



FACTORY AUTOMATION

MANUAL

MVT-HH12

MANUAL READ/WRITE DEVICE
FOR IDENT-M SYSTEM V



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 "Elektrotechnik und Elektroindustrie (ZVEI) e.V. in their most recent version as well as the supplementary clause: "Extended reservation of title".

We at Pepperl+Fuchs recognise a duty to make a contribution to the future,
For this reason, this printed matter is produced on paper bleached without the use of chlorine.

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1 Declaration of conformity

The MVT-HH12 was developed and manufactured taking into consideration applicable European standards and directives.



A corresponding declaration of conformity may be requested from the manufacturer.

Note

The manufacturer of the product, Pepperl+Fuchs GmbH in D-68301 Mannheim, has a certified quality assurance program in accordance with ISO 9001.



2 Symbols used



This symbol warns of a danger.

Failure to heed this warning can lead to personal injury or death and/or damage to or destruction of equipment.

Warning



This symbol warns of a possible fault.

Failure to observe the instructions given in this warning may result in the device and any facilities or systems connected to it developing a fault or even failing completely.

Attention



This symbol draws your attention to important information.

Note

3 Safety

3.1 Intended use

The MVT-HH12 is part of the microwave identification system IDENT-M System V of Pepperl+Fuchs. The device consisting of a read/write head and allows for wireless communication with data carriers of type MVC. The software integrated into the Hand-held device makes it possible to read, edit and write back the memory of the data carrier.



Protection of operating personnel and the system is not ensured if the device is not used in accordance with its intended purpose.

Warning

The device can only be operated by trained professionals in accordance with the available instruction manual.

3.2 General safety instructions



Any other type of operation other than what is described in this manual will place the safety and functionality of the device and systems connected to it in question.

Warning

Repairs may only be performed directly by the manufacturer. Tampering with or changes to the device are not permitted and will render any claims made under the warranty null and void.

The plant management is responsible for heeding the local safety regulations.

4 Product description

4.1 Product family

The IDENT-M System V identification system of Pepperl+Fuchs, which includes the MVT-HH12, offers various combination options for individual components within the system.



Figure 4.1: Marking of the identification system IDENT-M System V.

4.2 Range of application

The MVT-HH12 is designed for mobile use. Its practical handling make it especially suitable for data acquisition on site.

Some examples of usage possibilities

- monitoring
- maintenance or
- parameter assignment

The MVT-HH12 can be used to access all Pepperl+Fuchs data carriers of type MVC. The control program makes all significant standard functions available and optionally offers menu guidance in German and English.



Figure 4.2: Various data carriers of the identification system IDENT-M System V



Note

For detailed information on the components of the IDENT-M System V identification system, please refer to the sensor systems catalog 1.

4.3 Included with delivery/accessories

The following are included with delivery:

- 1 MVT-HH12
- Battery charger
- Voltage converter
- Carrying belt
- 1 manual on CD-ROM

5 General Instructions

5.1 Storage and transportation

The device must be packaged to protect it against bumps during storage and shipping and against moisture. The original packaging offers optimal protection.

In addition, the permissible ambient conditions must be observed (see Technical data).

5.2 Unpacking

Make certain the content is free of damage. In the event of damage, the postal service or goods transport service should be informed and the supplier notified.

Inspect the contents of the delivery package against your order and the delivery documents:

- Quantity supplied
- Device type and version in accordance with the type plate
- Accessories
- Handbook/handbooks

Retain the original packaging in case the items have to be stored or further transported at a later date.

If you have questions, please contact Pepperl+Fuchs GmbH.

5.3 Packaging and disposal

5.3.1 Repackaging

The device must be packaged to protect it against bumps and moisture for later use. The original packaging offers optimal protection.

5.3.2 Disposal



Note

Electronics waste is special waste. Please observe local requirements for disposing of it.

6 General operation

6.1 Information on the battery

The MVT-HH12 works with a battery as its source of power. The battery must be charged before using with the battery charger included with delivery.

If the battery is nearly depleted, a warning message appears on the display. You should then recharge the battery again as soon as possible.

If the turns off automatically, you still have about a week to charge the battery before data is lost in the .

The contains its own Lithium polymer battery that is continuously recharged by the device battery.



Note

You can extend the life of the battery by

- *reducing the brightness level of the display (optional) and using the background lighting of the sparingly;*
- *changing the setting for the automatic shut-off function (auto off) that turns off the after a certain amount of idle time (see section 6.3.1) and*
- *changing the shut-off time that determines when read/write readiness is turned off(see section 10.3).*

6.1.1 Charging the battery

To charge the battery, connect the cable from the battery charger (included with delivery) to the . Use the 4-pin socket identified as CHARGER for this purpose.

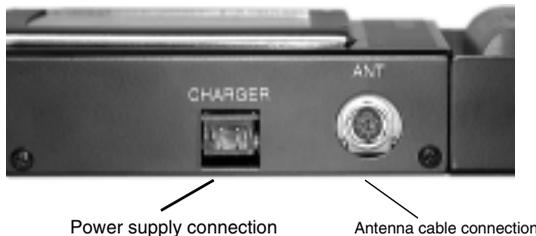


Figure 6.1: Connections of the s MVT-HH12

During the charging process, the red LED is lit on the battery charger. When the device is completely charged the green LED is lit.

The complete charging time is about 2 hours. After that, a few minutes each day is enough to charge the battery completely.

