

CSMH007 CSMH008 CSMH009 CSMH010

1D/2D Handheld Scanners



Operating Instructions

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1. General

1.1 Information Concerning these Instructions

- These instructions apply to the product with ID code CSMH007-CSMH010.
- 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 complied with as well.
- 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 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 and applicable standards and guidelines. Subject to change without notice.
- A valid declaration of conformity can be accessed at www.wenglor.com in the product's separate download area.
- wenglor sensoric 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

This hand scanner is used to decode 1D/2D codes.

This product can be used in the following industry sectors:

- Automotive industry
- Food industry
- Packaging industry
- Pharmaceuticals industry
- Clothing industry
- Plastics industry
- Consumer goods industry
- Paper industry
- Electronics industry
- Glass industry
- Printing industry
- Special machinery manufacturing
- Heavy machinery manufacturing
- Logistics
- Woodworking industry
- Steel industry
- Aviation industry
- Construction industry
- Chemicals industry
- Agriculture 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 combined with approved products. A list of approved accessories and combination products can be accessed at www.wenglor.com on the product detail page.



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.

- Observe instructions regarding use for intended purpose.

2.3 Personnel Qualifications

- Suitable technical training is a prerequisite
- In-house electronics training is required
- Trained personnel 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 Modification of Products



DANGER!

Risk of personal injury or property damage if the product is modified!

Personal injury and damage to equipment may occur. Non-observance may result in loss of the CE marking and the guarantee may be rendered null and void.

- Modification of the product is impermissible.

2.5 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 in the product's download area.
- Read the operating instructions carefully before using the product.
- Protect the sensor against contamination and mechanical influences.

2.6 Approvals



3. Technical Data

Technical Data	Order Number			
	CSHM001	CSHM002	CSHM003	CSHM004
Optische Daten				
Scanning distance	5...328 mm		5...265 mm	
Resolution	1280×960 pixels			
Light source	Red light			
Max. permitted ambient light	97,000 lux			
Electrical data				
Supply voltage	5V DC			
Power consumption	<350 mA			
Temperature range	-20...55 °C			
Interface	USB	RS-232	USB	RS-232
Acoustic signal	Yes			
Vibrational signal	Yes			
Visual signal	Yes			
Mechanical data				
Housing material	Plastic			
Protection	IP54			
Weight	110 g			
Connector type	Cable			
Cable length	180 cm			

3.1 Scanning field / working distances

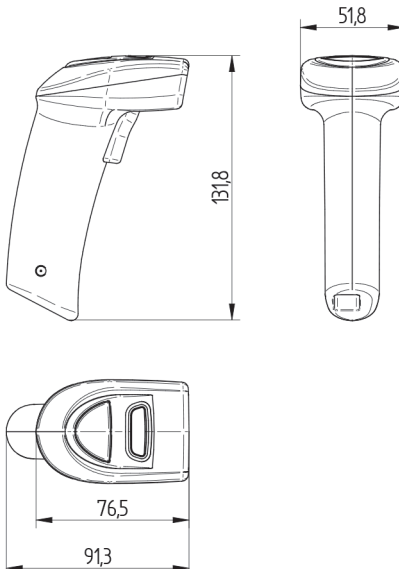
CSMH007 and CSMH009

Min. resolution		Scanning distance 1D	Scanning distance 2D
1D	2D		
0,076 mm	0,127 mm	85 to 107 mm	28 to 100 mm
0,190 mm	0,160 mm	18 to 167 mm	18 to 135 mm
0,267 mm	0,254 mm	5 to 205 mm	5 to 165 mm
0,330 mm	0,528 mm	13 to 265 mm	13 to 328 mm

CSMH009 and CSMH010

Min. resolution		Scanning distance 1D	Scanning distance 2D
1D	2D		
	0,107 mm		25 to 60 mm
	0,127 mm		20 to 70 mm
0,19 mm	0,16 mm	24 to 170 mm	12 to 92 mm
0,267 mm	0,254 mm	5 to 155 mm	5 to 150 mm
0,33 mm	0,528 mm	17 to 245 mm	10 to 265 mm

3.2 Housing Dimensions



3.3 Accessory Products

wenglor can provide you with suitable connection technology for your product.

Suitable mounting technology no.	431
Interface cable	ZDNV001
Interface cable	ZDNV002
Interface cable	ZDVN009
Interface cable	ZDNV010
Mains power pack	ZNNN001
Mains power pack	ZNNN002
Mounting bracket	Z0075
Mounting bracket	ZSLM001
Gooseneck stand	ZSLM002

3.4 Scope of Delivery

- Product
- USB cable (CSMH007, CSMH009)
- RS-232 cable + power supply (CSMH008, CSMH010)

4. Transport and Storage

4.1 Transport

Upon receipt of shipment, inspect the goods for damage in transit. In the case of damage, conditionally accept the package and notify the manufacturer of the damage. Then return the device making reference to damage in transit.

4.2 Storage

The following points must be taken into condition with regard to storage:

- Do not store the product outdoors
- Store the product in a dry, dust-free place
- Protect the product against mechanical impacts
- Protect the product against exposure to direct sunlight

