Manual

IPT-HH6, IPT-HH9

Hand read/write devices
with PSION-Workabout
program description

$C \epsilon$

PEPPERL+FUCHS

Contents

1   Product overview read/write devices

IPT-HH6

The hand read/write device IPT-HH6 consists of a read/write device IPH-HH6-R5 and the PSION-Workabout program. Technically, the device IPH-HH6-R5 corresponds to the read/write device IPH-FP5-R2/R4.

IPT-HH9

The hand read/write device IPT-HH9 consists of a read/write upper component and the PSION-Workabout program. Technically, the read/write upper component corresponds to the read/write device IPH-350-R2/R5.

IPT-HH4*

The hand read/write device IPT-HH4 consists of a read/write device IPH-350-R2/R5 and the PSION-Workabout program.

*The device IPT-HH4 is no longer available. Please order IPT-HH6 or IPT-HH9.

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2 Program description

The PSION-Workabout program can be used to address the IPH-FP5-R2/R5, IPH-HH6-R2/R5, IPH-FP5-R2/R4 and IPH-350-R2/R5 read/write heads. However, the R2 versions with serial interfaces have to be powered by an external supply voltage. The models equipped with TTL interfaces (R5) obtain their voltage supply via the TTL port of the PSION-Workabout. So as not to load the PSION batteries unnecessarily, the TTL port is only enabled when data is being transferred to the read/write head. This results in a delay of less than 1 second when read and write operations are carried out.

Once the program has started, it carries out an automatic read head detection sequence. This detection sequence cannot be cancelled. Due to the maximum response times of the ident system, the read head detection can take up to 15 seconds.

The program is controlled by a window-orientated user interface that is described in the following sections.

2.1 Main window

The main window contains all the control elements required to read data from the read/write head and to transfer data to it.
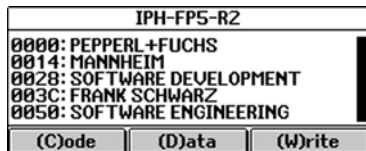

Figure 1:   Overview

The upper portion of the main window contains the type designation of the connected read/write head. The 5 lines of text below are available for the presentation of data. If more than 5 lines of text are required, then the program introduces a scroll bar on the right edge of the window. An arrow on the scroll bar pointing downwards indicates that further lines of text can be brought into the display area. The up and down arrow keys are used to control the contents of the display, whilst the actual key in use is imaged by the scroll bar arrow. The user can delete the contents of the display screen by means of the delete key.

The three most important functions of the program are started by means of the tool bar at the lower edge of the screen:

1. **(C)ode**   The program attempts to read the ID code of a code or data carrier in read range. The result is presented in the display area.

2. **(D)ata**   The program reads and displays the data from a data carrier in read range.

3. **(W)rite**   The program writes the data range of a data carrier in read range. The data can be input via the read/write head - "Write data" menu item.

2.2 Menu bar

Due to the allocation of space, the menu bar is not always visible, but it can be selected by actuating the menu key. The menu items can be selected via the arrow keys and the enter key. In addition, each menu item can be called up by using a short cut. The shortcut always consists of the PSION key plus an alphanumeric key.

Almost all menu items open dialogues. The arrow keys can be used to navigate within the dialogues. The enter key is used to exit a dialogue, in which case all changed data is saved. The on/esc key cancels the editing. Changed data is lost. All data that is set in the dialogues is permanently saved in an initialisation file.

The various functions which can be called up via the menu bar are described in greater detail in the following sections.

2.2.1 Read/write head

All the functions used to set the read and write parameters are summarised in this sub-section.
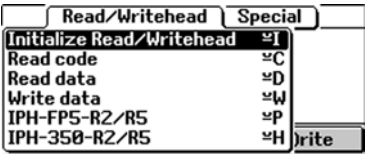

Figure 2:   "Read/write head" menu

Read/write head initialisation (PSION+"I")

This function starts the read/write head detection sequence. The detection sequence first attempts to initialise type IPH-FP5-R2/R5. If this is unsuccessful, initialisation of type IPH-HH6-R2/R5 or type IPH-350-R2/R5 is started. The detection sequence can last up to 15 seconds, since the maximum response times of the system must be taken into account. On successful initialisation of an ident system, the program displays the information relevant to the particular version of the read/write head. The following figures show the designated status for each of the read/write heads.
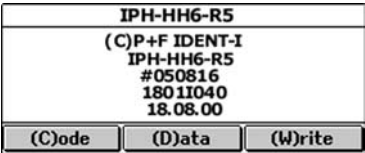

Figure 3:   Message, version IPH-FP5-R2

Figure 4:   Message, version IPH-HH6-R5

```
         IPH-350-R5 (STK3)
         IPH-350-R5 (STK3)

         Hardware Version 02
         Software Version 03

    (C)ode     (D)ata     (W)rite
```

Figure 5:   Message, version IPH-350-R5

Read code (PSION+"C")

```
            IPH-FP5-R2

          Read fixcode
     ▪Codetag    ◄Auto Ident►
     ·Dataformat   HEX

    (C)ode     (D)ata     (W)rite
```
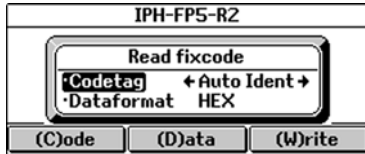
Figure 6:   "Read code" dialogue

Call up of the "Read code" menu item opens a dialogue in which the user can set the data carrier type and the method of presentation of the data. Closing this dialogue starts a read sequence. The parameters input here are also used by the program on call-up of the "Read code" function via the "(C)ode" button.