6.2 Operating components on the

The following operating components, which are important for proper use, are located on your the hand-held device:

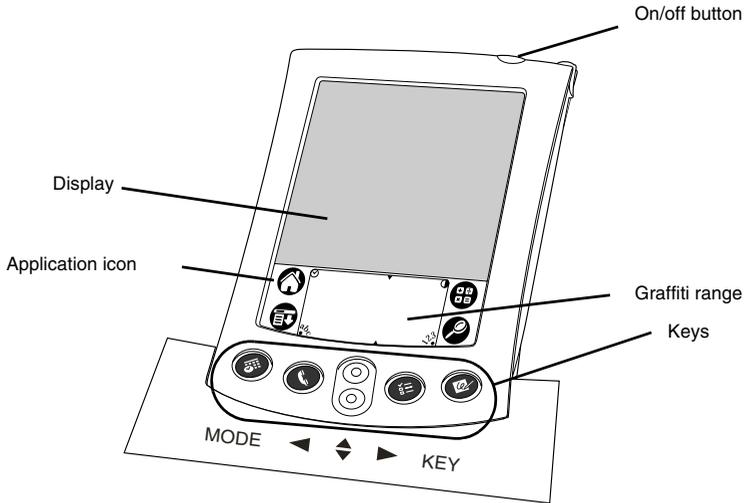


Figure 6.2: Operating components on the

6.2.1 Key assignment

Key	Symbol	Function
MODE		• Bringing up the OPERATING MODE screen
		• Scroll screen
		• Cursor movement up/down
		• Cursor movement for menu item selection
KEY		• Read data (READ) / function key switching

- Each keystroke is confirmed by a beep.
- Input of an invalid key or a fault signal is indicated by a double beep.

6.3 Turning the device on/off

The on/of button identified with POWER turns the on or off and makes it possible to adjust the background lighting of the to the existing light conditions.



Figure 6.3: On/off button

When the is turned off, turn it on by pressing the on/off button. The display that was last on the screen before the was turned off will then appear the screen.

If the is turned on, you can turn it off by pressing the on/off button.

When the is turned on, you can turn the on or off by pressing the background lighting for about two seconds (optional).



Background lighting switches off automatically after a set amount of time determined by the automatic shut-off function if there is no activity.

Note

6.3.1 Setting for the automatic shut-off function (auto off)

You can adjust the automatic shut-off feature in the SETTING application. Possible values are 30 seconds, 1, 2 or 3 minutes.

6.4 DS-30PG application

6.4.1 Brings up DS-30PG program

The is equipped with a series of applications. All applications installed on the are displayed in the starting screen as icons.



Figure 6.4: Start screen

The DS-30PG application is specially programmed for the MVT-HH12. It is responsible for controlling the read head with the correct commands and for showing data on the display of the .

Tapping on the application icon  starts the DS-30PG program.



You can change from one application to another while working. The automatically saves your work in the current application and displays it again when you return to this application.

Note

You can also tap on the application icon  to go to the starting screen.

6.4.2 OPERATING MODE screen

After you bring up the DS-30PG program, the OPERATING MODE screen appears on the display of the .

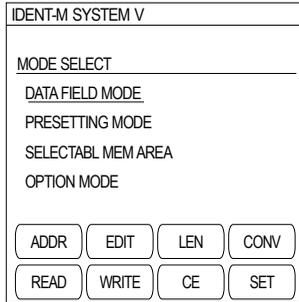


Figure 6.5: OPERATING MODE screen

You can select the operating mode by tapping on the desired menu item or selecting it with the scroll bar and confirming the menu item.

Key	Function
	The cursor moves up or down.
	The selected menu item is confirmed and the cursor jumps to the next display.
	Back to the OPERATING MODE screen.
MODE	Back to the OPERATING MODE screen.

6.4.3 Overview of various operating modes

You can branch to four different operating modes from the OPERATING MODE screen. The most important functional elements of the individual operating modes are illustrated in the following layout.

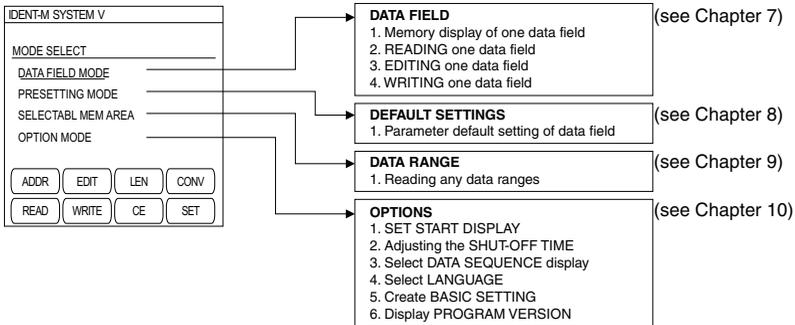


Figure 6.6: Layout of operating modes

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6.4.4 Touchscreen key assignment

While the DS-30PG program is running, 8 keys appear in the lower part of the display. Depending on the current operating mode, functions are assigned to some of these Touchscreen keys.

Tapping once on the appropriate area of the display causes the key to be "pressed" and the corresponding function to be called.