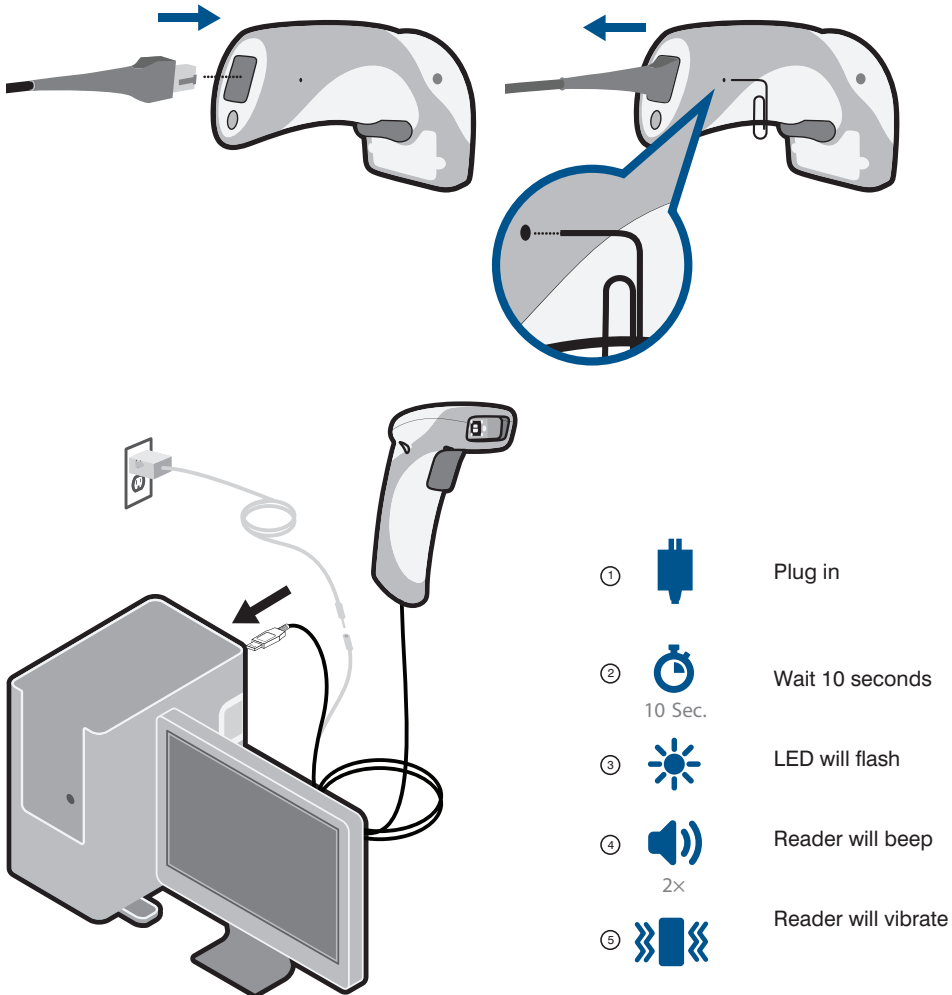


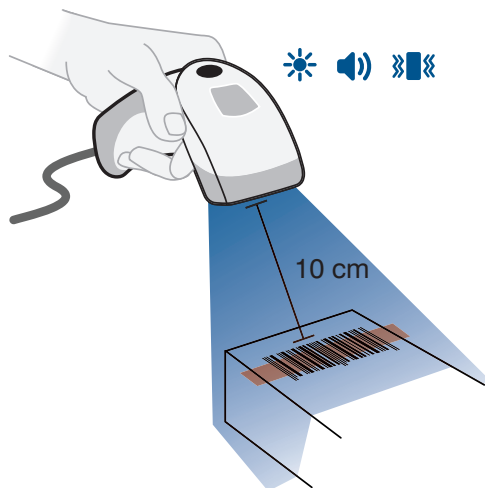
ATTENTION!
Risk of property damage in case of improper storage!
The product may be damaged.
• Comply with storage instructions.

5. Installation and Electrical Connection

5.1 Installation

- Protect the product against contamination during installation.
- Observe all applicable electrical and mechanical regulations, standards, and safety rules.
- Protect the product against mechanical influences.
- There must not be any objects underneath the working range.



**ATTENTION!****Risk of property damage in case of improper installation!**

The product may be damaged.

- Comply with installation instructions.

**CAUTION!****Risk of personal injury or property damage during installation!**

Personal injury and damage to the product may occur.

- Ensure a safe installation environment.

5.2 Electrical Connection

The CSMH00x hand scanner has an RJ-50 connector with the following configurations:

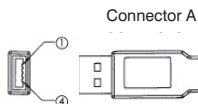
Pin 1	+ 5 V
Pin 2	USB_DM
Pin 3	USB_DP
Pin 4	RS-232 TX (scanner output)
Pin 5	RS-232 RTS (scanner output)
Pin 6	RS-232 RX (scanner input)
Pin 7	RS-232 CTS (scanner input)
Pin 8	External trigger (active low scanner input)
Pin 9	N/C
Pin 10	Grounding

NOTES:

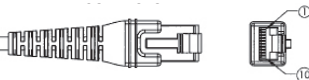
1. Part to be ROHS and Reach compliant.
2. Maximum Voltage Tolerance = 5 V +/- 10 %.
3. Caution: Exceeding the maximum voltage will void manufacturer warranty.

Connector A	Name	Wire	Color	Connector B
1	VIN	24 A WG	Red	1
2	DM	28 A WG	White	2
3	DP	28 A WG	Green	3
4	GND	24 A WG	Black	10
Shell	—	Shield	Bare	Shell

Connector A



Connector B



Connector B

NOTES:

1. Part to be ROHS and Reach compliant.
2. Maximum Voltage Tolerance = 5 V +/- 10 %.
3. Caution: Exceeding the maximum voltage will void manufacturer warranty.

Conn A	Name	Wire	Color	Conn B	Wire	Color	Conn C
1	VIN	24 A WG	Red	9	24 A WG	Red	TIP
4	TX	28 A WG	Brown	2			
5	RTS	28 A WG	Orange	8			
6	RX	28 A WG	Yellow	3			
7	CTS	28 A WG	Green	7			
10	GND	24 A WG	Black	5	24 A WG	Black	RING
Shield	—	Shield		Shield			

Connector C



Connector A



Connector B



DANGER!

Risk of personal injury or property damage due to electric current!

Voltage conducting parts may cause personal injury or damage to equipment.

- The electric device may only be connected by appropriately qualified personnel.

5.3 Diagnostics

Required action in case of fault:



NOTE!

- Shut down the machine.
- Analyze and eliminate the cause of error with the help of the diagnostics information.
- If the error cannot be eliminated, please contact wenglor's support department
- Do not operate if malfunctioning indeterminately.
- The machine must be shut down if the error cannot be definitively explained or properly eliminated.



DANGER!

Risk of personal injury or property damage in case of non-compliance!

