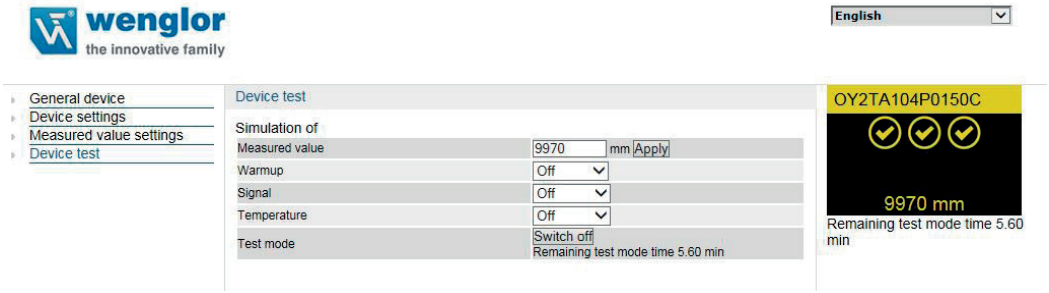
Filter
For functional description of filter see chapter “7.3. Filter” on page 14.

Emitted Light
For functional description of transmitted light see chapter “7.5. Laser” on page 15.

Sensor Settings Reset
In the event of a reset, the display settings are returned to their default values.

Note: Measured value settings are not reset in this case!

8.5. Device Test



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

The test is activated as soon as at least one parameter is changed.

The length of the test is limited to 10 minutes. Afterwards, the test is terminated automatically. The remaining time of the test is displayed under the button “Switch off” and below the display window. The test can also be terminated prematurely by clicking on “Switch off”.

9. 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.

10. 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.

11. EU Declaration of Conformity

The EU declaration of conformity can be found on our website at www.wenglor.com in download area.

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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