Key	Function
	<ul style="list-style-type: none"> • Display of the starting and ending address of the data field on the screen, in the top left, second line down • Selection of an address to be edited
	<ul style="list-style-type: none"> • Editing the data of the selected data field • To enter unlauded characters and ß
	<ul style="list-style-type: none"> • Doubling the displayed data length
	<ul style="list-style-type: none"> • Cyclic change of the data format of the selected data line to HEX/DEC/ASCII
	<ul style="list-style-type: none"> • Start of reading data from the data carrier
	<ul style="list-style-type: none"> • Start writing data to the data carrier
	<ul style="list-style-type: none"> • Interruption of data carrier communication in all operating modes • Jump back to the higher level screen • Take back data input and display previous value • Delete a pending fault signal
	<ul style="list-style-type: none"> • The selected setting is accepted

- Each keystroke is confirmed by a beep.
- Input of an invalid key or a fault signal is indicated by a double beep.

You can use the screen keyboard of the to enter letters and numbers. There are Touchscreen buttons permanently printed in the Graffiti area of the that will allow you to bring up the screen keyboard for this purpose.

Symbol	Function
	<ul style="list-style-type: none"> • Brings up screen keyboard for letters
	<ul style="list-style-type: none"> • Brings up screen keyboard for numbers

7 DATA MODE operating mode

7.1 Layout of the data field display

The memory content of a data carrier can be read and displayed, edited and written back to the data carrier again in the DATA FIELD operating mode.

DATA FIELD 1	
ADDRESS (H)	DATA(H)
0 0 0 0 H	0 0
0 0 0 1 H	0 0
0 0 0 2 H	0 0
0 0 0 3 H	0 0
0 0 0 4 H	0 0
0 0 0 5 H	0 0
0 0 0 6 H	0 0
0 0 0 7 H	0 0

ADDR EDIT LEN CONV

READ WRITE CE SET

Figure 7.1: Data field display

DATA FIELD 1 is displayed in the basic setting.

Key	Function
CE	Back to the OPERATING MODE screen.
MODE	Back to the OPERATING MODE screen.

7.2 Changing the data format and data length

You can adjust the data format and data length of the data display with SETTINGS. These parameters can also be changed in operation with the CONV key.

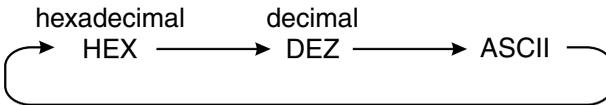


Figure 7.2: Changing the data format

Key	Function
CONV	The display of the data format changes between hexadecimal (H), decimal (D) and ASCII (A).
CE	Back to the OPERATING MODE screen.
MODE	Back to the OPERATING MODE screen.

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The data format can only be switched if the currently set data length allows it.

Note

You can double the data length that is displayed by pressing the **LEN** key. If a data length was set in the default settings that is not a multiple of 2, this data length will be displayed in addition.

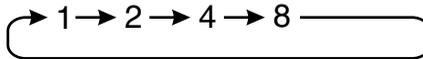


Figure 7.3: Data length in bytes for hexadecimal display

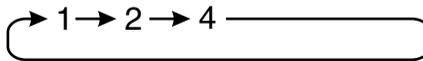


Figure 7.4: Data length in bytes for decimal display

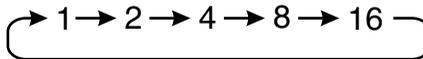


Figure 7.5: Data length in bytes for display in ASCII

Key	Function
LEN	Doubling the displayed data length
CE	Back to the OPERATING MODE screen.
MODE	Back to the OPERATING MODE screen.

7.3 Selecting a data field

DATA FIELD 1 through DATA FIELD 6 can be directly selected with the ◀ and ▶ keys. The corresponding data content is immediately read and displayed from the data carrier.



Figure 7.6: Selection of data field

Key	Function
◀	The previous data field is read and displayed by the data carrier.
▶	The next data field is read and displayed by the data carrier.
<input type="button" value="CE"/>	Back to the OPERATING MODE screen.
MODE	Back to the OPERATING MODE screen.

7.3.1 Select address

You can place an address in the current display by scrolling or entering directly in the address area of the selected data field.

Tapping on **[ADDR]** activates the ADDRESS INPUT operating mode. The cursor is positioned on the address in the first line. Tapping on this address in the display will allow you to enter an address within the current data field in the display with the screen keyboard.

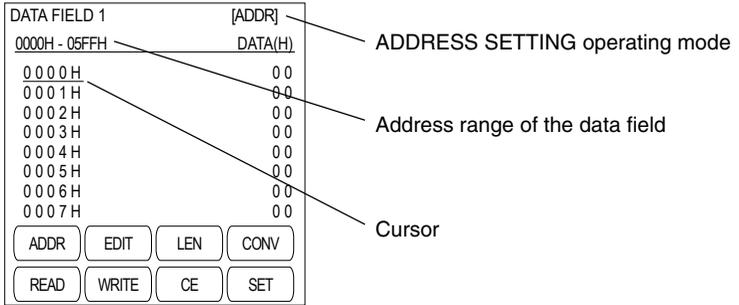


Figure 7.7: ADDRESS SETTING screen

As long as the cursor is displayed, the data format of the addresses can be changed.

Key	Function
◆	Move the displayed data field forward or backward by one line.
[ADDR]	Input of an address with the screen keyboard.
[CONV]	The display of the data format changes between hexadecimal (H), decimal (D) and ASCII (A).
[CE]	Exit the ADDRESS INPUT operating mode.
MODE	Back to the OPERATING MODE screen.

7.4 Reading data

A data carrier can be read by directly selecting another data field (see section 7.3) or by tapping on . "DATA CARRIER COMMUNICATION" appears on the display in the last line.