The system's safety function is disabled. Personal injury and damage to equipment.

- Required action as specified in case of fault.
-

6. Functions Overview

6.1 Default Settings

The following code types are activated upon delivery:

- Codabar
- Code 39
- Code 93
- Code 128:
- Data matrix
- Data matrix rectangle
- All GS1 DataBars
- Interleaved 2 of 5
- MSI Plessey
- PDF417
- QR Code
- UPC/EAN/JAN

Additional types of codes can be activated using either the wenglor eazyScan parametrization software or the parametrization codes in [chapter 9 on page 24](#).

7. Installing the eazyScan2 software

7.1 Installation procedure

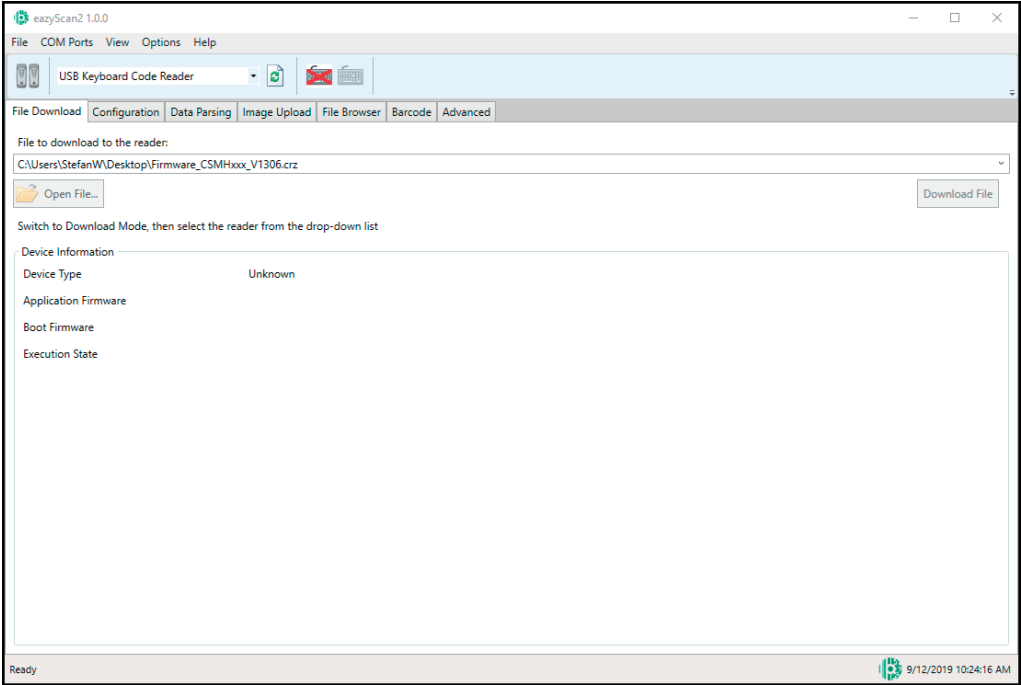
First verify whether there is a current version of the software available on the website. Go to www.wenglor.com and download the most current version of the software, as needed.

1. Insert the installations CD into the CD drive.
 - Double-click on the “Install_eazScan2” setup program to begin. Administrator rights are required here.
2. Installation instructions will follow.
 - The eazyScan2 software is installed.

8. General setup of the eazyScan software

8.1 Start screen

The following start window appears after the program has been started. Various options are provided by the software.

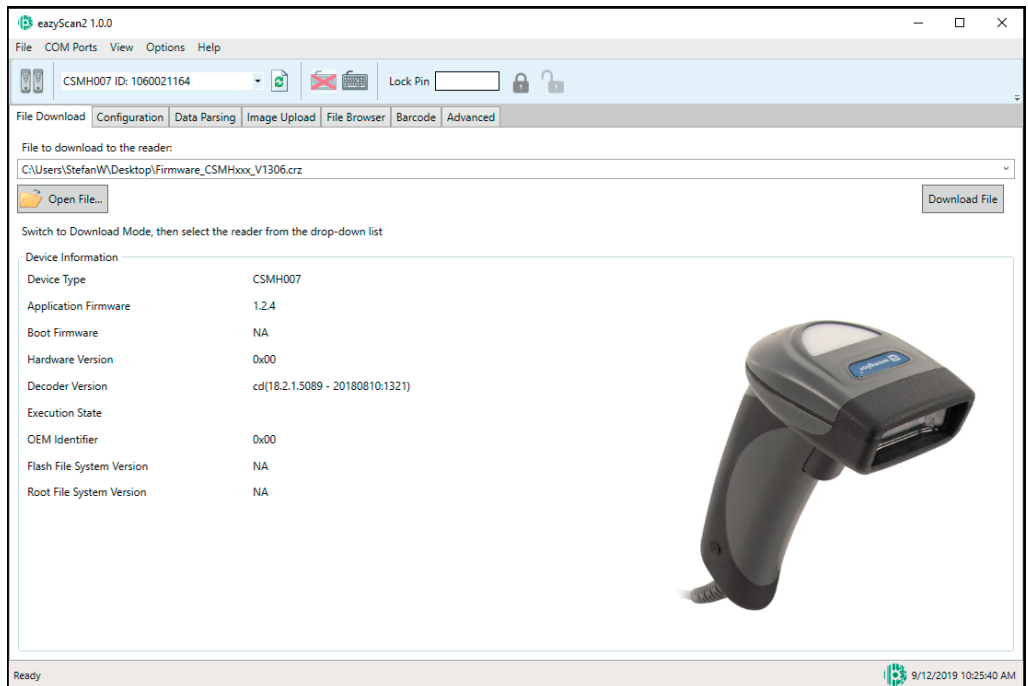



8.2 Operator interface

The depicted layout of the operator interface shows the standard configuration of the software upon first use. However, the user interface can be adapted to meet your individual needs.

