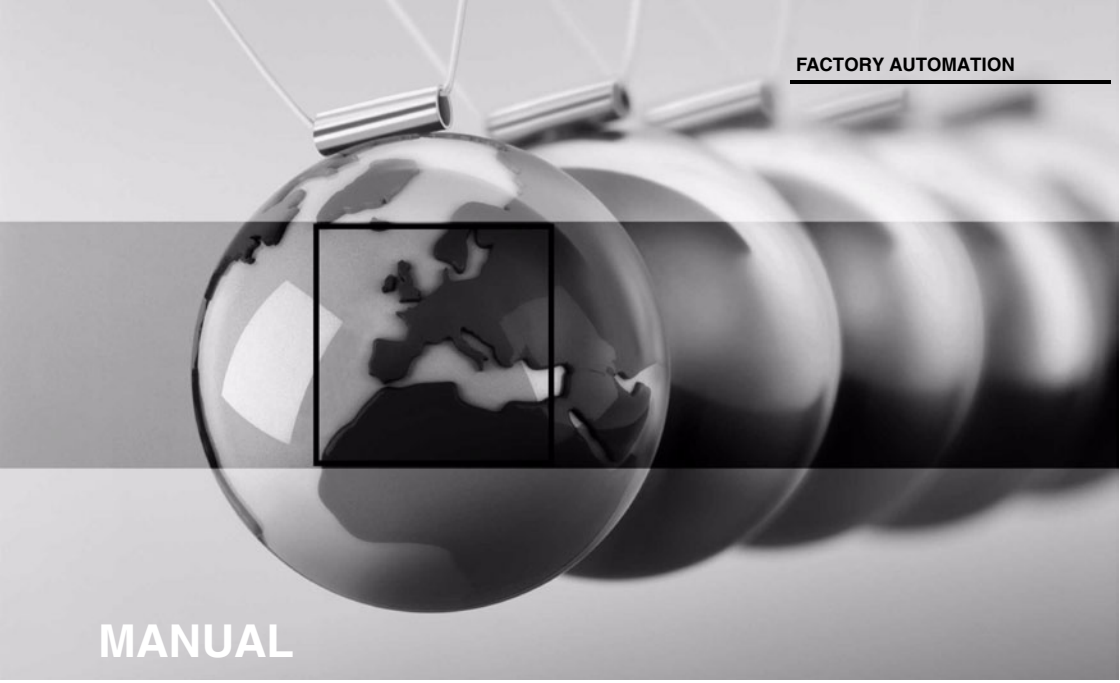

MANUAL

ODT-HH-MAH300
Handheld

Format A5

CE

PEPPERL+FUCHS
SENSING YOUR NEEDS

With regard to the supply of products, the current issue of the following document is applicable: The General Terms of Delivery for Products and Services of the Electrical Industry, published by the Central Association of the Electrical Industry (Zentralverband Elektrotechnik und Elektroindustrie (ZVEI) e.V.) in its most recent version as well as the supplementary clause: "Expanded reservation of proprietorship"

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1 Introduction

Congratulations

You have chosen a device manufactured by Pepperl+Fuchs. Pepperl+Fuchs develops, produces and distributes electronic sensors and interface modules for the market of automation technology on a worldwide scale.

Before you install this device and put it into operation, please read the operating instructions thoroughly. The instructions and notes contained in this operating manual will guide you step-by-step through the installation and commissioning procedures to ensure trouble-free use of this product. By doing so, you:

- guarantee safe operation of the device
- can utilize the entire range of device functions
- avoid faulty operation and the associated errors
- reduce costs from downtimes and incidental repairs
- increase the effectiveness and operating efficiency of your plant.

Store this operating manual somewhere safe in order to have it available for future work on the device.

Directly after opening the packaging, please ensure that the device is intact and that the package is complete.

Symbols used

The following symbols are used in this manual:

Note!

This symbol brings important information to your attention.

Handling instructions

You will find handling instructions beside this symbol

Contact

If you have any questions about the device, its functions, or accessories, please contact us at:

Pepperl+Fuchs GmbH
Lilienthalstraße 200
68307 Mannheim
Telephone: +49 621 776-4411
Fax: +49 621 776-274411
E-Mail: fa-info@pepperl-fuchs.com

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PEPPERL+FUCHS

1.1 Declaration of Conformity

All products have been developed and manufactured taking into consideration applicable European standards and regulations.

Note!

A Declaration of Conformity can be requested from the manufacturer.

The manufacturer of this product, Pepperl+Fuchs GmbH in 68307 Mannheim, Germany, has a certified quality assurance system in conformity with ISO 9001.

ISO**9001**

2 Safety

2.1 Symbols relevant to safety

Danger!
This symbol indicates a warning about a possible danger.

In the event the warning is ignored, the consequences may range from personal injury to death.

Warning!
This symbol indicates a warning about a possible fault or danger.

In the event the warning is ignored, the consequences may course personal injury or heaviest property damage.

Caution!
This symbol warns of a possible fault.

Failure to observe the instructions given in this warning may result in the devices and any connected facilities or systems develop a fault or fail completely.

2.2 Intended use

Always operate the device as described in these instructions to ensure that the device and connected systems function correctly. The protection of operating personnel and plant is only guaranteed if the device is operated in accordance with its intended use.

The handheld was designed for identifying 1D and 2D codes and should be used for this purpose only. The handheld is flexible and can therefore be used to decode codes in many branches of industry, such as the logistics sector.

2.3 General safety notes

Class 2M laser product

This handheld is a class 2M laser product:

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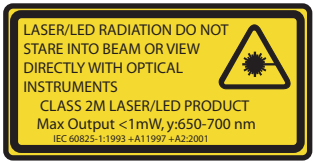
Warning!
Class 2M laser radiation

Laser targeting beams can cause serious eye injuries.

The irradiation can lead to irritation even in a dark environment. Do not point at people!
Caution: laser light, do not look into the beam or observe laser light with optical instruments such as magnifying glasses, microscopes, telescopes or binoculars!
Caution: visible and invisible laser radiation, do not look into the beam or observe with optical instruments such as magnifying glasses, microscopes, telescopes or binoculars!
Maintenance and repairs should only be carried out by authorized service personnel!

These safety instructions are also printed on the back of the handheld next to the battery compartment:

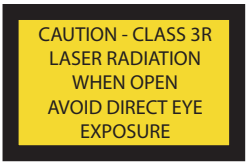


Warning!
Class 3R laser radiation

Laser beam emissions can cause serious eye injuries when the housing is opened.

Do not open the housing of the handheld. If the device develops a fault, please contact Pepperl+Fuchs. Avoid looking directly into laser beams.

These safety instructions are also printed on the inside of the housing:



Do not open, burn or short-circuit the battery. The battery may ignite, explode, leak or heat up and become irreparably damaged.

Always charge the battery using approved cables.

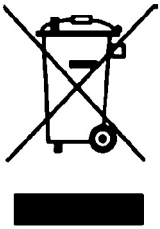
Only use recommended original accessories.

The operating company bears responsibility for observing locally applicable safety regulations.

Installation and commissioning of all devices must be performed by a trained professional only.

User modification and or repair are dangerous and will void the warranty and exclude the manufacturer from any liability. If serious faults occur, stop using the device. Secure the device against inadvertent operation. In the event of repairs, return the device to your local Pepperl+Fuchs representative or sales office.

Do not dispose of storage batteries with the household refuse.



Consumers are obliged by law to dispose of used storage batteries in accordance with regulations. You can hand in your used batteries at public collection points in your area or sales points where batteries of that particular kind are sold. You can also send your used batteries directly to us for disposal. Please remember that this service is only available within the scope of normal use. If you wish to send back your used batteries, please affix sufficient postage stamps and send to our address. There are no extra charges for disposal.

Note!

Disposal

Electronic waste is hazardous waste. When disposing of the equipment, observe the current statutory requirements in the respective country of use, as well as local regulations.