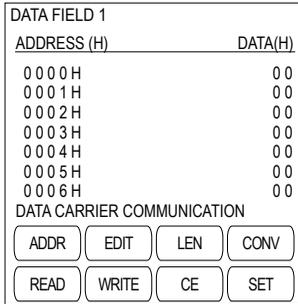


Figure 7.8: Read data

Key	Function
	Start read.
	Cancel read.
MODE	Back to the OPERATING MODE screen.



Cancel by tapping on  may last for a short time.

Note

7.4.1 Successful read

If the read process was completed normally, data will be transferred to the (the "PROCESSING DATA" message) and shown on the display in the preset data format.

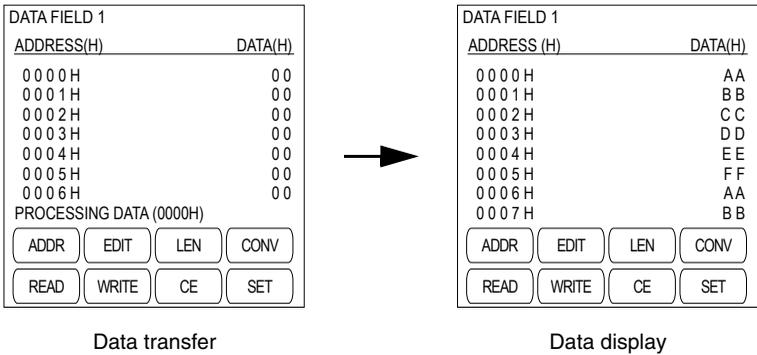


Figure 7.9: Display during successful read

7.4.2 Incorrect read

If a fault occurs, a fault message and an error number are displayed instead of "PROCESSING DATA".

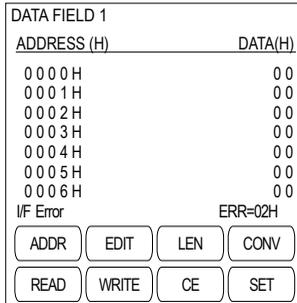


Figure 7.10: Incorrect read

Key	Function
<input type="button" value="READ"/>	Start read again.
<input type="button" value="CE"/>	Cancel read.
MODE	Back to the OPERATING MODE screen.



Note

Cancel by tapping on may last for a short time.

The memory content of the is displayed again.

7.5 Editing and changing data

Memory content can be edited line by line in the address area of the selected data field.

Tapping on **[EDIT]** will activate the EDITOR operating mode and the cursor will be positioned on the memory content of the first address line.

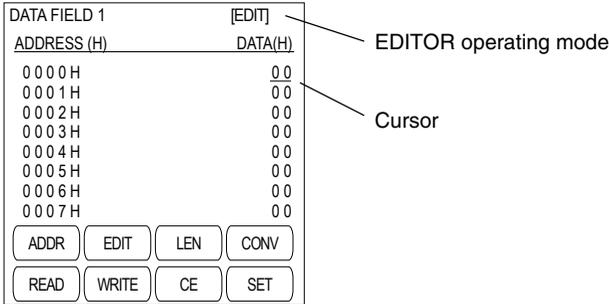


Figure 7.11: EDITOR screen

You can select the desired line by tapping on the data in the display or with the scroll bar **◆**.

Tapping on the content in the display will allow you to enter a new value with the screen keyboard.

As long as the cursor is displayed, the data format and the data length of the displayed memory content can be changed.

Key	Function
◆	The cursor moves down or up and the line to be edited can be selected.
[EDIT]	Input of memory content with the screen keyboard.
[LEN]	Doubling the displayed data length
[CONV]	The display of the data format changes between hexadecimal (H), decimal (D) and ASCII (A).
[CE]	Exit the EDITOR operating mode.
MODE	Back to the OPERATING MODE screen.

7.6 Writing data

You can start the write process by tapping on . First the data is transferred in the .

DATA FIELD 1			
ADDRESS(H)	DATA(H)		
0 0 0 0 H	0 0		
0 0 0 1 H	0 0		
0 0 0 2 H	0 0		
0 0 0 3 H	0 0		
0 0 0 4 H	0 0		
0 0 0 5 H	0 0		
0 0 0 6 H	0 0		
PROCESSING DATA (0000H)			
			
			

Figure 7.12: Start of the write process

Key	Function
	Start write process.
	Cancel write process.
MODE	Back to the OPERATING MODE screen.

7.6.1 Successful write

If the read process was completed normally, data will be transferred from the to the data carrier. The data display is shown on the screen again.

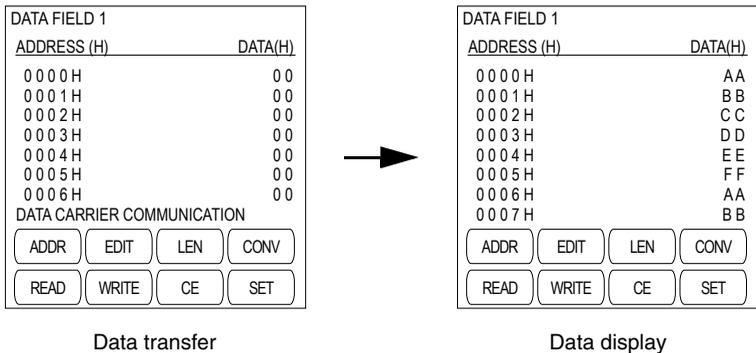


Figure 7.13: Display during write

7.6.2 Incorrect write

If a fault occurs, a fault message and an error number are displayed instead of "DATA CARRIER COMMUNICATION".