8.3 Establishing connection

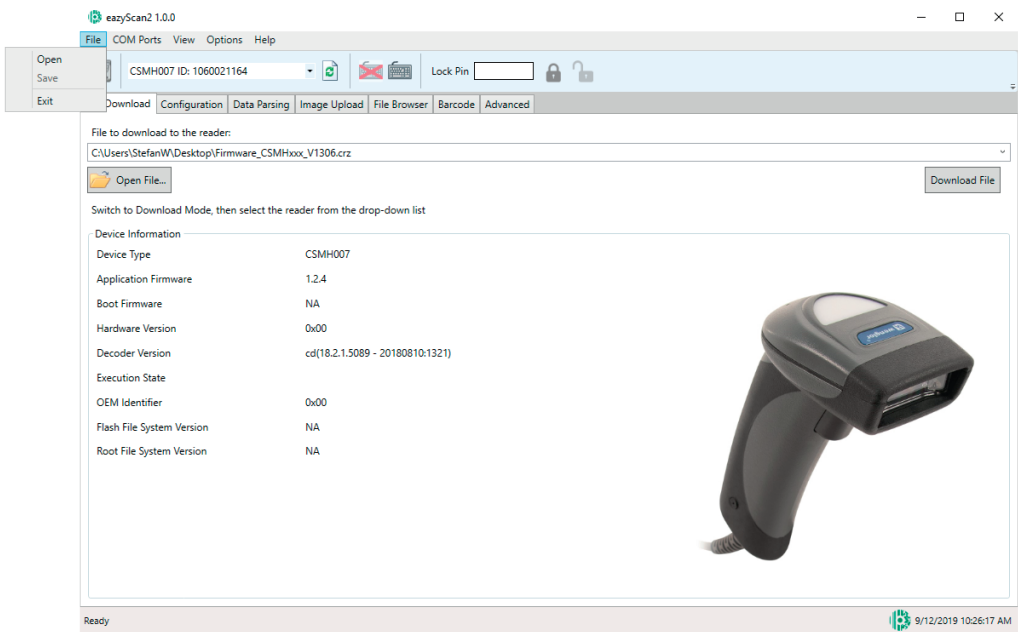
1. Open the easyScan2 software.
2. Plug the USB cable or RS-232 jack into your PC.
3. If an RS-232 scanner is to be connected, the COM port used must be selected in the software.
4. The scanner will connect automatically. Two beeps will be heard when the scanner was connected correctly. With an RS-232 scanner, the Reload symbol must be pressed to start the search for RS-232 scanners.



5. USB scanners start in USB keyboard mode, which is set in download mode by clicking the -icon. When the mode has been changed, the scanner and its device information will appear in the software.

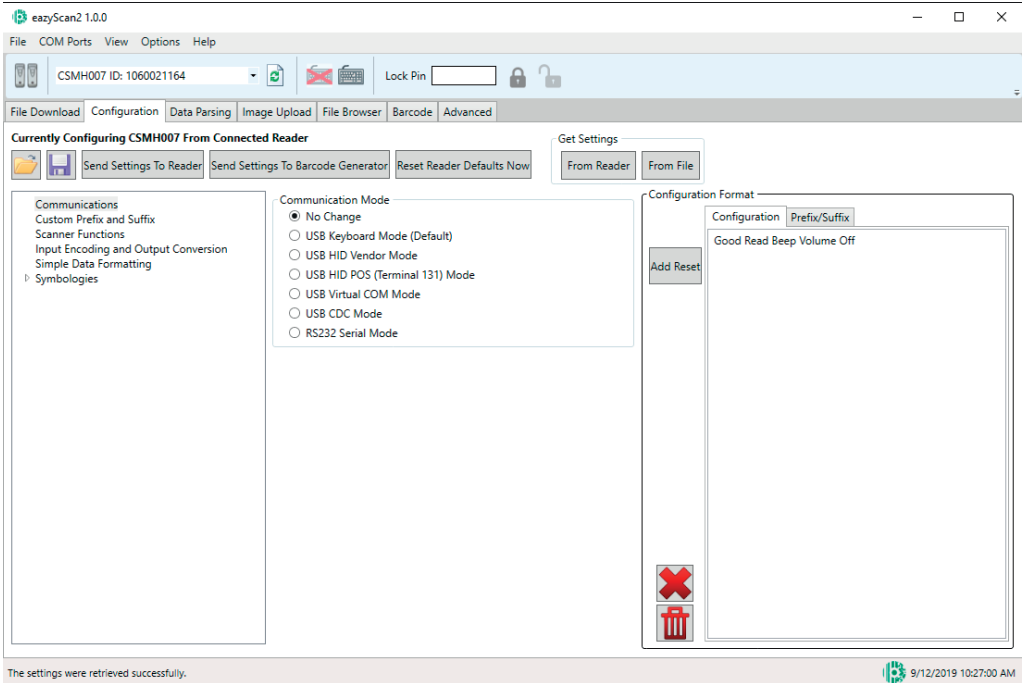
8.4 Firmware updates

Click on Open file... to look for firmware files on the PC. When a firmware file has been selected, the firmware update process is started by clicking on Download file.