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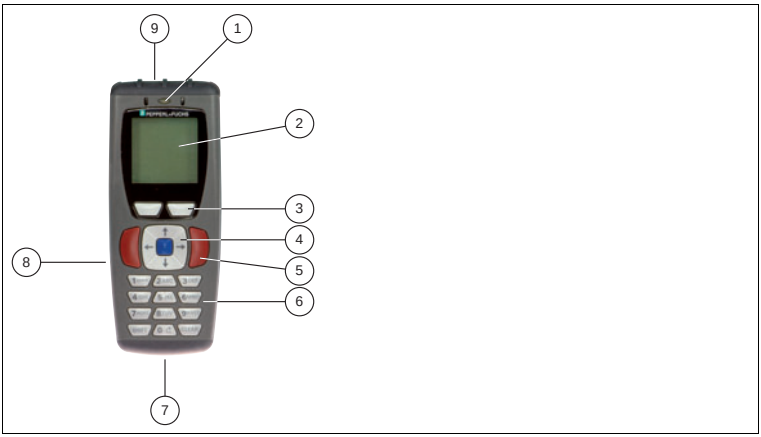
3 Product description

3.1 Use and application areas

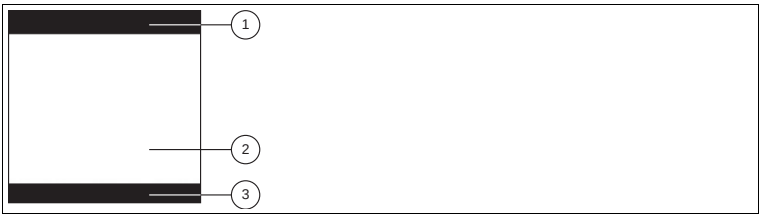
3.2 LED indicators and control buttons



1 Status LED
2 LC display
3 Softkeys
4 Navigation keys
5 Trigger buttons
6 Input keys
7 Interface
8 Battery compartment
9 CCD camera

3.2.1 Display

The display on the device is divided into different areas:



1 Toolbar
2 Display
3 Softkey bar

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The following table lists all the symbols on the toolbar and the functions they perform:

Symbols in the status bar

Symbol	Description
Charge state	
	The battery capacity is between 50 % and 100 %.
	The battery capacity is between 20 % and 50 %.
	The battery capacity is between 0 % and 20 %. Charge the battery.
	Battery is charging.
Connection status	
	The handheld device is connected to an interface.
	RS 232 is the preset interface.
	PS/2 is the preset interface.
	USB is the preset interface.
	Bluetooth is the preset interface.
Data transfer	
	Data transfer in one direction: Data is sent from the handheld device to the computer. A response from the computer is not required.
	Data transfer in two directions: Data is sent from the handheld device to the computer. The handheld device then waits for a response from the computer.
	Keyboard mode: The handheld device is connected to the computer via a USB or PS/2 interface.
	Virtual COM port mode: The handheld device emulates an RS 232 interface via the USB interface to allow communication from the computer to the handheld device as well. A response from the computer is not required.
	Secure mode
Memory status	
	0 % to 25 % of the internal memory is occupied.
	25 % to 50 % of the internal memory is occupied.
	50 % to 75 % of the internal memory is occupied.
	75 % to 100 % of the internal memory is occupied.
	The internal memory is full. There internal memory has no more space to store data.
	Batch mode inactive. Data is not cached in the internal memory.

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Symbol	Description
Input mode	
	Numerical input mode - data entered using the input keys appears in the numerical form.
	Alphabetical input mode - data entered using the input keys appears in alphabetical form.
	Alphabetical input mode - data entered using the input keys appears in the form of lowercase letters.
	Symbol input mode - data entered using the input keys appears in the form of symbols.

3.2.2 Key overview

The following table lists all keys on the device and the functions they perform:

Selection buttons

Button	Description
	Left selection button
	Right selection button

Navigation keys

Keys	Designation
	Up navigation key
	Down navigation key
	Left navigation key
	Right navigation key
	Enter navigation key

Function buttons

Button	Description
	Left function button (= left trigger button)
	Right function button (= right trigger button)

Input keys

Keys	"Numerical" mode	"Alphanumerical upper case" mode	"Alphanumerical lower case" mode	"Symbols" mode
SHIFT	Switches between "Numerical", "Alphanumerical upper case", "Alphanumerical lower case" and "Symbols" mode.			
1 space	1	Space, 1	Space, 1	Space) < _
2 ABC	2	A, B, C, 2	a, b, c, 2	! * = `
3 DEF	3	D, E, F, 3	d, e, f, 3	" + > {
4 GHI	4	G, H, I, 4	g, h, i, 4	# , ? |
5 JKL	5	J, K, L, 5	j, k, l, 5	$ - @ }
6 MNO	6	M, N, O, 6	m, n, o, 6	% . [~
7 PQRS	7	P, Q, R, S, 7	p, q, r, s, 7	& / \ Space
8 TUV	8	T, U, V, 8	t, u, v, 8	' :] Space
9 WXYZ	9	W, X, Y, Z	w, x, y, z	(; ^ Space
0	0	0	0	Scrolls through the different symbol pages
CLEAR	For data input fields: delete the last character. Otherwise: ESC function (exits the menu without adopting the current settings.)			

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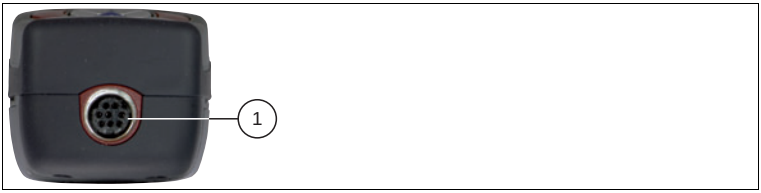
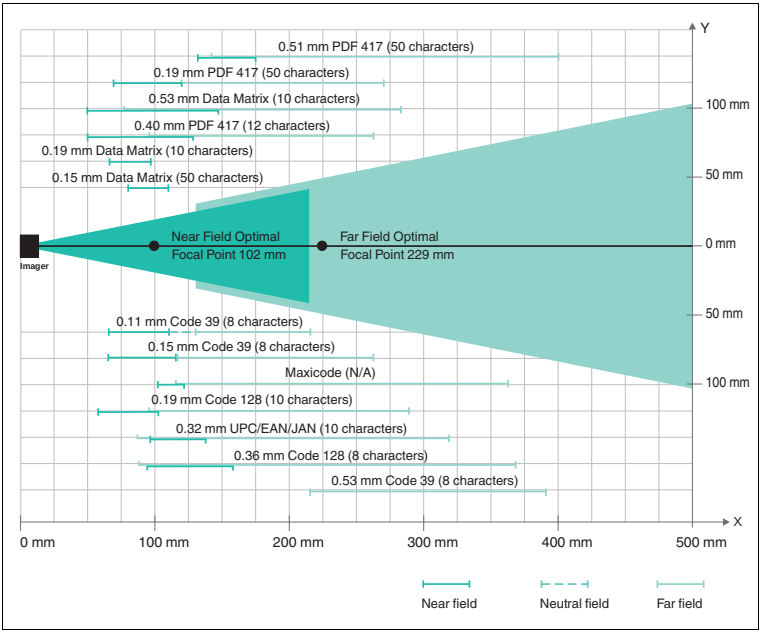
3.3 Interfaces and connections



1 8-pin connecting socket

3.4 Field of vision and resolution of the handheld



3.5 Delivery package

- ODT-HH-MAH300
- Quick start guide

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3.6 Accessories

Different connection cables, handles, mounts, storage batteries and a range of accessories for chargers and interfaces are available for this Handheld.

3.6.1 Accessories for interfaces

The following interfaces are available as optional accessories:

Designation	Description
ODZ-MAH-B15-M3	Bluetooth modem (without cable), preset to USB

3.6.2 Handles

The following handles are available as an optional accessory:

Designation	Description
ODZ-MAH-GRIP1	Handle, without battery
ODZ-MAH-GRIP2	Handle, with integrated lithium ion battery, capacity 1950 mAh
ODZ-MAH-GRIP3	Handle, with integrated lithium ion battery, capacity 3900 mAh

3.6.3 Connecting cable

The following connecting cables are available as an option:

Designation	Description
ODZ-MAH-CAB-B14	Connecting cable USB interface, length approx. 180 cm
ODZ-MAH-CAB-B14-3.7m	Connecting cable USB interface, length approx. 370 cm
ODZ-MAH-CAB-R2	Connecting cable RS 232 interface, length approx. 120 cm
ODZ-MAH-CAB-R6	Connecting cable PS/2 interface, length approx. 120 cm

3.6.4 Storage batteries

The following batteries are available as an optional accessory:

Designation	Description
ODZ-MAH-BAT	Lithium ion battery, capacity 1950 mAh
ODZ-MAH-BLANK	Battery blank (for cable operation)

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3.6.5 Chargers

The following chargers are available as an optional accessory:

Designation	Description
ODZ-MAH200-CHARGER	Charger for 2 lithium ion storage batteries
ODZ-MAH-CHARGER	Battery charging tray for handles with integrated lithium ion storage battery
ODZ-MAH200-SUPPLY + ODZ-MAH-CAB-CHARGE	Plug supply unit with cable for direct connection of the Handheld
ODZ-MAH-CHARGER-SINGLE	Charger for handhelds with integrated battery ODZ-MAH-BAT

3.6.6 Brackets

The following brackets are available as an option:

Designation	Description
ODZ-MAH300-BRACKET	Table bracket for Handhelds

4 Installation

4.1 Storage and transport

For storage and transport purposes, package the unit using shockproof packaging material and protect it against moisture. The best method of protection is to package the unit using the original packaging. Furthermore, ensure that the ambient conditions are within allowable range.