If the code carrier is set to "Auto Ident", an arbitrary data carrier, supported by the read/write head, can be read. The user can choose between two data formats: HEX and ASCII. In the hexadecimal representation, each byte read is output as a two digit hexadecimal number. The ASCII format contains the appropriate ASCII characters. Figures 7 and 8 show the ID-Code of a type IPC03 tag in hexadecimal and decimal representation, respectively.

```
            IPH-FP5-R2
    0000: 32 70 00 00



    (C)ode     (D)ata     (W)rite
```

Figure 7:   ID-Code in hexadecimal representation

```
            IPH-FP5-R2
    0000: 2p↵



    (C)ode     (D)ata     (W)rite
```

Figure 8:   ID-Code in decimal representation

Read data (PSION+"D")

The "Read data" menu item opens, as in the case of "Read code", a dialogue in which the parameters data carrier, data format, start address and length of the data to be read can be set.
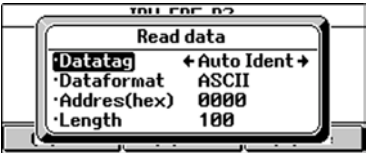

Figure 9:   "Read data" dialogue

For the "Data format" parameter, as for "Read code", the user can choose between ASCII and HEX (see figures 10 and 11). The read process start address must be given in hexadecimal format. The length of the data to be read is input as a decimal number. It should be noted, that the sum of the start address plus the data length must not be greater than 116. Where necessary, the program corrects the values for the read sequence.
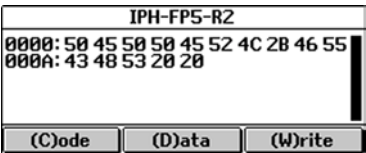

Figure 10:   Data in hexadecimal format

Figure 11:   Data in decimal format

Write data (PSION+"S")

The user specifies the data that is to be written in a data carrier, via the "Write data" menu item. The data inserted here is used by the application on call-up of the "Write data" function, using the "(W)rite" button.
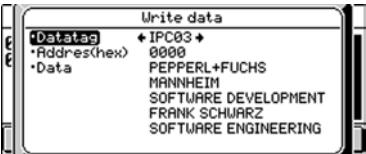

Figure 12:   "Write data" dialogue

The start address corresponds with the address of the "Read data" dialogue. The length of the data to be written is calculated automatically by the program. The user can input up to 116 characters in 6 rows. 20 characters can be entered in the first 5 lines and 16 in the last line. Lines that are not completely filled are completed by adding spaces (ASCII 32). The start address plus the number of characters to be written must not exceed 116. Input characters that have an address above 116 (0074 HEX) are ignored by the program.

- IPH-FP5-R2/R5   PSION+„P"
  IPH-HH6-R2/R5   PSION+„P"
- IPH-350-R2/R5   PSION+„H"

By using these two menu items, the application can be compressed into one read head mode. The program attempts to initialise the corresponding read/write head. However, it switches to the mode, even if no response is obtained from the read/write head. The "initialise read/write head" function blocks the communication with a connected read/write head if it has been unsuccessful in initialising a type.

2.2.2 Special functions

All program service functions that are not directly related to read/write head operation are summarised under the heading "Special".

Figure 13: "Special" menu

Info about (PSION+"A")

The menu item "About" opens a dialogue containing software version information and copyright details. It is otherwise of no significance to the operation of the program.

Figure 14: "About" dialogue

Options (PSION+"O")

Figure 15: "Options" dialogue

In this version of the program, the only choice of languages is english or german. The language selected is effective immediately the dialogue is closed. "Port" is used to specify the serial interface for communication with the read/write head. The program can function with either the TTL interfaces or serial interfaces of the PSION-Workabout. The TTL interfaces are only enabled during the communication cycles, since the power supply for the read/write head is also secured via this interface.

One Company, Two Divisions.
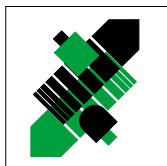
Factory Automation Division
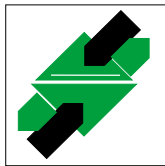
Product Range

- Digital and analogue sensors
- in different technologies
    - Inductive and capacitive sensors
    - Magnetic sensors
    - Ultrasonic sensors
    - Photoelectric sensors
- Incremental and absolute rotary encoders
- Counters and control equipment
- Identification Systems
- AS-Interface

Areas of Application

- Machine engineering
- Conveyor or transport
- Packaging and bottling
- Automotive industry

Process Automation Division

Product Range

- Signal conditioners
- Intrinsically safe interface modules
- Remote Process Interface (RPI)
- Intrinsically safe field bus solutions
- Level control sensors
- Process measuring and control systems engineering at the interface level
- Intrinsic safety training

Areas of Application

- Chemical industry
- Industrial and community sewage
- Oil, gas and petrochemical industry
- PLC and process control systems
- Engineering companies for process systems

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