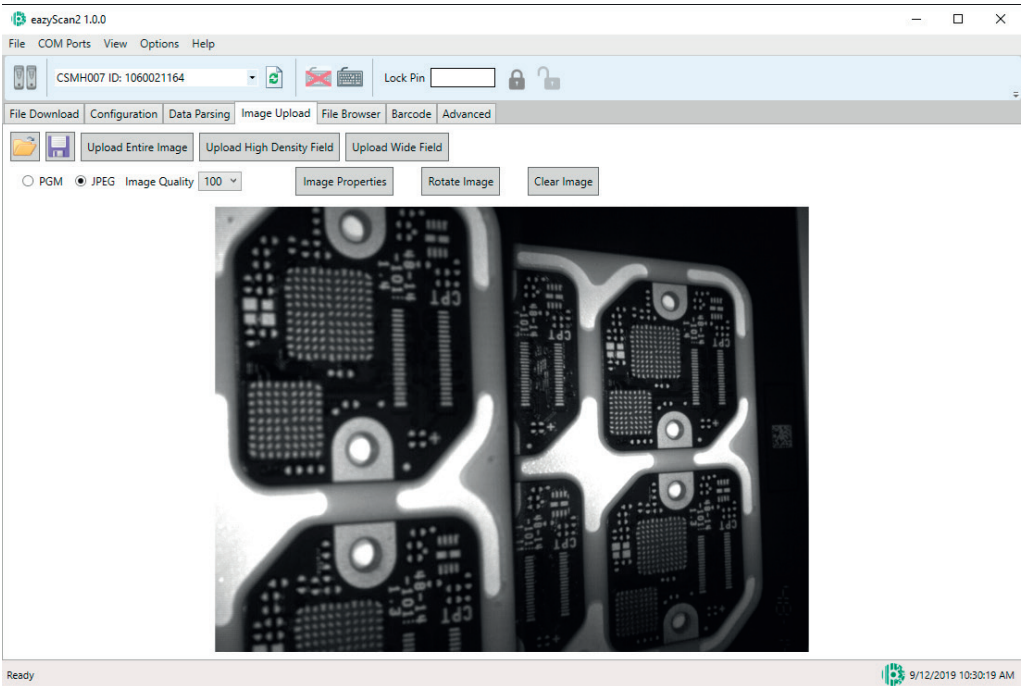


8.5 Configuration

The scanner configuration can be found under the Configuration tab. All available scanner setup parameters are displayed there.



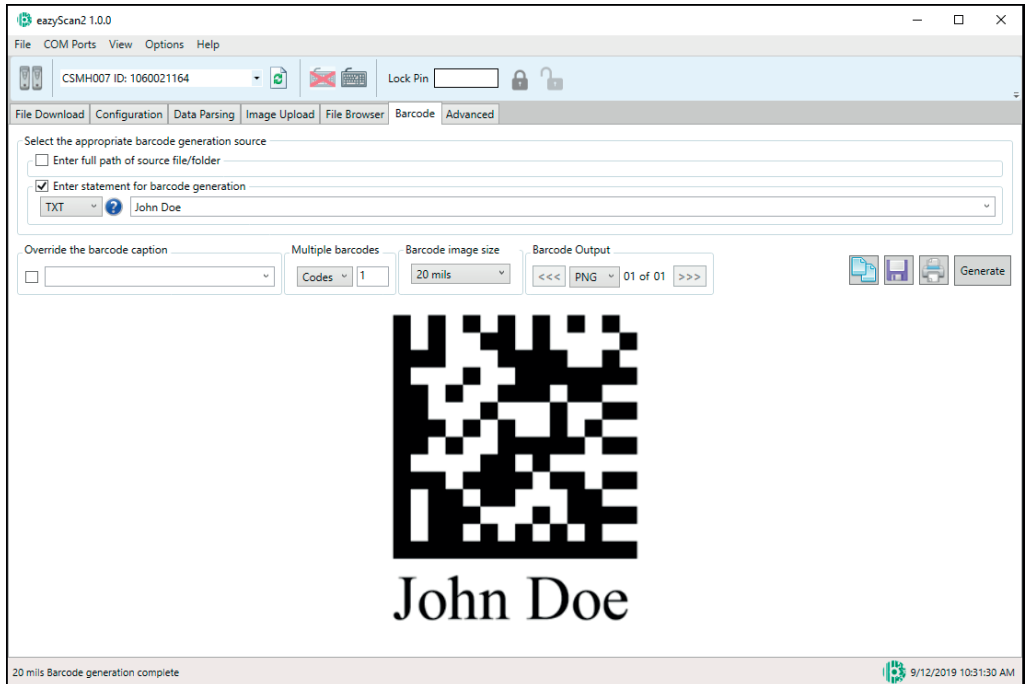
8.6 Image capturing



1. Select the image type in which you would like to save the image. You may choose PGM or JPEG. If JPG is selected, you may also choose the image quality.
2. Position the scanner where the barcode is to be read.
3. Select image windows from which readouts are to be made.
4. If the image was captured, three additional buttons will become visible. Image properties, Rotate image, Delete image.

8.7 Data Matrix Code Generator

Click on the barcode and the data matrix code generator will open. After entering the data into the free field and defining the module size of the code, generate a code by clicking on Create.



9. Setup using QR-Code

9.1 USB port

The scanner is normally set to USB native mode (HID)

In this mode, unformatted, unpacked data is usually sent to the scanner via the USB port.



M20177_01

Reset to USB Factory Defaults

Scan this barcode to place the reader in USB Downloader Mode. This mode allows file transfer to/from the reader. File types eligible for transfer include firmware, configuration, and images (also default mode for easyScan2).



M20325_01

USB Downloader Mode (on)

If this function is activated, the handheld scanner responds to configuration commands in text form via the selected interface.



M20326_01

USB Downloader Mode (off)

Scan this barcode to use Virtual COM mode to transfer batch data. The reader will talk to a virtual COM port on the host device and transmit data serially (i.e. like an RS232 device).



M20347_01

USB virtual COM – 1-way mode – Batch mode only



M20346_01

USB virtual COM – multiple ports



M20226_01

Communications device class (CDC) interface for Linux.



M20178_01

USB keyboard mode



M20225_01

Switches the scanner to HID POS mode. The Human Interface Device Class and Point of Sale are used for communication. Information on the function of this class and how it works is available at usb.org. This code also activates AIM ID.



M20399_01

USB Full Speed Mode on



M20400_01

USB High Speed Mode on

9.2 RS-232 Interface

With RS-232 communication, the scanner communicates with the host using a communication program like ESP Terminal.

The standard settings for creating an RS-232 connection are:

Baud rate: **115.2 K**

Parity: **None**

Stop bits: **1**

Data bits: **8**

If the RS-232 interface is active, USB communication is turned off, and you will have to reset the scanner or press the “USB Keyboard Mode” symbol to return to USB.



M20115_01

Baud Rate (RS-232)

The baud rate is the speed at which the scanner and host transmit data. It only needs to be changed when the host settings need to be adjusted.