4.2 Preparation

Unpacking the unit

1. Check that all package contents are present and undamaged.

   ↳ If anything is damaged, inform the shipper and contact the supplier.

2. Check that all items are present and correct based on your order and the shipping documents.

   ↳ If you have any questions, please contact Pepperl+Fuchs.

3. Keep the original packing material in case you need to store or ship the unit at a later time.

Fitting the battery

Fit the battery as follows:

1. Turn the battery so that you can remove it as shown in the illustration.

2. Slide the plastic tab on the battery into the corresponding recess on the Handheld.

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3. Push the locking device upwards and push in the battery.

4. Push the battery in the Handheld, hold in position and release the locking device so that the battery engages.

Charging the battery

Charge the battery as follows:

1. Connect the handheld device with battery to an interface cable.
2. Make sure the computer is switched on and then connect the interface cable to computer.

   ↳ When the handheld device is switched on, the symbols displayed in the status bar on the handheld device indicate the charge state. view table "Symbols in the status bar" on page 12

Note!

If you are operating the handheld via an RS 232 interface, connect the RS 232 interface power supply unit to the socket to charge the battery.

Note!

Completely discharged storage batteries

If the storage battery is completely discharged, you will have to wait at least 10 minutes before the Handheld is ready for operation again.

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4.3 Handle installation

Fitting a handle with cable connection

Fit the handle to the Handheld as follows:

1. Remove the battery from the battery compartment of the Handheld if necessary.
2. Carefully pull the rear, flexible part of the handle attached to the plug downwards.
3. Attach the cable connection socket on the Handheld to the plug on the handle.
4. Slide the plastic tab on the battery into the corresponding recess on the Handheld.

↳ The Handheld is now fitted to the handle.

5. Push down the Handheld carefully until the locking device on the Handheld engages in the handle.
6. Connect the interface cable to the cable connection socket underneath the handle.

↳ The Handheld is now ready for operation.

Fitting a handle with integrated storage battery

A handle with integrated battery is also available for this Handheld as an optional accessory. Fit the handle to the Handheld as follows:

1. Remove the battery from the battery compartment of the Handheld if necessary.
2. Slide the plastic tab on the battery into the corresponding recess on the Handheld.
3. Push down the Handheld carefully until the locking device on the Handheld engages in the handle.

↳ The Handheld is now fitted to the handle.

Securing the interface cable to prevent inadvertent removal

You have the option of attaching a cord grip to prevent the interface cable from being pulled out inadvertently. Proceed as follows:

1. Secure the interface cable to the cable connection socket on the handle.
2. Guide the cable through the slot on the cord grip and slide the cord grip towards the cable connection socket.
3. Make sure that you slide the cord grip over the interface cable and into the correct position.

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4. Screw the cord grip to the handle using the screws provided.

↳ The interface cable is secured against inadvertent removal.

Note!

Note!

For secure mounting of the Handheld, we recommend that you secure the Handheld using the screws supplied. Two holes have been drilled on the lower section of the handle for this purpose (see illustration).

Removing the handle

Remove the handle as follows:

1. If you have secured the handheld with screws on the handle, remove the screws.
2. Push the locking device in the direction of the arrow and press the handheld out of the retainer.

↳ The handle is removed.

5 Commissioning

5.1 Basic operation

5.1.1 Switching on and off

Switching on the handheld device

Switch on the handheld device as follows:

Press and hold either the left function button () or the right function button () for approx.1 second.

↳ The handheld device switches on.

Note!

The Handheld automatically switches to standby mode approx. 2 minutes after the key is last pressed.

Note!

The device switches on automatically when connected to the USB or PS/2 interface on your computer.

Switching off the Handheld

The Handheld switches off automatically if it remains idle for more than 2 hours.

5.1.2 Navigation through menus

Button	Function
Up navigation button ()	Scroll up through different menus and submenus
Down navigation button ()	Scroll down through different menus and submenus
Enter navigation button ()	Select menus, submenus and individual menu entries
Left selection button ()	Function depends on the menu. This button is usually used to confirm a command (e.g., OK) or execute a command (e.g., read).
Right selection button ()	Function depends on the menu. This button is usually used to stop or cancel a command (e.g., ESC).

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Activating/Deactivating a menu entry

Activate/deactivate a menu entry as follows:

1. Scroll to the menu entry of your choice using the up navigation button () or the down navigation button ().

   ↳ The menu entry currently selected is highlighted black.

2. Press the Enter navigation button to activate the menu entry ().

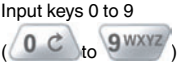
   ↳ A star appears in front of the activated menu entry.

3. Press the Enter navigation button again to deactivate the menu entry ().

   ↳ The star no longer appears in front of the deactivated menu entry.

4. Press the left selection button to confirm your selection ().

5.1.3 Data entry

Keys	Function
Input keys 0 to 9 ()	Entering numbers or letters (depending on the mode selected).
SHIFT input key ()	Switching between the different input modes. (The selected mode appears on the left of the toolbar on the Handheld.)
CLEAR input key ()	For data input fields: delete the last character entered. Within menus: exit menu.

5.2 Wireless operation

The handheld is suitable for mobile applications. You therefore have the option of operating the handheld without a cable. There are two modes available for wireless operation:

- Batch mode: there is no connection to the computer, data is stored temporarily in the internal memory of the handheld.
- Operation via Bluetooth: there is a wireless connection to the computer via the Bluetooth interface. The data is transferred immediately and deleted from the internal memory depending on the settings.

Note!

Using batteries

You will require a battery or a handle with integral battery to operate the handheld device using a wireless connection.

A battery is not normally required for cable operation via USB. However, this depends on the current strength that the computer supplies via the USB connection. If the computer does not supply sufficient power to the USB port, you will require a USB hub with a separate power supply or will have to fit a battery to the handheld device.

This optional accessory is available from Pepperl+Fuchs.

Caution!

Data loss

An incorrectly preset interface may lead to data loss.

Make sure that the Handheld is connected to the interface (USB, RS 232, Bluetooth) preset in the Handheld. If necessary, use another interface cable or modify the settings in the Handheld.

5.2.1 Batch Mode

When there is no longer a connection to the computer (via the cable USB, RS 232 and PS/2 interfaces or Bluetooth), the handheld switches automatically to Batch mode: in this mode, the data read is buffered in the internal memory of the handheld. This allows you to transfer the data saved in the handheld to a computer at a later time.

5.2.2 Operating with Bluetooth

This handheld has a wireless Bluetooth interface with a class 1 radio device that enables wireless point-to-point communication with other Bluetooth-compatible devices. If the other Bluetooth-compatible device also has a class 1 radio device, this results in a range of approx. 100 m in free field. The ranges of connections with a Bluetooth-compatible class 2 or 3 device are correspondingly shorter.

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If the handheld is outside the range, it saves the read data in the internal memory. The handheld continues attempting to send the read data until the connection to the Bluetooth-compatible device is restored. As soon as the handheld sends the data to the Bluetooth-compatible device, the data is deleted automatically from the internal memory.

There are three different modes available for Bluetooth operation:

Bluetooth interface

Bluetooth mode	Description
1way range	One-way communication from the handheld to the computer. This operating mode offers a greater maximum range but is not as reliable. Only select this operating mode if you intend to use the handheld within the maximum range or connect the handheld to a device with no operating system (e.g. printer). One-way communication may lead to data loss even though the connection is stable.
1way reliability	One-way communication from the handheld to the computer. This operating mode offers a lower maximum range but is more reliable. Only select this operating mode if you intend to use the handheld within the maximum range or connect the handheld to a device with no operating system (e.g. printer). One-way communication may lead to data loss even though the connection is stable.
2way	Two-way communication between the handheld and the computer.

Connecting the handheld via Bluetooth

Note!

You will require a MAC-address to establish a connection between the handheld and a Bluetooth-compatible device. This 12-digit numerical code is usually found on the Bluetooth-compatible device or in the manual accompanying your Bluetooth-compatible device.

If you are using a Pepperl+Fuchs Bluetooth modem, use the data matrix code printed on the top of the modem as a QuickConnect code.

Establish a connection between the handheld and a Bluetooth-compatible device (e.g. laptop with corresponding Bluetooth USB dongle) as follows.

1. Connect the Bluetooth-compatible device or the Pepperl+Fuchs Bluetooth modem to the computer.
2. Generate a data matrix code using the MAC-address on the Bluetooth-compatible device: visit www.pepperl-fuchs.com and use the **Quick Connect Code Generator** to generate the data matrix code. Print this data matrix code.