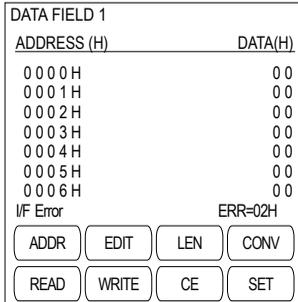


Figure 7.14: Incorrect write

Key	Function
	Start write process again.
	Cancel write process.
MODE	Back to the OPERATING MODE screen.



Cancel by tapping on may last for a short time.

Note

8 DEFAULT SETTINGS operating mode

The default settings for the 6 possible data fields can be made in this menu item. You can change

- the memory range
 - the data format that is displayed
 - the number of bytes per line
 - the data carrier identification process
 - the verification
 - the assigned ID code and
 - a separate name
- for each data field.

8.1 Selecting a data field

First select one of the existing data fields.

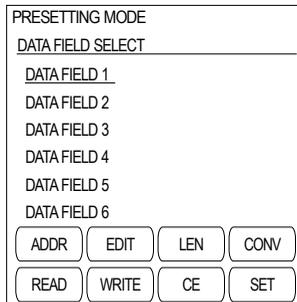


Figure 8.1: SELECT DATA FIELD screen

The basic setting is DATA FIELD 1.

Key	Function
◀▶	The cursor moves up or down.
[SET]	The selected menu item is confirmed and the cursor jumps to the next display.
[CE]	Back to the OPERATING MODE screen.
MODE	Back to the OPERATING MODE screen.

8.1.1 Memory range setting

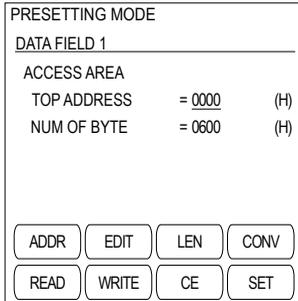


Figure 8.2: Memory range setting

Depending on the data field selected, the basic setting is:

DATA FIELD 1	0000 (H) ...05FF (H)	(1536 bytes)
DATA FIELD 2	0600 (H) ...0BFF (H)	(1536 bytes)
DATA FIELD 3	0C00 (H) ...11FF (H)	(1536 bytes)
DATA FIELD 4	1200 (H) ...17FF (H)	(1536 bytes)
DATA FIELD 5	1800 (H) ...1D7F (H)	(1536 bytes)
DATA FIELD 6	8000 (H) ...807D (H)	(126 bytes)

To change the underlined numeric value, open the screen keyboard or tap on or or touch the value on the screen. Then enter the desired new value.

Key	Function
	The cursor moves up or down.
	The display of the data format changes between hexadecimal (H) and decimal (D).
	Input of other values with the screen keyboard.
	The values that are entered are confirmed and the cursor jumps to the next display.
	Back to the previous display. The values that were already entered will be retained.
MODE	Back to the OPERATING MODE screen.

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8.1.2 Adjusting the data format

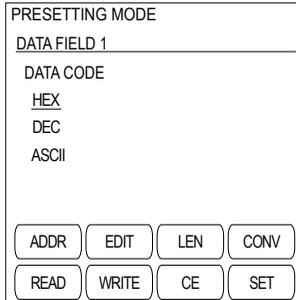


Figure 8.3: Adjusting the data format
The basic setting is HEX (hexadecimal).

Key	Function
⬆ ⬇ ⬆	The cursor moves up or down.
SET	The selected menu item is confirmed and the cursor jumps to the next display.
CE	Back to the previous display. The value that was already entered will be retained.
MODE	Back to the OPERATING MODE screen.

8.1.3 Data length setting

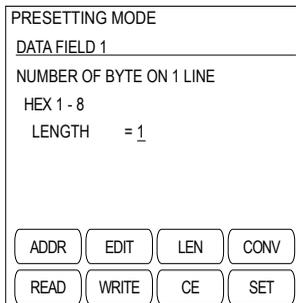


Figure 8.4: Data length setting
Depending on the data format, the basic setting is:

HEX: 1 (possible data length: 1 ... 8)
 DEC: 1 (possible data length: 1 ... 4)
 ASCII: 1 (possible data length: 1 ... 16)

Key	Function
	Input of other values with the screen keyboard.
SET	The value that was entered is confirmed and the cursor jumps to the next display.
CE	Back to the previous display. The value that was already entered will be retained.
MODE	Back to the OPERATING MODE screen.

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8.1.4 Setting for the data carrier identification process

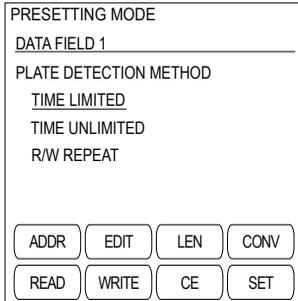


Figure 8.5: Setting for the data carrier identification process

The basic setting is IMMEDIATE. This corresponds to performing the command immediately. If there is no data carrier in the antenna area, a fault is reported.

With automatic data carrier recognition the command will continue to be executed until a data carrier in the antenna range can be read.

Read is always in cyclic operating mode.

Key	Function
◆	The cursor moves up or down.
SET	The selected menu item is confirmed and the cursor jumps to the next display.
CE	Back to the previous display.
MODE	Back to the OPERATING MODE screen.