M20160_01

RS232 Interface 1200 Baud Rate



M20161_01

RS232 Interface 2400 Baud Rate



M20162_01

RS232 Interface 4800 Baud Rate



M20163_01

RS232 Interface 9600 Baud Rate



M20164_01

RS232 Interface 19200 Baud Rate



M20165_01

RS232 Interface 38400 Baud Rate



M20166_01

RS232 Interface 57600 Baud Rate



M20167_01

RS232 Interface 115200 Baud Rate

Parity (RS-232)

Parity is an error detection routine in which every character in a data bit is set to 1 or 0 so that the total number of 1 bits in each data field is even or odd. It only needs to be changed when the host settings need to be adjusted.

Data Bits (RS-232)

Data bits represents the total number of bits in a character. This setting only needs to be changed when the host settings need to be adjusted.



M20168_01

RS232 Interface 7 Data Bits



M20169_01

RS232 Interface 8 Data Bits (Standard)



M20170_01

RS232 Interface Stop Bits 1



M20171_01

RS232 Interface Stop Bits 2



M20172_01

RS232 interface Even Parity



M20174_01

RS232 Interface Odd Parity



M20175_01

RS232 Interface Flow Control On



M20176_01

RS232 Interface Flow Control Off

9.3 Communications Mode

Data is transmitted from the scanner to the host in raw format, without packet framing or check characters. One-way communication is conducted in raw format. No response from the host is expected and data will not be resent.



M20239_01

RS-232 Raw Mode

Packet mode data is sent with framing (meaning a preamble that communicates the quantity of data to be transmitted and a postamble with error detection) and check characters, and a response is expected from the host. Two-way communication is conducted in packet form.



M20238_01

RS232 Packet Mode



M20250_01

Activate Virtual Com port.

9.4 Keyboard Mapping

The Keyboard Mapping option provides alternative settings for keyboards that do not have the US English keyboard layout.



NOTE!

The universal keyboard layout is somewhat slower than other language-specific options since the keys are assigned using the entire ASCII character set. The advantage of the universal keyboard layout is that every language and keyboard layout can be mapped.

Important: This option should not be confused with the USB keyboard mode, which provides the ability to create wired USB communication.



M20181_01

Keyboard support: Keyboard Belgian French for Windows



M20182_01

Keyboard support: Keyboard US English for Windows



M20184_01

Keyboard support: Keyboard US English for Apple



M20185_01

Keyboard support: Keyboard French for Windows



M20186_01

Keyboard support: Keyboard French for Apple



M20187_01

Keyboard support: Keyboard German for Apple



M20188_01

Keyboard support: Keyboard German for Windows



M20189_01

Keyboard support: Keyboard Swiss German for Apple



M20190_01

Keyboard support: Keyboard Swiss German for Windows



M20191_01

Keyboard support: Italian for Apple



M20363_01

Keyboard support: Italian for Windows



M20192_01

Keyboard support: Japanese for Windows



M20193_01

Keyboard support: Latin American for Windows



M20194_01

Keyboard support: Russian for Windows



M20195_01

Keyboard support: Spanish for Windows



M20196_01

Keyboard support: Spanish for Apple



M20197_01

Keyboard support: US English for Windows



M20198_01

Keyboard support: International English for Windows



M20364_01

Keyboard support: Portuguese for Windows



M20362_01

Keyboard support: UTF-8 Chinese



M20221_01

Translate all characters to uppercase



M20221_01

Translate all characters to uppercase



M20222_01

Translate all characters to lowercase



M20421_01

Keyboard stroke delay 0 ms



M20422_01

Keyboard stroke delay 20 ms



M20423_01

Keyboard stroke delay 40 ms



M20223_02

Translate all characters in original



M20180_01

Installed languages



M20179_01

Active language

9.5 Alternative operating systems

The reader will modify its enumeration and communication scheme to work on Linux, Windows CE, or OS X operating systems.



M20305_01

Alternative operating system on



M20306_01

Alternative operating system off

9.6 Scanning process

To prevent multiple scanning of the same code, the transmission of duplicates can be prevented for different time intervals.



M20229_01

Deactivate scanning of duplicates



M20230_01

Scanning of duplicates for 1 second



M20231_01

Scanning of duplicates for 2 seconds



M20232_01

Scanning of duplicates for 3 seconds



M20233_01

Scanning of duplicates for 5 seconds



M20234_01

Scanning of duplicates for 10 seconds



M20235 01

Scanning of duplicates for 30 seconds



M20236 01

Scanning of duplicates for 1 hour



M20237 01

Scanning of duplicates for 1 day



M20234 01

Scanning



M20234 01

Scanning



M20234 01

Scanning

9.7 Motion detection

Use Motion Detection to specify that the scanner start a decoding trial as soon as it detects movement in its visual field.



M20227_03

Motion detection on



M20228_04

Motion detection on, but the scanner waits for 500 ms after detecting the movement before the scanning process is started.



M20199_01

Motion detection off inside and outside the holder



M20200_01

Motion detection off outside the holder and on while the scanner is in the holder



M20248_01

Holder detection on



M20249_01

Holder detection off



M20297_02

Motion detection in the holder on



M20296_02

Triggered scanning process in the holder



M20244_01

Brightness during the scanning process, with motion detection 100 %



M20245_01

Brightness during the scanning process, with motion detection 75 %



M20246_01

Brightness during the scanning process, with motion detection 50 %



M20247_01

Brightness during the scanning process, with motion detection 25 %

9.8 LED alignment assistance

You can activate and deactivate LED alignment assistance using the Targeting parameter. Alignment assistance is activated by default.



M20294_01

LED alignment assistance on during the scanning process



M20295_01

LED alignment assistance off during the scanning process



M20333_02

LED alignment assistance always on



M20334_02

LED alignment assistance always off

9.9 Display scanning

The scanning properties are optimized for scanning smartphone displays or other displays.



M20240_03

Smartphone scanning on



M20241_02

Smartphone scanning off

9.10 Preamble and postamble

Attached at the beginning of a decoded data string. The characters are displayed in the order that they are activated (from left to right). If you, for example, enter a comma and then a space, then decode a barcode with the “ABC” data, the following will output:

, ABC

The number of preamble characters that can be entered depends on the total quantity of memory space available. Specify the desired preamble character by pressing the corresponding symbol, shown below.