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3. Scan the code **Reset to RF Factory Defaults**:


M684_01

4. Scan the generated data matrix code or scan the code printed on the top of the Pepperl+Fuchs Bluetooth modem.

   ↳ The handheld automatically attempts to establish a connection to the computer via Bluetooth.

5. To save the settings, scan the code **Save Settings**:


M188_02

↳ The handheld is now ready for operation. Open the application on the computer to which you wish to send data.

Changing Bluetooth mode

To change Bluetooth mode scan one of the following codes.

1way reliability	1way range	2way
 M128_01	 M127_01	 M129_02

Disconnecting Bluetooth

You have the option of disconnecting Bluetooth manually. In delivery state, an existing Bluetooth connection is disconnected automatically after 90 seconds (you have the option of modifying the time-out setting, see "Changing Bluetooth connection parameters" on page 29). To disconnect the existing Bluetooth connection manually, proceed as follows:

Scan the code **Bluetooth Disconnect**:


M114_02

↳ Once you have scanned the code, you may have to wait between 10 to 15 seconds until the handheld is disconnected.

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Restoring the Bluetooth connection

If you have secured the handheld in RF mode, the Bluetooth connection is restored under the following conditions:

- You switch on the handheld.
- The handheld switches to standby mode.
- You scan a new code.

Activating/Deactivating permanent Bluetooth connection

It is usually possible to connect several devices to a single modem alternately. For many applications, connecting a handheld permanently to a modem via Bluetooth is more appropriate. In this case, communication is only possible between a handheld and the modem. To activate the permanent Bluetooth connection, proceed as follows:

1. If you are using a Pepperl+Fuchs Bluetooth modem, scan the data matrix code printed on the top of the modem or scan the data matrix code generated by the **Quick Connect Code Generator** (see "Connecting the handheld via Bluetooth" on page 25).
2. Scan the code **Lockout Link Mode**:


M710_02

3. Set the standby time if necessary (view table "Bluetooth connection parameters" on page 29).
4. If you would like to connect other devices to the modem, you must first deactivate an existing permanent Bluetooth connection. Scan the code **Unlock Link Mode** to do this:


M711_01

Activating/Deactivating automatic Bluetooth connection

If this function is activated, once standby mode is deactivated or switched off the handheld automatically attempts to establish a connection to the Bluetooth-compatible device with which it was previously connected (this function is active in delivery state). An automatic connection can only be established if you have saved the previous Bluetooth connection with the code **Save Settings**. To activate or deactivate the automatic Bluetooth connection, proceed as follows:

1. To activate the automatic Bluetooth connection, scan the code **Bluetooth Radio Auto Connect On (Default)**:


M068_01

2. To deactivate the automatic Bluetooth connection, scan the code **Bluetooth Radio Auto Connect Off**:


M067_01

Activating/deactivating automatic disconnection of the Bluetooth connection

As soon as the automatic disconnection of the Bluetooth connection is activated, the handheld disconnects the existing connection after every data transmission to the computer (this function is deactivated in delivery state). If you would like to connect several handhelds to the computer via the same Bluetooth-compatible device, activate this function. To activate or deactivate the automatic disconnection of the Bluetooth connection setup, proceed as follows:

1. To activate the automatic disconnection of the Bluetooth connection, scan the code **Bluetooth Radio Auto Disconnect On**:


M066_01

2. To deactivate the automatic disconnection of the Bluetooth connection, scan the code **Bluetooth Radio Auto Disconnect Off**:


M065_01

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Changing Bluetooth connection parameters

To change the individual parameters of the Bluetooth connection, scan the respective code (view table "Bluetooth connection parameters" on page 29).

Bluetooth connection parameters

<table>
<tr><td colspan="2">Scan one of the following codes to set the time period after which the handheld switches to standby mode if it has not been active.
The longer the handheld is ready for operation, the lower the battery runtime.</td></tr>
<tr><td>90 seconds (default setting)
M125_01</td><td>5 minutes
M121_01</td></tr>
<tr><td>10 minutes
M122_01</td><td>15 minutes
M123_01</td></tr>
<tr><td>30 minutes
M124_01</td><td>1 hour
M119_01</td></tr>
<tr><td>2 hours
M120_01</td><td></td></tr>
<tr><td colspan="2">Scan one of the following codes to select the alarm signal for indicating when the handheld has left the radio range of the Bluetooth-compatible device.</td></tr>
<tr><td>Acoustic warning signal on
M583_01</td><td>Vibration alarm on
M582_01</td></tr>
<tr><td>Acoustic warning signal and vibration signal on
M587_01</td><td>Acoustic warning signal/vibration alarm off (default setting)
M581_01</td></tr>
</table>

5.3 Cable operation: PS/2 interface

The handheld is connected to a computer in 3 steps:

- Adjusting the interface settings on the handheld
- Connecting the interface cable to the handheld
- Connecting the interface cable to the computer

Note!

Required PS/2 interface cable

You will require a PS/2 interface cable with the following connectors to connect the Handheld to the computer:

- **8-pin DIN connector** for connection to the Handheld.
- **PS/2 socket** for connecting an external keyboard.
- **PS/2 connector** for connection to the computer.

Adjusting the settings for the PS/2 interface on the handheld

Adjust the settings for the PS/2 interface on the handheld as follows:

1. Select **Option > Settings > Communication**.
2. Activate the interface **PS/2 KB**.
3. Confirm the message "Settings changed. Save now?" by pressing the left softkey ().

   ↳ The settings are adopted and you are redirected automatically back to the main menu.

Connecting the interface cable to the Handheld

To connect the interface cable to the Handheld, proceed as follows:

1. Turn the 8-pin DIN plug so that the arrows on the plug are pointing downwards.
2. Hold the Handheld in your hand with the controls facing upwards.
3. Insert the plug into the corresponding cable connection socket on the Handheld.
4. Press the plug firmly into the cable connection socket until the locking device audibly engages.

   ↳ The interface cable is now connected to the Handheld.

Note!

Connection cable with fitted grip

If you have mounted the Handheld to the optional grip, connect the interface cable to the cable connection socket on the grip.

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Connecting the handheld device to the computer using a PS/2 interface cable

Connect the handheld device to the computer as follows:

1. Switch off the computer.
2. If an external keyboard is connected to the computer, disconnect from the computer.
3. If you are using a USB keyboard, connect the keyboard to the PS/2 socket on the interface cable using a corresponding adapter. If you are using a keyboard with PS/2 plug, connect the plug directly to the PS/2 socket on the interface cable.
4. Connect the PS/2 plug on the interface cable to the keyboard port on the computer.
5. Switch on the computer.

   ↳ After you have connected the handheld device to the computer, it switches on automatically. The symbols  and  appear in the status bar.

5.4 Cable operation

Caution!
Data loss

An incorrectly preset interface may lead to data loss.

Make sure that the Handheld is connected to the interface (USB, RS 232, Bluetooth) preset in the Handheld. If necessary, use another interface cable or modify the settings in the Handheld.

5.4.1 Cable operation: USB interface

The handheld is connected to a computer in 3 steps:

- Adjusting the interface settings on the handheld
- Connecting the interface cable to the handheld
- Connecting the interface cable to the computer

Setting the USB interface on the handheld

Adjust the settings for the USB interface on the handheld as follows:

1. Select **Option > Settings > Communication**.
2. Activate the interface **USB**.

   ↳ The **USB** submenu opens.
3. Activate the required USB mode.
4. Confirm the message "Settings changed. Save now?" by pressing the left softkey ().

   ↳ The settings are adopted and you are redirected automatically back to the main menu.

Connecting the interface cable to the Handheld

To connect the interface cable to the Handheld, proceed as follows:

1. Turn the 8-pin DIN plug so that the arrows on the plug are pointing downwards.
2. Hold the Handheld in your hand with the controls facing upwards.
3. Insert the plug into the corresponding cable connection socket on the Handheld.
4. Press the plug firmly into the cable connection socket until the locking device audibly engages.

↳ The interface cable is now connected to the Handheld.

Note!

Connection cable with fitted grip

If you have mounted the Handheld to the optional grip, connect the interface cable to the cable connection socket on the grip.

Connecting the Handheld to the computer via the USB interface cable

Connect the Handheld to the computer as follows:

Insert the USB plug on the interface cable into a free USB port on the computer. It does not matter whether the computer is switched on or off.

↳ The Handheld switches on automatically once you have connected it to the computer. The symbols  and  are displayed in the toolbar.