8.1.5 Verification setting

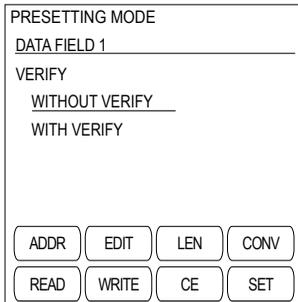


Figure 8.6: Verification setting

The basic setting is WITHOUT VERIFICATION. This corresponds to a process without testing for read or write.

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If the setting is WITH VERIFICATION, data that is read or written will be read again for verification.

Key	Function
◆	The cursor moves up or down.
SET	The selected menu item is confirmed and the cursor jumps to the next display.
CE	Back to the previous display.
MODE	Back to the OPERATING MODE screen.

8.1.6 Assignment of the ID code

PRESETTING MODE

DATA FIELD 1

ID-CODE

WITHOUT ASSIGNED

ASSIGNED

ASSIGNED NON-OPERATION

ADDR

EDIT

LEN

CONV

READ

WRITE

CE

SET

Figure 8.7: Assignment of the ID code

The basic setting is WITHOUT ASSIGNMENT. The system works with all data carriers when this setting is selected.

Key	Function
◆	The cursor moves up or down.
SET	The selected menu item is confirmed and the cursor jumps to the next display.
CE	Back to the previous display.
MODE	Back to the OPERATING MODE screen.

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When ASSIGNMENT is selected, the ID code should be entered in the next display. The system will then only communicate with data carriers that have ID codes matching the set value. The basic setting of the ID code is 00000000 (H).

If the EXCLUDING ASSIGNMENT setting is selected, the system will communicate with all data carriers having ID codes that do **not** match the set value.

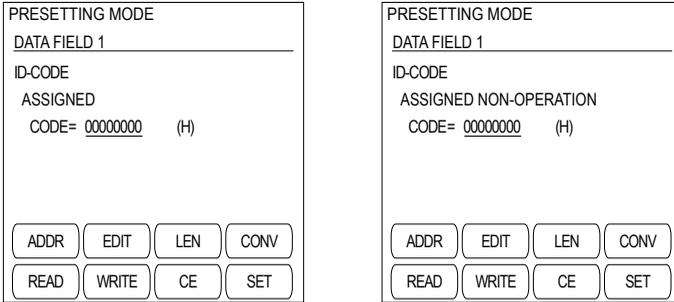


Figure 8.8: Input of the ID code

Key	Function
	Input of other values with the screen keyboard.
	The display of the data format changes between hexadecimal (H), decimal (D) and ASCII (A).
	The value that was entered is confirmed and the cursor jumps to the next display.
	Back to the previous display. The value that was already entered will be retained.
MODE	Back to the OPERATING MODE screen.

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8.1.7 Input of the data field name

Data fields 1 through 6 can be renamed by entering a data field name.

PRESETTING MODE

DATA FIELD 1

DATA FIELD NAME
NAME

> DATA FIELD 1

ADDR

EDIT

LEN

CONV

READ

WRITE

CE

SET

Figure 8.9: Input of the data field name

The basic setting is DATA FIELD 1... DATA FIELD 6.

Key	Function
	Input of other values with the screen keyboard.
	The value that was entered is confirmed and the cursor jumps to the next display.
	Back to the previous display. The value that was already entered will be retained.
MODE	Back to the OPERATING MODE screen.

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DEFAULT SETTINGS operating mode

8.1.8 End of the DEFAULT SETTINGS operating mode

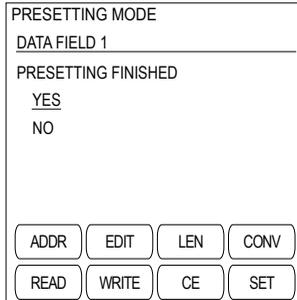


Figure 8.10: End of the DEFAULT SETTINGS operating mode

The basic setting is YES. If you want to set additional data fields, select NO.

Key	Function
◆	The cursor moves up or down.
SET	The selected menu item is confirmed and the cursor jumps to the next display.
CE	Back to the previous display.
MODE	Back to the OPERATING MODE screen.

9 DATA RANGE operating mode

Any memory range can be specified and read by the data carrier in the DATA RANGE operating mode. The starting address and number of bytes of the data range can be specified.

9.1 Selection of the data range

The values for START ADDRESS and NUMBER OF BYTE are 0000 (H) in the basic setting.

SELECTABLE MEMORY AREA			
READ			
ACCESS AREA			
TOP ADDRESS	= 0000	(H)	
NUM OF BYTE	= 0000	(H)	
ADDR	EDIT	LEN	CONV
READ	WRITE	CE	SET

Figure 9.1: DATA RANGE screen

Key	Function
◆	The line to be edited can be selected.
abc 123	Input of other values with the screen keyboard.
CONV	The display of the data format changes between hexadecimal (H) and decimal (D).
SET	The values that are entered are confirmed and the cursor jumps to the next display.
CE	Leave the DATA RANGE operating mode.
MODE	Back to the OPERATING MODE screen.

After the values are confirmed, you will be prompted to press the **READ** key. This will start the read process.

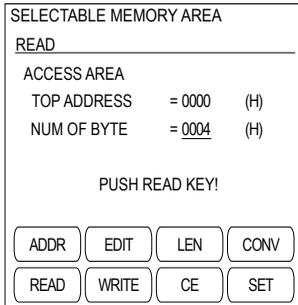


Figure 9.2: Read data

If the read is successful, the selected memory range will be displayed (see section 7.4.1); if the read is unsuccessful, the data content of active memory will be displayed (see section 7.4.2).

