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Software Version 04.03.16

Datafox accompanying booklet

Flexible data acquisition with method



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The software accompanying booklet is an addition to the current manuals. It describes new functionality available with this software release.

The following figure shows, for which devices the following section applies – if no additional information is present there.

The affected individual devices are marked using the ☒ symbol.

			 4.3/4.6	 2.8/3.5	 Universal	 Inloc	 Mobil Box	 IO-Box	 Oneloc			 EVO-PC
☒	☒	☒	☒	☒	☒	☒	☒	☒	☒			☒

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1. Introduction

We appreciate your interest in the extended functionality of the new software release.

We aim to provide a quick start into the functional enhancements of firmware version 04.03.15 by providing this document.

The most recent software accompanying booklet was associated to release 04.03.15 – you can access it through the Datafox Website → “Download” → “Downloads Datafox Software” → “Download – Software Master IV – Hardware Version 4”.

1.1. Overview

With this firmware release we extended the functionality provided by our device generation V4.

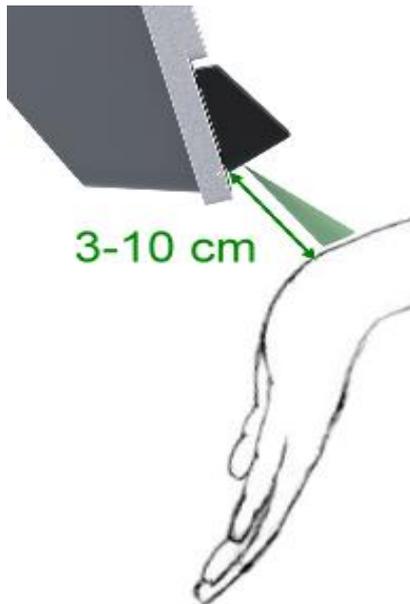
The most prominent feature is:

- [Fever measurement](#)

2. Fever measurement on the wrist

The temperature measurement option on Datafox terminals measures the skin temperature behind the wrist at a distance of 3-10 cm. This measurement can give an indication of whether the person at the terminal may have a fever. Fever is often an early sign of contagious infectious diseases, as it is the case with Covid-19.



Attention:



The temperature measurement of the terminals is only an indication. If an increased temperature is detected here, this must be repeated by another measurement with a medical thermometer.

Which steps are then taken in the individual case must be regulated by the operator, Datafox only offers the technical possibility to measure the skin temperature.

Attention:



As with all infrared thermometers, only the surface temperature of the skin is measured. This provides a good indication of the body temperature inside.

However, the temperature can also deviate significantly due to external influences, for example:

- Cold outside temperature
- Resting the arms on cold surfaces
- Cold hands
- Poor blood circulation
- Solar radiation
- Sweat

It is recommended to have a few minutes of acclimatisation before the measurement so that the external influencing factors are reduced.

2.1. Operating sequence of the measuring process

To make operation easier for the user, instructions are given on the display and an LED is also used in the sensor.

1. Start of the procedure by the field function.
2. Notice on the display to hold the wrist under the sensor.
3. The LED flashes. The light indicates where the measurement will take place.
4. When the wrist is close enough to the sensor, ideally 3-10 cm, the LED lights up continuously. At a greater distance it flashes slowly, at a smaller distance it flashes quickly, accompanied by a rapid beep.
5. The measurement takes place and lasts about 2-3 seconds. The arm should be held still during this time.
6. The end of the measurement is signalled by a short beep and the LED switching off.
7. The measured value is shown on the display in different colours depending on the status of the result, see table below.

2.2. Results of the measurement

The temperature measurement can be integrated into the booking procedure on the unit via a field function. The temperatures described are the default values, they can be adjusted in the field function

Based on the measured temperature, 4 result states are determined:

Status	Range	Colour	Description
1	< 30,0°C	Blue	The temperature is too low, it should not be a human body temperature. Display of the temperature value in blue.
2	30,0°C bis 37,9°C	Green	Body temperature is fine.
3	38,0°C bis 42,0°C	Red	The temperature indicates a fever.
4	> 42,0°C	Purple	The temperature is too high, it should not be a human body temperature.

Either the temperature value itself can be used for further processing. The status is also available and facilitates conditional jumps in the further input chain.