USB interface

USB mode	Description
Keyboard	In USB mode **Keyboard**, data is transferred in one direction from the handheld to the computer. The data is transferred to the computer in the same way as when entered via a connected USB keyboard
Downloader	In USB mode **Downloader**, data is transferred in one direction from the computer to the handheld. This mode is used to install new software onto the handheld, for example.
Native 2way	In USB mode **Native 2way**, data is transferred in both directions between the computer and the handheld.
VCOM 1way	In USB mode **VCOM 1way**, data is transferred in both directions between the computer and the handheld via a virtual COM port. Activate this USB mode if you are using applications that communicate via the serial interface. Visit www.pepperl-fuchs.com for information on suitable USB Virtual COM port drivers (for Windows XP or Windows 2000).
USB HID POS (Terminal ID 131)	Enables handheld communication as a USB HID POS device. At present, this USB mode can only be set using the following configuration code:  M736_01

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5.4.2 Cable mode: RS 232 interface

The handheld is connected to a computer in 3 steps:

- Adjusting the interface settings on the handheld
- Connecting the interface cable to the handheld
- Connecting the interface cable to the computer

Adjusting the settings for the RS 232 interface on the handheld

Adjust the settings for the RS 232 interface on the handheld as follows:

1. Select **Option > Settings > Communication** .
2. Activate the interface **RS 232** .

   ↳ The submenu **RS 232** opens.
3. Activate the required RS 232 mode.
4. Confirm the message "Settings changed. Save now?" by pressing the left softkey ().

   ↳ The settings are adopted and you are redirected automatically back to the main menu.

Connecting the interface cable to the Handheld

To connect the interface cable to the Handheld, proceed as follows:

1. Turn the 8-pin DIN plug so that the arrows on the plug are pointing downwards.
2. Hold the Handheld in your hand with the controls facing upwards.
3. Insert the plug into the corresponding cable connection socket on the Handheld.
4. Press the plug firmly into the cable connection socket until the locking device audibly engages.

   ↳ The interface cable is now connected to the Handheld.

Note!

Connection cable with fitted grip

If you have mounted the Handheld to the optional grip, connect the interface cable to the cable connection socket on the grip.

Connecting the Handheld to the computer via the RS 232 interface cable

Connect the Handheld to the computer as follows:

1. Switch off the computer.
2. Connect the RS 232 plug on the interface cable to the RS 232 interface on the computer.
3. Connect the low-voltage plug on the power supply unit to the low-voltage socket on the RS 232 interface cable.
4. Connect the power supply unit to the mains power supply.
5. Switch on the computer.

   ↳ The Handheld switches on automatically once you have connected it to the computer. The symbols  and  are displayed in the toolbar.

RS 232 interface

RS 232 interface	Description
One Way	In RS 232 mode **One Way** , data is transferred in one direction from the handheld to the computer.
Two Way	In RS 232 mode **Two Way** , data is transferred in both directions between the computer and the handheld.
Operations	In this submenu, you have the option of modifying other settings: • **Baud Rate**: 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 • **Data bits**: 7, 8 • **Stop bits**: 1, 2 • **Parity**: None, Odd, Even

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6 Operation

6.1 Reading codes

This handheld uses digital camera technology to record an image of the code to be read. Once an image has been recorded, the handheld evaluates the data contained in the image using an advanced evaluation process.

The handheld reads both extremely small two-dimensional codes (e.g. data matrix codes) and larger one-dimensional codes (e.g. bar codes). The handheld has an innovative field of vision with two areas that are read simultaneously: the near field covers a lens with an optimal focal point of about 10 cm and is specially designed for reading smaller codes. The far field covers a lens with an optimal focal point of about 23 cm and is specially designed for reading larger codes. These combinations enable the handheld to cover a reading area between 5 and 50 cm.

The handheld is held either directly in the hand or fitted to a handle. The handle has a separate button. The two red trigger buttons on the top of the handheld also function when the handle is fitted.

Reading the 1D and 2D code

1. To read smaller codes, hold the handheld nearer to the code. To read larger codes, hold the handheld further away from the code.
2. Depending on the key assignment, press and hold in the trigger button for reading and center the laser targeting in any direction on the code to be read.

   ↳ If the reading process is successful, the status LED lights up green briefly and the read code appears on the display. If you have activated the buzzer and the vibration alarm, an acoustic signal sounds and the handheld vibrates.

6.2 Editing and entering data manually

Editing data manually

Edit data that has already been entered as follows:

1. Select **Options > View storage**.
2. Press the left navigation key () or right navigation key () to browse to the relevant data record.
3. Press the left softkey () to open the options.
4. Select **Edit**.
5. Press the  button to delete individual characters. You can only delete the last characters entered, not individual characters within the character string.
6. Enter the required modifications using the input keys.
7. Press the left softkey () to confirm the entry.

   ↳ The edited data is modified in the memory.

Entering data manually

Enter new data manually as follows:

1. Select **Options > Enter data**.
2. Enter the data using the input keys.
3. Press the Enter navigation key () to confirm your entry.

   ↳ The input data is saved.

6.3 Entering data manually

You have the option of automatically transferring data stored on the handheld memory to the computer as soon as a connection is available at the USB, RS 232, PS/2 or Bluetooth interface.

There is a separate submenu for transferring files automatically. Refer to the Chapter "CodeViewer Settings" for more information.

Entering all data manually

To transfer all the handheld memory data to the computer, proceed as follows:

1. Connect the handheld to the computer.
2. Select **Options > Send all**.

   ↳ The data is transferred to the computer. The transfer process may take a few minutes, depending on the data volume. The message "Ready (Sent all)" appears on the display if the data is transferred successfully.

Transferring individual data records manually

To manually transfer individual data records from the handheld memory to the computer, proceed as follows:

1. Select **Options > View storage**.
2. Press the left navigation key () or right navigation key () to browse to the relevant data record.
3. Press the left softkey () to open the options.
4. Select **Send**.

   ↳ The data record is transferred to the computer. The message "#n Sent" appears in the toolbar if the record is transferred successfully.

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6.4 Deleting data manually

You have the option of automatically deleting data that has already been transferred automatically to the computer.

There is a separate submenu for deleting files automatically. Refer to the Chapter "CodeViewer Settings" for more information.

Deleting all data manually

To delete all data from the handheld memory, proceed as follows:

1. Select **Options > View storage**.
2. Press the left softkey () to open the options.
3. Select **Delete all**.
4. Press the left softkey () to confirm deletion of the data.

   ↳ All data is deleted from the handheld memory.

Deleting individual data records manually

To delete individual data records from the handheld memory, proceed as follows:

1. Select **Options > View storage**.
2. Press the left navigation key () or right navigation key () to browse to the relevant data record.
3. Press the left softkey () to open the options.
4. Select **Delete**.
5. Press the left softkey () to confirm deletion of the data record.

   ↳ The selected data record is deleted from the handheld memory.

7 Settings

You have the option of making several settings via the graphic operator interface **code viewer**. You can make other settings by scanning the corresponding data matrix configuration codes.

7.1 Factory defaults

Resetting the handheld to factory defaults

To reset the handheld to the factory defaults of the operating mode, scan the appropriate code.

Operating mode	Code
USB	 M049_03
RS 232	 M418_02
PS/2	 M060_03
Bluetooth	 M684_01

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7.2 Settings in CodeViewer

See **Options > Settings** for a list of settings that you can modify via the graphic control panel.

7.2.1 Settings > Application

Caution!

Modified or independent JavaScript programs

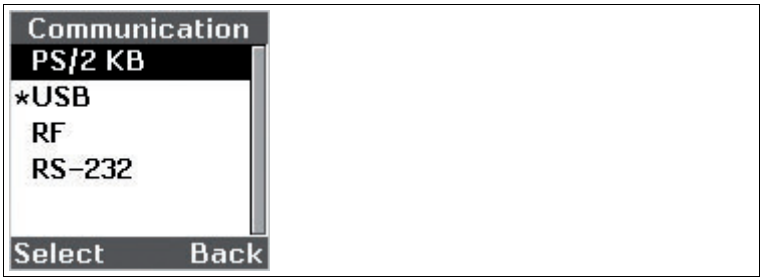
The processes involved in the reading and writing of data are susceptible to external influences and interference.

- Do not modify JavaScript programs from the manufacturer.
- If you write your own JavaScript programs, check that the identification function is not affected.

All JavaScript applications saved on the device are displayed in the **Application** submenu. The CodeViewer.js application is required to operate the device as a handheld.

After selecting a JavaScript application, you have the option of launching the application (**Run**), displaying information on the application version (**Version**) or deleting the application (**Delete**). Furthermore, you have the option of setting the application as the default (**Set as default**). This application is launched automatically when the device is powered up.

7.2.2 Settings > Communication



In the **Communication** submenu, you have the option of assigning interfaces to the computer together with their parameters.