M20207_01

Delete preamble



M20208_01

Delete postamble



M20209_01

Preamble comma



M20210_01

Preamble space



M20211_01

Preamble tabulator



M20212_01

Postamble CR, position start of the line



M20213_01

Postamble CRLF, new line & position start of the line



M20214_01

Postamble LF, new line



M20215_01

Postamble comma



M20216_01

Postamble space



M20217_01

Postamble tabulator



M20218_02

Preamble tabulator (keyboard)



M20219_02

Postamble enter (keyboard)



M20220_02

Postamble tabulator (keyboard)



M20322_01

Delete preamble and postamble

9.11 Beeper / Vibrator

Press the configuration symbols below in order to activate or deactivate the beeper and vibrator functions.



M20329_01

Beep on, vibration on



M20330_01

Beep off, vibration on



M20331_01

Beep on, vibration off



M20332_01

Beep off, vibration off



M20339_01

Beep volume 0 %



M20340_01

Beep volume 33 %



M20341_01

Beep volume 67 %



M20342_01

Beep volume 100 %

9.12 Image transmission

With each scanning process, the image taken can be transmitted to the connected PC as a data package.



M20242_01

Image transmission on



M20243_01

Image transmission off

9.13 Other commands



M20211_01

Reset scanner to factory settings (reset)



M20213_01

Read out scanner settings



M20214_01

Read out all scanner parameters



M20345_01

Reboot scanner



M20335_01

Save all settings



M20351_01

Control character Ctrl + character (requires Windows keyboard settings)