9.2 Editing/changing and writing the data range

Operation and display of communication with the data carrier match the description in the DATA FIELD operating mode:

""Editing and changing data" see section 7.5,

""Writing data" see section 7.6.

10 OPTIONS operating mode

You can make the basic settings of the device in the OPTIONS operating mode. These are the starting display, the data sequence that is displayed or the language in the display. In addition, you can bring up the internal program version or reset the device to the original basic setting.

10.1 Select menu item

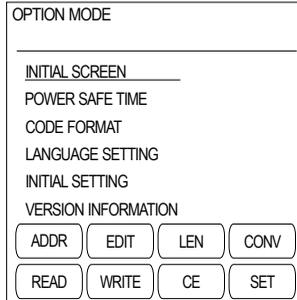


Figure 10.1: OPTIONS screen

The basic setting is SET START DISPLAY.

Key	Function
◆	The cursor moves up or down.
SET	The selected menu item is confirmed and the cursor jumps to the next display.
CE	Back to the OPERATING MODE screen.
MODE	Back to the OPERATING MODE screen.

10.2 SET START DISPLAY

You can use this command to specify the display that will appear after you turn on the device.

INIT SCREEN SET			
MODE SELECT			
DATA FIELD 1			
DATA FIELD 2			
DATA FIELD 3			
DATA FIELD 4			
DATA FIELD 5			
DATA FIELD 6			
ADDR	EDIT	LEN	CONV
READ	WRITE	CE	SET

Figure 10.2: SET START DISPLAY screen

The basic setting is OPERATING MODE.

Key	Function
◆	The cursor moves up or down.
SET	The value that was entered is confirmed and the program jumps back to the OPERATING MODE screen.
CE	Back to the OPTIONS screen.
MODE	Back to the OPERATING MODE screen.

10.3 Adjusting the SHUT-OFF TIME

You can use this command to adjust the time in increments of minutes after which read/write readiness will switch off automatically if no key is pressed.

OPTION MODE			
POWER SAVE TIME			
TIME	=	<u>3</u>	(minutes)
ADDR	EDIT	LEN	CONV
READ	WRITE	CE	SET

Figure 10.3: SHUT-OFF TIME screen

The basic setting is 3 minutes.

Key	Function
$\overset{?}{\underset{?}{3}}$	Enter the number of minutes. Possible values are 1, 2 or 3 minutes
SET	The value that was entered is confirmed and the program jumps back to the OPERATING MODE screen.
CE	Back to the OPTIONS screen.
MODE	Back to the OPERATING MODE screen.



Note

Set the shut-off time of read/write readiness to the same value or a shorter value than the shut-off function (auto off) to make it work.

10.4 Select DATA SEQUENCE display

You can use this setting to switch the high-order byte with the low-order byte in the data display. It is also possible to completely replace four bytes in the display.

OPTION MODE			
CODE FORMAT			
NORMAL	:	B0-B1-B2-B3	
CHANGED	:	B1-B0-B3-B2	
REVERSED	:	B3-B2-B1-B0	
ADDR	EDIT	LEN	CONV
READ	WRITE	CE	SET

Figure 10.4: DATA SEQUENCE screen

The basic setting is NORMAL.

Key	Function
◆	The cursor moves up or down.
SET	The value that was entered is confirmed and the program jumps back to the OPERATING MODE screen.
CE	Back to the OPTIONS screen.
MODE	Back to the OPERATING MODE screen.

10.5 Select LANGUAGE

This setting can be used to select the user language. All displays and menus on the screen will be shown in the selected language.

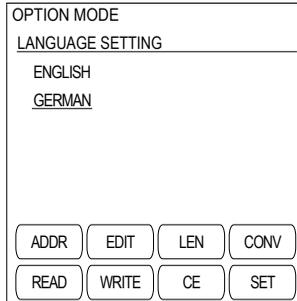


Figure 10.5: LANGUAGE screen

The basic setting is the currently set language GERMAN.

Key	Function
◆	The cursor moves up or down.
SET	The value that was entered is confirmed and the program jumps back to the OPERATING MODE screen.
CE	Back to the OPTIONS screen.
MODE	Back to the OPERATING MODE screen.

10.6 Create BASIC SETTING

Selecting this command resets the device to its default setting.

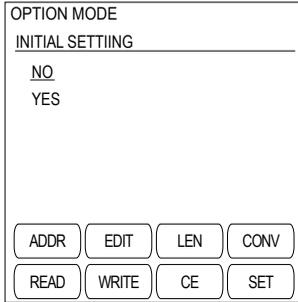


Figure 10.6: DEFAULT SETTING screen

The basic setting is NO.

Key	Function
◆	The cursor moves up or down.
[SET]	The value that was entered is confirmed, the device is switched back to the standard setting, and the OPERATING MODE screen is displayed.
[CE]	Back to the OPTIONS screen.
MODE	Back to the OPERATING MODE screen.

10.7 Display PROGRAM VERSION

You can use this setting to query the software version to distinguish between different software levels.



Figure 10.7: PROGRAM VERSION screen

Pressing any key will take you back to the operating mode setting.