The following interfaces are available:

- PS/2
- USB
- Bluetooth (RF) (only ODT-HH-MAH300-B15)
- RS 232

You can adjust the following parameters for the respective interface:

USB interface

USB mode	Description
Keyboard	In USB mode **Keyboard**, data is transferred in one direction from the handheld to the computer. The data is transferred to the computer in the same way as when entered via a connected USB keyboard
Downloader	In USB mode **Downloader**, data is transferred in one direction from the computer to the handheld. This mode is used to install new software onto the handheld, for example.
Native 2way	In USB mode **Native 2way**, data is transferred in both directions between the computer and the handheld.
VCOM 1way	In USB mode **VCOM 1way**, data is transferred in both directions between the computer and the handheld via a virtual COM port. Activate this USB mode if you are using applications that communicate via the serial interface. Visit www.pepperl-fuchs.com for information on suitable USB Virtual COM port drivers (for Windows XP or Windows 2000).
USB HID POS (Terminal ID 131)	Enables handheld communication as a USB HID POS device. At present, this USB mode can only be set using the following configuration code:  M736_01

Bluetooth interface

Bluetooth mode	Description
1way range	One-way communication from the handheld to the computer. This operating mode offers a greater maximum range but is not as reliable. Only select this operating mode if you intend to use the handheld within the maximum range or connect the handheld to a device with no operating system (e.g. printer). One-way communication may lead to data loss even though the connection is stable.
1way reliability	One-way communication from the handheld to the computer. This operating mode offers a lower maximum range but is more reliable. Only select this operating mode if you intend to use the handheld within the maximum range or connect the handheld to a device with no operating system (e.g. printer). One-way communication may lead to data loss even though the connection is stable.
2way	Two-way communication between the handheld and the computer.

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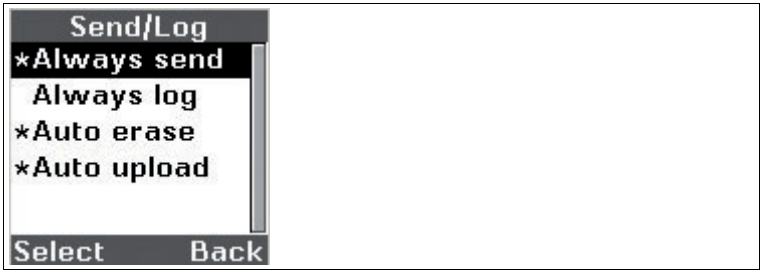
RS 232-Schnittstelle

RS 232 interface	Description
One Way	In RS 232 mode **One Way** , data is transferred in one direction from the handheld to the computer.
Two Way	In RS 232 mode **Two Way** , data is transferred in both directions between the computer and the handheld.
Operations	In this submenu, you have the option of modifying other settings: • **Baud Rate**: 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 • **Data bits**: 7, 8 • **Stop bits**: 1, 2 • **Parity**: None, Odd, Even

7.2.3 Settings > Send/Log



In the **Send/Log** submenu, you have the option of determining how the handheld processes scanned or manually entered data.

The following menu entries can be activated/deactivated:

Menu entry	Description
Always send	Scanned or manually entered data is sent to the computer immediately as soon as the handheld is connected to a computer. The data is transferred regardless of the menu entry **Always log**.
Always log	Scanned or manually entered data is stored in the handheld memory regardless of the **Always send** menu entry and irrespective of whether a connection to the computer has been established.
Auto erase	When scanned or manually entered data is transferred to the computer, the data is deleted from the handheld memory immediately when the data transfer is complete.
Auto upload	Data scanned or entered manually in batch mode is transferred to the computer as soon as a connection is established, regardless of the menu entry **Always log**.

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7.2.4 Settings > Reader Info

The **Reader Info** submenu contains information about the handheld. Activate the individual menu entries to access specific submenus containing more information.

Menu entry	Description
Firmware Ver:	Information on the installed software
Reader Serial #	Serial number of handheld
Date/Time	Current date and time setting
Radio BD_ADDR	MAC address of the Bluetooth connection (only ODT-HH-MAH300-B15)

7.2.5 Settings > Optimization

Menu entry	Description
SXGA Both	Activation of both reading areas (near and far field) in SXGA resolution (1024 x 640 pixels)
SXGA Near	Activation of near field in SXGA resolution (1024 x 640 pixels)
SXGA Far	Activation of far field in SXGA resolution (1024 x 640 pixels)
VGA Both	Activation of both reading areas (near and far field) in VGA resolution (480 x 320 pixels)
VGA Near	Activation of near field in VGA resolution (480 x 320 pixels)
VGA FAR	Activation of far field in VGA resolution (480 x 320 pixels)
DOT Both	Activation of both reading areas (near and far field) in DOT mode (var. resolution)
DOT Near	Activation of near field in DOT mode (var. resolution)
DOT Far	Activation of far field in DOT mode (var. resolution)

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7.2.6 Settings > System

In the **System** submenu, you have the option of modifying system settings such as the background lighting and date, etc.

The following submenus are available:

Submenu/Menu entry	Description
Backlight time	Sets the backlight time
Set date/time	Sets the date and time
Save settings	Saves modified settings
Reset defaults	Resets to the factory settings

Setting the backlight time

1. Press the CLEAR input key (CLEAR) to delete numbers already entered..
2. Enter the numbers using the input keys.
3. Press the left softkey ( ) to confirm deletion of the data record.

   ↳ The settings are accepted.

Entering the date and time

1. Press the up navigation key ( ) and the down navigation key ( ) to navigate to the individual data input fields.
2. Press the CLEAR input key (CLEAR) to delete numbers already entered.
3. Enter the numbers using the input keys.
4. Press the left softkey ( ) to confirm deletion of the data record.

   ↳ The settings are accepted.

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7.3 Handheld configuration

Locking handheld to prevent modifications to settings

Once you have adjusted all the necessary settings of the handheld, you have the option of locking the settings to prevent further modifications. To do so, proceed as follows:

1. Scan the code **Reader Settings Locked**:

M429_01

2. To unlock the handheld, scan the code **Reader Settings Unlocked**:

M428_01

3. Scan the code **Save Settings**:

M188_02

7.3.1 Volume and vibration setting

Vibration mode		
Vibration & Beep on M107_01	Vibration on/Beep off M109_01	Vibration off/Beep on (Default) M108_01
Volume mode		
Beep off M110_01	Beep low M111_01	Beep High (Default) M112_01

Scan the code **Save Settings** after selection: M188_02

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7.3.2 Readability index

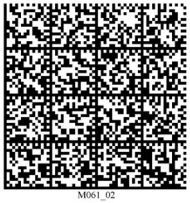
The readability index provides information on how well the handheld can decode a specific symbol and allows conclusions to be made regarding the reliability of labeling or identification systems. Factors such as contrast, symbology structure, error recognition, forward error correction (if applicable) and other characteristics affecting symbology are taken into consideration in the decoder algorithm and evaluated with a value between 01 (extremely poor readability) and 100 (excellent readability).

If you guide the handheld by hand, the readability index for the same symbol may differ slightly from reading to reading because of differences in movement, angle, reflection, focus and ambient lighting. If you use the handheld in a stationary position and the distance from the handheld to the symbol and the ambient conditions remain virtually unchanged as a result, the readability index is ideal for quality assurance purposes.

Activating readability index

To activate the readability index, proceed as follows:

1. Scan the code **Code Readability Index Rule**:



↳ The code resets the current readability index in the internal memory of the handheld.

2. To display the readability index, scan the code **Readability Index Output Enable**:

↳ The handheld displays the readability index during every reading. The readability index is displayed separately with a comma and appears in front of the decoded data. The readability index is displayed until deactivated.

3. To deactivate the readability index, scan the code **Readability Index Output Disable**:

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7.3.3 Laser targeting settings

Activating/deactivating laser targeting	
Laser targeting on (default)  M055_01	Laser targeting off  M054_01

Setting the brightness of the laser targeting		
High (default)  M058_01	Medium  M057_01	Low  M056_01

7.3.4 Handheld switched off

1 hour  M691_02	2 hours (default)  M688_02	4 hours  M689_02

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7.3.5 Information on firmware and serial number of the reader

You have the option of displaying information on firmware and the serial number of the reader.

The information is structured as follows:

Xap/iVVVVWWWWXXXXSSSSSSSSSSPXXX-XX+XX-

Abbreviation	Character	Meaning
Xap/i	-	Internal ID
VVVV	4	Version number of application firmware
WWWW	4	Version number of bootloader firmware
XXXX	4	Version number of Bluetooth firmware
SSSSSSSSSS	10	Serial number of the reader
P	1	**A** for application firmware, **B** for bootloader firmware
XXX-XX+XX-	-	Internal ID

Reading firmware and serial numbers

To read information on firmware and the serial number of the reader, proceed as follows:

1. Open the text editing program (e.g., Notepad, Microsoft Word, etc.).
2. Scan the code **Reader ID and Firmware**:


M153_01

↳ Information on firmware and the serial numbers of the reader is transferred from the internal reader memory and displayed in the text editing program.