M20352_01

Control character ALT + character



M20353_01

Control character ALT + character + leading zero



M20350_01

Control character for the default language



M20343_01

AIM ID on



M20344_01

AIM ID off

10. Code settings

10.1 Aztec Code



M20002_01

Aztec code on



M20003_01

Aztec code off



M20004_01

Aztec normal and inverted



M20005_01

Aztec inverted off



M20318_01

Aztec mirrored on



M20319_01

Aztec mirrored off

10.2 BC412



M20006_01

BC412 on



M20007_01

BC412 off



M20259_02

BC412 on and BC412 Reverse off



M20260_02

BC412 off and BC412 Reverse off



M20261_02

BC412 on and BC412 Reverse on



M20262_02

BC412 Reverse off

10.3 Codabar



M20010_01

Codabar On



M20011_01

Codabar Off



M20012_01

Codabar checksum required



M20013_01

Codabar no checksum required



M20014_01

Codabar remove start/stop character from the data transmission



M20015_01

Codabar include start/stop character with transmission



M20018_01

Codabar F on



M20019_01

Codabar F off

10.4 Code 11



M20020_01

Code 11 On



M20021_01

Code 11 Off



M20022_01

Code 11 do not transmit checksum



M20023_01

Code 11 transmit checksum



M20031_01

Code 11 no checksum required



M20032_01

Code 11 one-digit checksum required



M20033_01

Code 11 two-digit checksum required

10.5 Code 32



M20024_01

Code 32 On



M20025_01

Code 32 Off

10.6 Code 39



M20026_01

Code 39 On



M20027_01

Code 39 Off



M20028_01

Code 39 checksum required



M20029_01

Code 39 no checksum required



M20030_01

Code 39 do not transmit checksum



M20320_02

Code 39 Extended Full ASCII on



M20321_02

Code 39 Extended Full ASCII off

10.7 Code 49



M20263_01

Code 49 On



M20264_01

Code 49 Off

10.8 Code 93



M20265_01

Code 93 On



M20266_01

Code 93 Off

10.9 Code 128



M20034_01

Code 128 On



M20035_01

Code 128 Off

10.10 Composite Codes



M20036_01

Composite Codes On



M20037_01

Composite Codes Off

10.11 Data Matrix Code



M20038_02

Data Matrix Code On



M20039_01

Data Matrix Code Off



M20040_01

Data Matrix Code inverted and normal on



M20041_01

Data Matrix Code inverted off



M20042_01

Data Matrix Code mirrored on



M20043_01

Data Matrix Code mirrored off



M20044_01

Data Matrix Code Rectangular on



M20045_01

Data Matrix Code Rectangular off



M20046_01

Data Matrix Code Rectangular Extended on



M20047_01

Data Matrix Code Rectangular Extended off

10.12 Grid Matrix



M20048_01

Grid Matrix On



M20049_01

Grid Matrix Off



M20281_01

Grid Matrix Revers mirrored on



M20282_01

Grid Matrix Revers mirrored off



M20283_02

Grid Matrix mirrored on



M20284_01

Grid Matrix mirrored off

10.13 GS1 Databar



M20050_02

GS1 DataBar omni-directional scanning and GS1 DataBar Truncated on



M20051_02

GS1 DataBar omni-directional scanning and GS1 DataBar Truncated on



M20271_01

GS1 Databar Stacked and GS1 Databar Stacked Omnidirectional on



M20272_01

GS1 Databar Stacked and GS1 Databar Stacked Omnidirectional off



M20273_01

GS1 Databar Expanded on



M20274_01

GS1 Databar Expanded off



M20275_01

GS1 DataBar Expanded Stacked on



M20276_01

GS1 DataBar Expanded Stacked off



M20277_01

GS1 DataBar Limited on



M20278_01

GS1 Databar Limited off

10.14 Han Xin



M20052_01

Han Xin on



M20053_01

Han Xin off



M20054_01

Han Xin inverted on



M20055_01

Han Xin inverted off



M20056_01

Han Xin mirrored on



M20057_01

Han Xin mirrored off



M20304_01

Han Xin inverted and normal polarity on

10.15 Hong Kong 2 of 5



M20058_01

Hong Kong 2 of 5 On



M20059_01

Hong Kong 2 of 5 Off

10.16 Interleaved 2 of 5



M20060_01

Interleaved 2 of 5 On



M20061_01

Interleaved 2 of 5 Off



M20062_01

Interleaved 2 of 5 checksum required on



M20063_01

Interleaved 2 of 5 checksum required off



M20064_01

Interleaved 2 of 5 do not transmit checksum



M20077_01

Interleaved 2 of 5 transmit checksum

10.17 Matrix 2 of 5



M20071_01

Matrix Code 2 of 5 On



M20072_01

Matrix Code 2 of 5 Off

10.18 Maxicode



M20073_01

Maxicode On



M20074_01

Maxicode Off

10.19 MSI Plessey



M20075_01

MSI Plessey On



M20076_01

MSI Plessey Off



M20078_01

MSI Plessey no checksum required



M20079_01

MSI Plessey Mod 10 checksum required



M20080_02

MSI Plessey Mod 10/10 checksum required



M20081_02

MSI Plessey Mod 11/10 checksum required



M20082_01

MSI Plessey do not transmit checksum



M20083_01
MSI Plessey transmit checksum



M20087_01
UK Plessey On



M20088_01
UK Plessey Off

10.20 NEC 2 of 5



M20084_01
NEC 2 of 5 On



M20085_01
NEC 2 of 5 Off



M20086_01
NEC 2 of 5 checksum required



M20087_01

NEC 2 of 5 no checksum required

10.21 PDF 417



M20088_01

PDF 417 On



M20089_01

PDF 417 off

10.22 Micro PDF 417



M20090_01

Micro PDF 417 On



M20091_01

Micro PDF 417 Off

10.23 Pharmacode



M20092_01
Pharmacode On



M20093_01
Pharmacode Off



M20094_01
Pharma Code Reverse scanning (from right to left) on



M20095_01
Pharma Code Reverse scanning (from right to left) off



M20289_01
Pharma Code color on



M20290_01
Pharma Code color off

10.24 Post Codes

10.24.1 Australien Post



M20000_01

Australien Post On



M20001_01

Australien Post Off

10.24.2 Canada Post



M20008_01

Canada Post On



M20009_01

Canada Post Off

10.24.3 Japan Post



M20065_01

Japan Post on



M20066_01

Japan Post off

10.24.4 KIX (Dutch postal service)



M20067_01

KIX on



M20068_01

KIX off

10.24.5 Korean Post



M20069_01

Korean Post On



M20070_01

Korean Post Off

10.24.6 UK Royal Mail



M20124_01

UK Royal Mail On



M20125_01

UK Royal Mail Off



M20285_01

UK Royal Mail checksum required



M20286_01

UK Royal Mail no checksum required

10.24.7 UPU ID Tags



M20152_01

UPU ID Tags on



M20153_01

UPU ID Tags off

10.24.8 USPS Intelligent Mail



M20154_01

USPS Intelligent Mail on



M20155_01

USPS Intelligent Mail off

10.24.9 USPS Planet



M20156_01

USPS Planet on



M20157_01

USPS Planet off

10.24.10 USPS Postnet



M20158_01

USPS Postnet on



M20159_01

USPS Postnet off

10.25 QR Code



M20096_01

QR Code On



M20097_01

QR Code Off



M20098_01

QR Code normal on



M20099_01

QR Code inverted



M20100_01

QR Code inverted and normal on



M20101_01

QR Code mirrored on



M20102_01

QR Code mirrored off



M20103_01

QR Code – Micro QR Code on



M20104_01

QR Code – Micro QR Code off



M20105_01

QR Code – Mode 1 QR Code on



M20106_01

QR Code – Mode 1 QR Code off

10.26 Straight 2 of 5



M20107_01
Straight 2 of 5 On



M20108_01
Straight 2 of 5 Off

10.27 Telepen



M20109_01
Telepen On



M20110_01
Telepen Offf



M20106_01
Telepen as ASCII



M20117_01
Telepen as numerical values

10.28 Trioptic



M20118_01

Trioptic On



M20119_01

Trioptic Off



M20120_01

Reverse Trioptic On



M20121_01

Reverse Trioptic Off



M20122_01

Trioptic transmission start/stop character on



M20123_01

Trioptic transmission start/stop character off

10.29 UPC / EAN



M20126_01
UPC/EAN On



M20127_01
UPC/EAN Off



M20128_01
UPC extensions (supplemental) on



M20129_01
UPC extensions (supplemental) off



M20130_01
Expand EAN-8 to EAN13



M20131_01
Do not expand EAN-8 to EAN13



M20132_01
Expand UPC-E to UPC-A



M20133_01

Do not expand UPC-E to UPC-A



M20134_01

Expand UPC-A to EAN13



M20135_01

Do not expand UPC-A to EAN13



M20136_01

Convert Bookland to ISBN



M20137_01

Do not convert Bookland to ISBN



M20138_01

Convert Bookland to ISSN



M20139_01

Do not convert Bookland to ISSN



M20140_01

UPC-A transmit checksum



M20141_01

UPC-A do not transmit checksum



M20142_01

UPC-A transmission of the numbering system on



M20143_01

UPC-A transmission of the numbering system off



M20144_01

UPC-E transmit checksum



M20145_01

UPC-E do not transmit checksum



M20146_01

UPC-E transmission of the numbering system on



M20147_01

UPC-E transmission of the numbering system off



M20148_01

EAN-8 transmit checksum



M20149_01

EAN-8 do not transmit checksum



M20150_01

EAN-13 transmit checksum



M20151_01

EAN-13 do not transmit checksum

11. Maintenance Instructions



NOTE!

- This wenglor sensor is maintenance-free
- It's advisable to clean the transducer and the display, and to check the plug connections at regular intervals
- Do not clean the sensor with solvents or cleansers which could damage the product
- The product must be protected against contamination during initial start-up

12. Proper Disposal

wenglor sensoric GmbH does not accept the return of unusable or irreparable products. Respectively valid national waste disposal regulations apply to product disposal.

13. Appendix

13.1 List of Changes to Operating Instructions

Version	Date	Description/change	Associated software version
1.0.0	12.09.2019	Initial version of the operating instructions	

13.2 EU Declaration of Conformity

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