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11 Technical data

General data	
Working frequency	2.45 GHz ± 200 kHz
Radiated power	1.54 mW (1.9 dBm)
Read distance	0 ... 100 mm
Write distance	0 ... 100 mm
Displays/operating elements	
Display	LCD display, monochrome
Keyboard	Touchscreen
LED Tx	Communication active
LED OK	Power-on
Electrical data	
Power supply	NiMH battery Battery charger included with delivery
Ambient conditions	
Ambient temperature	5 ... 40 °C (278 ... 313 K)
Storage temperature	20 ... 40 °C (293 ... 313 K)
Klimatische Bedingungen	Humidity max. 20 ... 90 %
Mechanical data	
Mass	1370 g
Dimensions	100 mm x 272 mm x 38 mm (H x B x T) (without antenna cable)
Design	Manual device

11.1 Dimensions

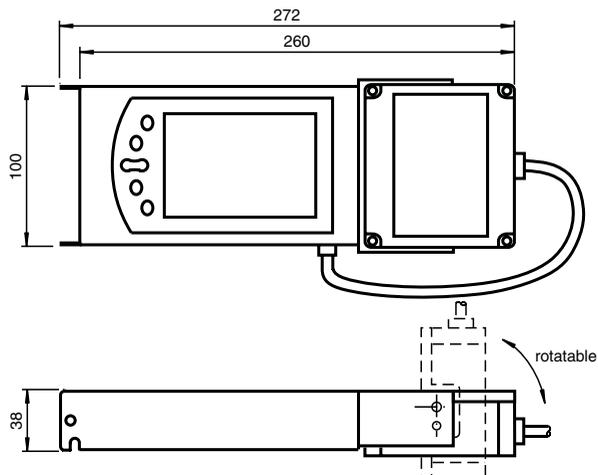


Figure 11.1: External dimensions

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ASCII table

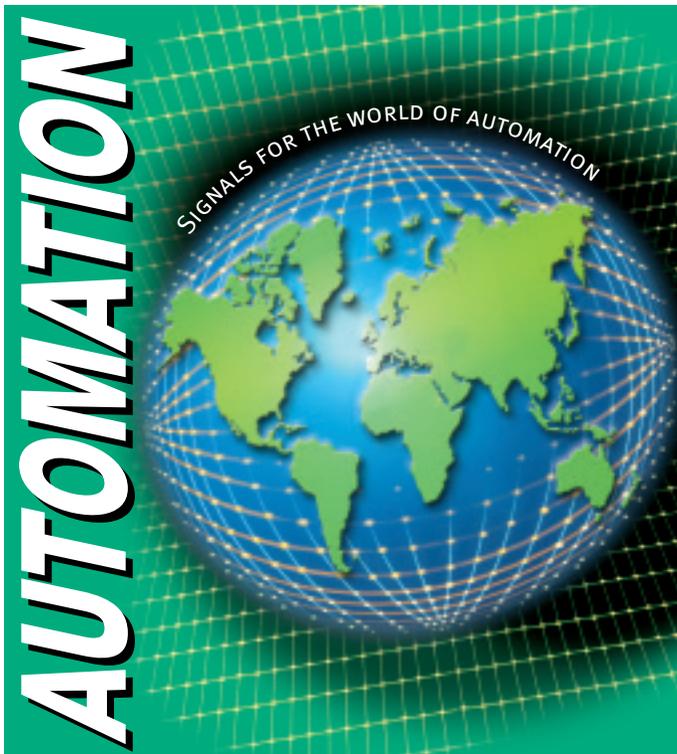
12 ASCII table

hex	dec.	ASCII									
00	0	NUL	20	32	Space	40	64	@	60	96	`
01	1	SOH	21	33	!	41	65	A	61	97	a
02	2	STX	22	34	"	42	66	B	62	98	b
03	3	ETX	23	35	#	43	67	C	63	99	c
04	4	EOT	24	36	\$	44	68	D	64	100	d
05	5	ENQ	25	37	%	45	69	E	65	101	e
06	6	ACK	26	38	&	46	70	F	66	102	f
07	7	BEL	27	39	'	47	71	G	67	103	g
08	8	BS	28	40	(	48	72	H	68	104	h
09	9	HT	29	41	)	49	73	I	69	105	i
0A	10	LF	2A	42	*	4A	74	J	6A	106	j
0B	11	VT	2B	43	+	4B	75	K	6B	107	k
0C	12	FF	2C	44	,	4C	76	L	6C	108	l
0D	13	CR	2D	45	-	4D	77	M	6D	109	m
0E	14	SO	2E	46	.	4E	78	N	6E	110	n
0F	15	SI	2F	47	/	4F	79	O	6F	111	o
10	16	DLE	30	48	0	50	80	P	70	112	p
11	17	DC1	31	49	1	51	81	Q	71	113	q
12	18	DC2	32	50	2	52	82	R	72	114	r
13	19	DC3	33	51	3	53	83	S	73	115	s
14	20	DC4	34	52	4	54	84	T	74	116	t
15	21	NAK	35	53	5	55	85	U	75	117	u
16	22	SYN	36	54	6	56	86	V	76	118	v
17	23	ETB	37	55	7	57	87	W	77	119	w
18	24	CAN	38	56	8	58	88	X	78	120	x
19	25	EM	39	57	9	59	89	Y	79	121	y
1A	26	SUB	3A	58	:	5A	90	Z	7A	122	z
1B	27	ESC	3B	59	;	5B	91	[	7B	123	{
1C	28	FS	3C	60	<	5C	92	\	7C	124	|
1D	29	GS	3D	61	=	5D	93]	7D	125	}
1E	30	RS	3E	62	>	5E	94	^	7E	126	~
1F	31	US	3F	63	?	5F	95	_	7F	127	DEL

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