Note!

Current firmware and upgrades

Pepperl+Fuchs regularly releases new firmware for readers. Contact Pepperl+Fuchs for information on current firmware versions or upgrades.

7.3.6 Keyboard settings

US English Keyboard - No leading 0 (Default) M172_01	US English Keyboard - Leading 0 M602_01	US English - ctrl+char for Non-Printable ASCII M606_01
French M609_03	German M604_01	Japanese M605_01
Universal Keyboard M173_01		Custom Keyboard M171_01
Alternative OS enable (Windows CE / MAC / Unix / Linux) M585_02		Alternative OS disable (Windows CE / MAC / Unix / Linux) M584_02

Scan the code **Save Settings:** after delection: M188_02

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7.3.7 Mirror decoding

As soon as you activate mirror decoding, the handheld can read codes that have been inverted. Furthermore, all other code reading functions are deactivated.

Activating/Deactivating mirror decoding

1. To activate mirror decoding, scan the code **Mirroring on**:

M182_01

2. Scan the mirrored code **Save Settings**:

3. To deactivate mirror decoding, scan the code **Mirroring off (Default)**:

M181_02

4. Scan the code **Save Settings:**

M188_02

7.3.8 Prefix and suffix settings

Caution!
Risk of data loss

If you scan one of the following codes, data loss may result

First save the settings on your handheld before scanning one of the following codes.

Defining prefix

For presentation of the read data, we recommend - besides the use of suffixes - the use of prefixes as separators between the individual data records. You can select between several separators. Combining several separators is also possible (e.g. a comma followed by a space, followed by the data record).

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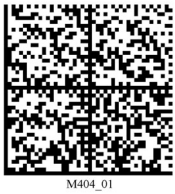
To define a prefix, scan the corresponding data matrix code in the following table.

Comma as a prefix	Space as a prefix	Tabulator as a prefix (USB mode)
 M159_02	 M164_02	 M166_01
Tabulator as a prefix (RS 232 mode)	**Carriage return line feed (RS 232 mode)**	
 M218_02	 M214_02	

Deleting a prefix

To delete all prefixes, scan the data matrix code **Prefix - Erase**:


M404_01

Defining suffix

For presentation of the read data, we recommend - besides the use of prefixes - the use of suffixes as separators between the individual data records. You can select between several separators. Combining several separators is also possible (e.g. a comma followed by a space, followed by the data record). Proceed as follows to define a suffix:

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To define a suffix, scan the corresponding data matrix code in the following table.

Comma as a suffix

Space as a suffix

Carriage return as a suffix (RS 232 mode)

Line feed as a suffix (RS 232 mode)

Carriage return line feed (RS 232 mode)

Line break as a suffix (USB mode)

Tabulator as a suffix (USB mode)

Tabulator as a suffix (RS 232 mode)

Deleting a suffix

To delete all suffixes, scan the code **Suffix - Erase**:

Deleting prefixes and suffixes

To delete all prefixes and suffixes, scan the code **Erase Prefix & Suffix Data**:

8 Optimizing the handheld

8.1 Optimization of the reading speed: windowing

In SXGA mode, the handheld needs more time to detect the codes due to the quantity of the processed data. Furthermore, you have the option of optimizing the reading speed by windowing (adapting the reading area to the code to be read).

1D codes

When windowing for 1D codes of invariable size, the handheld focus is reduced to a reading area of 1024x200 pixels.

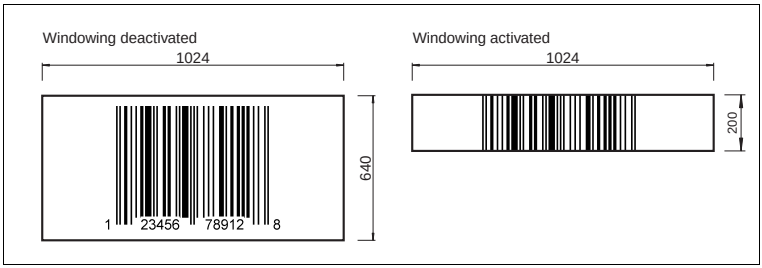

Figure 8.1: Effect of 1D windowing

The handheld must detect a narrow, horizontal strip to decode the 1D codes correctly. The area above and below the 200 pixels is ignored, reducing the data volume of the processed data and enabling the handheld to read the codes faster.

Activating 1D windowing

Note!

Activating 1D windowing may cause problems when other codes are read. If necessary, increase the distance between the handheld and the code you wish to read.

To activate 1D windowing, scan the code **1D Codes ONLY (1024 x 200 pixels)**:

M209_01

Save Settings:

M188_02

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2D codes

When windowing for 2D codes of invariable size, the handheld focus is reduced to a reading area of either 640 x 640, 512 x 512 or 480 x 480 pixels.

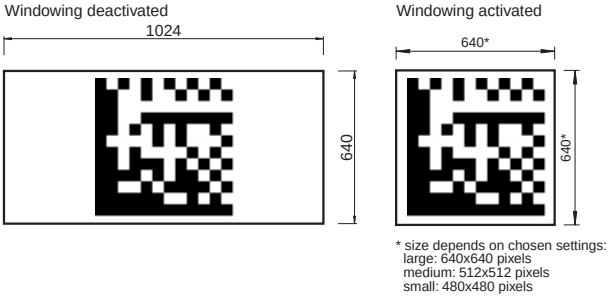


Figure 8.2: Effect of 2D windowing

Downsizing the reading area reduces the data volume of the processed data and enables the handheld to read the codes faster.

Activating 2D windowing

1. To activate 2D windowing for a reading area of 640 x 640 pixels, scan the code **Large 2D Codes (640 x 640 pixels)**:

2. To activate 2D windowing for a reading area of 512 x 512 pixels, scan the code **Medium 2D Codes (512 x 512 pixels)**:

3. To activate 2D windowing for a reading area of 480 x 480 pixels, scan the code **Small 2D Codes (480 x 480 pixels)**:

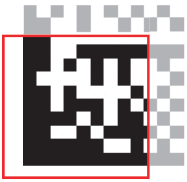

M210_01

4. Scan the code **Save Settings:**


M188_02

Windowing limits

- Selecting a window of insufficient size has a negative influence of the performance of the handheld and the code may not be read:



- The windowing function is not suitable for detecting codes of different sizes.

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8.2 Optimization and Trigger Programming

From the moment you turn on your handheld, you are taking full advantage of the dual path 1.3 megapixel imager, the 400 MHz prozessor. The reader are able to read a wide range of symbology types and sizes, as well as a variety of printed media, within a wide range of environmental factors including light (natural or ambient lightning).

By defining if you are scanning large, small, high density or low sensity types of symbology(s), the reader has options that will maximize decoding speed.

The chart below shows options that will improve performance based on parameters listed in each box.

The settings distinguish between, e.g.:

- Code type (1D or 2D codes)
- Size of the code (small, medium, large)
- Information density of the code (low, medium, high)

	SXGA
Near field	High density codes small size 2D
Far field	Standard density codes Medium to large codes
Near and far field	High density and standard density codes small to large codes

You also have the option of assigning the selected settings to the trigger buttons of the handheld. The following are available:

- All buttons: Trigger buttons on handheld and handle button (handle is an optional extra, see chapter 3.6
- Left trigger button only
- Right trigger button only
- Continuous reading

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8.2.1 Programming all trigger buttons

	SXGA
Near field	M614_02
Far field	M615_02
Near and far field	M613_02

8.2.2 Programming the left trigger button

	SXGA
Near field	M632_02
Far field	M633_02
Near and far field	M631_02

Taking pictures

To assign the "Take picture" function to the left trigger button, scan the data matrix code **Left Trigger Take Picture** :

M179_01

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8.2.3 Programming the right trigger button

	SXGA
Near field	M641_02
Far field	M642_02
Near an far field	M640_02

Taking pictures

To assign the "Take picture" function to the right trigger button, scan the data matrix code **Right Trigger Take Picture**:

M186_01

8.2.4 Programming the handle trigger button

	SXGA
Near field	M623_03
Far field	M624_03
Near and far field	M622_03

Taking pictures

To assign the "Take picture" function to the handle trigger button, scan the data matrix code **Handle Trigger Take Picture** :


M154_04

8.2.5 Programming continuous scanning

	SXGA
Near field	 M650_02
Far field	 M651_02
Near and far field	 M649_02

Activating/Deactivating continuous scanning

To activate/deactivate continuous scanning, either scan the data matrix code

Continuous Scan Off (Default) 
M141_02

or scan the data matrix code **Continuous Scan On** 
M138_01

Continuous reading - other setting options

Scan one of the following codes to set the time duration after which the cable-connected handheld in continuous reading mode switches to standby mode.

Cabled - 2 hours


M136_01

Cabled - unlimited


M137_01

Scan one of the following codes to set the time duration after which a handheld in continuous reading mode not connected by cable switches to standby mode.
Continuous reading mode is recommended for short periods only because it consumes the battery more quickly.

Not cable-connected - 5 minutes (default)


M145_01

Not cable-connected - 15 minutes


M146_01

Not cable-connected - 30 minutes


M147_01

Scan one of the following codes to define the time between individual readings.

0 seconds


M142_01

1 second


M143_01

3 seconds


M144_01

Scan one of the following codes to set the delay time for reading double codes.

0 seconds


M222_01

1 second


M223_01

3 seconds


M224_01

Scan one of the following codes to activate/deactivate the reading of codes on moving objects.

Activated


M701_01

Deactivated (default)


M702_01

8.3 Programming different code symbologies

Note!

Code Save Settings

Always scan the code **Save Settings** after reading a configuration code. Thus the configuration code is saved permanently.

8.3.1 Aztec

Aztec On

M273_01

Aztec Off (Default)

M272_01

Save Settings

M188_02

Example:

8.3.2 Codabar

Codabar On (Default)

M275_01

Codabar Off

M274_01

Save Settings

M188_02

Example:

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8.3.3 Codablock F

Codablock F On

M277_01

Codablock F Off (Default)

M276_01

Save Settings

M188_02

Example:

8.3.4 Code 11

Code 11 On (Default)

M394_01

Code 11 Off

M393_01

Code 11 Checksum 1 digit

M395_01

Code 11 Checksum 1 digit & Strip from result

M397_01

Code 11 Checksum 2 digit & Strip from result

M396_01

Save Settings

M188_02

Example:

8.3.5 Code 39

Code 39 On (Default)

M235_01

Code 39 Off

M234_01

Code 39 Enable Checksum

M237_01

Code 39 Enable Checksum & Strip from result

M238_01

Disable Checksum (Default)

M236_01

Code 39 Extended Full ASCII On

M233_01

Code 39 Extended Full ASCII Off (Default)

M232_01

Code 39 Short Margin On

M390_01

Code 39 Short Margin Off (Default)

M389_01

Code 39 Trioptic On (Default)

M671_01

Code 39 Trioptic Off

M670_01

Save Settings

M188_02

Example: Code 39

12345678

Example: Trioptic Code 39

123456

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8.3.6 Code 93

Code 39 On (Default)

M281_02

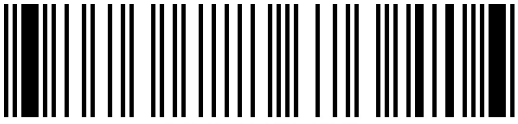
Code 93 Off

M280_01

Save Settings

M188_02

Example:



8.3.7 Code 128

Code 128 On (Default)

M283_01

Code 128 Off

M282_01

Code 128 Short Margin On

M392_01

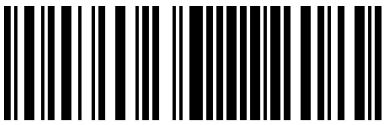
Code 128 Short Margin Off (Default)

M391_01

Save Settings

M188_02

Example:



8.3.8 Composite

Composite On

M285_02

Composite Off (Default)

M284_02

Save Settings

M188_02

8.3.9 Data Matrix

Data Matrix Rectangle On

M242_01

Data Matrix Rectangle Off (Default)

M241_01

Data Matrix Inverse On

M239_01

Data Matrix Inverse Off (Default)

M240_01

Save Settings

M188_02

Example Data Matrix:

Example Data Matrix Rectangle:

8.3.10 GoCode

GoCode is a two-dimensional symbol in miniature format. GoCode was developed in such a way that it fits into one text line and has a multidimensional adaptable matrix pattern which can be reproduced practically on any surface. GoCode is a private symbology and can be used by obtaining a fixed-term license. GoCode has many important advantages when compared with usual linear bar codes and 2D symbols. Please contact Pepperl+Fuchs if you require any further information on the advantages of a private symbology.

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8.3.11 Interleaved 2 of 5

Int 2 of 5 On (Default)

M244_01

Int 2 of 5 Off

M243_01

Int 2 of 5 Two Digits On

M246_01

Int 2 of 5 Two Digits Off (Default)

M245_02

Int 2 of 5 Four Digits On

M248_01

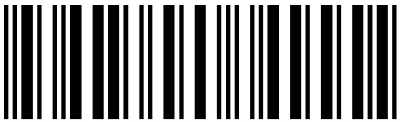
Int 2 of 5 Four Digits Off (Default)

M247_01

Save Settings

M188_02

Example:



123456789

8.3.12 Maxicode

Maxicode On

M289_04

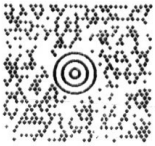
Maxicode Off (Default)

M288_01

Save Settings

M188_02

Example:



8.3.13 Matrix 2 of 5

Matrix 2 of 5 On (Default)


M675_01

Matrix 2 of 5 Off


M674_01

Save Settings


M188_02

Example:

8.3.14 Micro PDF417

Micro PDF417 On


M301_01

Micro PDF417 Off (Default)


M300_01

Save Settings


M188_02

Example:

8.3.15 MSI Plessy

MSI Plessy On


M291_01

MSI Plessy Off (Default)


M290_01

Save Settings


M188_02

Example:

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8.3.16 NEC 2 of 5

NEC 2 of 5 On

M673_01

NEC 2 of 5 Off (Default)

M672_01

Save Settings

M188_02

8.3.17 PDF417

PDF417 On (Default)

M293_01

PDF417 Off

M292_01

Macro PDF 417 On

M287_01

Macro PDF 417 Off (Default)

M286_01

Save Settings

M188_02

Example:

8.3.18 Pharmacode

An explanation of the Pharmacode settings and all programming codes can be obtained from Pepperl+Fuchs.

8.3.19 Post Codes

All post codes (zipcodes) are deactivated as standard. Scan the following codes to activate the corresponding post symbology.

Note!

If you wish to change the activated symbologies, first scan the code **Disable all Postal Codes** and then the post codes for the desired symbology.

Australian Post On

M252_01

Japan Post On

M253_01

KIX

M254_01

Planet On

M256_01

Postnet On

M257_01

Planet & Postnet On

M255_01

Royal Mail On

M258_01

4-State CB On (Intelligent Mail)

M748_01

Disable all Postal Codes

M261_01

Save Settings

M188_02

Example:

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8.3.20 QR Code

QR Code On

M261_01

QR Code Off (Default)

M260_01

Enable Checksum

M265_01

Disable Checksum (Default)

M264_01

QR Code Inverse On

M262_01

Both Inverse and Standard On

M263_01

All QR On (includes Micro QR)

M609_03

Inverse QR and Micro QR On

M687_03

Save Settings

M188_02

Example QR Code

Example Micro QR

8.3.21 GS1 data bar

GS1 Limited On

M268_01

GS1 14 and GS1 14 Truncated On

M271_01

GS1 14 Stacked On

M270_01

GS1 Expanded On

M269_01

All GS1 On

M267_01

All GS1 Off (Default)

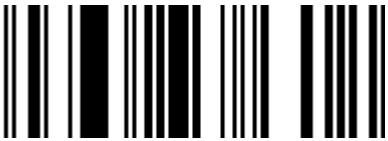
M266_01

Save Settings

M188_02

Example GS1 Limited Code

Example GS1 14 Code



Example GS1 14 Truncated Code

Example GS1 14 Stacked Code

8.3.22 Telepen

Telepen On (Default)

M677_01

Telepen Off

M676_01

Save Settings

M188_02

Example:

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8.3.23 UPC/EAN/JAN

UPC On (Default)

M295_01

UPC Off

M294_01

UPC Short Margin Enabled

M299_01

UPC Short Margin Disabled (Default)

M298_01

UPC Extension On

M297_01

UPC Extension Off

M296_01

Save Settings

M188_02

Example:

9 Maintenance and repair

9.1 Maintenance

The cable and power supply are maintenance-free. To get the best possible performance out of your device, keep the optical unit on the device clean and clean it when necessary.

Observe the following instructions when cleaning:

- Do not touch the optical unit with your fingers.
- Do not immerse the device in water. Do not spray the device with water or other fluids.
- Do not use a scouring agent to clean the surface of the device.
- Use a cotton or paper cloth moistened with water or isopropyl alcohol (not soaked).
- Remove any residual alcohol using a cotton or paper cloth moistened with distilled water (not soaked).
- Wipe the surface of the device dry using a lint-free cloth.

9.2 Repair

The devices may not be repaired, changed or manipulated. If there is a defect, the product must always be replaced with an original part.

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FACTORY AUTOMATION – SENSING YOUR NEEDS

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