Result status of the evaluation:

In addition to the measured value, the field function provides a corresponding "result status of the evaluation". This can be used in the further course of the input chain in input chain fields to display information messages or to perform other actions (e.g. green or red light).

The value of the result status can be assigned to a record description field or also to a "global variable" for a subsequent evaluation.

2.2.1. Description of the field function

Input Jumps

A function for field and/or GV execute assignment

Name of the field query: Fever measur...

Text in row 4 of the display: Name of field

field name, in accordance: Temp

Field function: Perform fever control

Temperatur-Messwert der Fieberkontrolle

Write value in global variable: GV: Temp

Measuring unit: Celsius, Fahrenheit

Measuring range min. 30.0 °C max. 42.0 °C Fever from 38.0 °C

Display of the measured value in the messages.
 Repeatable after a valid measurement.
 Repeatable after an invalid measurement.

Result status of the evaluation

Write to record field: not selected

Write to global variable: GV: Value

With the new field function, it is possible to carry out a temperature measurement. At the same time, a limit value can be set, which is then used for evaluation.

The measured temperature can be displayed in a **GV** and saved in a **Data set**

Setting range for the result evaluation.

Werte des Ergebnisstatus

1 = Messwert unterschreitet die Minimaltemperatur
 2 = Messwert liegt im Normalbereich
 3 = Messwert liegt im Fieberbereich
 4 = Messwert überschreitet die Maximaltemperatur

If the result of the evaluation is to be saved in a GV, you can select it here.

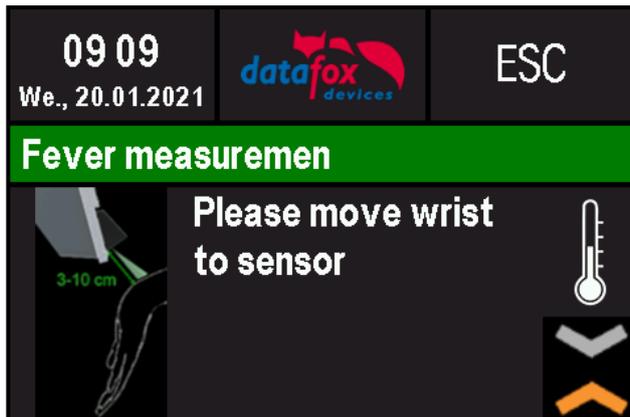
If the result of the evaluation is to be saved in a data record, you can select the corresponding data field here.

The measured temperature is stored in the record description field "Temperature" after successful completion of the function in this example.

The following settings are made in the "Temperature measured value of fever control" area:

- The measured temperature can be written to a "Global Variable".
- The unit of measurement can be selected between Celsius and Fahrenheit, and the measured value is then displayed accordingly. The unit is also written into the record description field and possibly into the "Global Variable".
- The valid measuring range can be adjusted within its limits if necessary. Below 30°C and above 42°C it is to be assumed that no valid body temperature was measured. Elevated temperature and thus suspected fever is indicated from 38.0°C. Which status value is assigned to the result depends on these limits and has already been explained above.
- After a valid or only after an invalid measurement, a query can be activated to be able to repeat the measurement. This gives the user the possibility to perform measurements again by one or more repetitions, e.g. if there were still clothes in the measuring range.

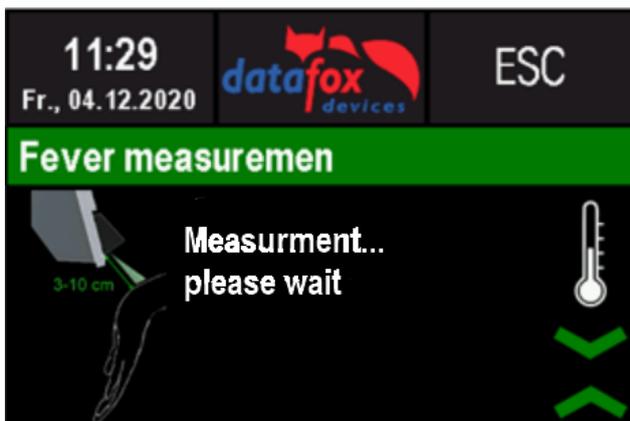
2.2.2. Operation on the unit

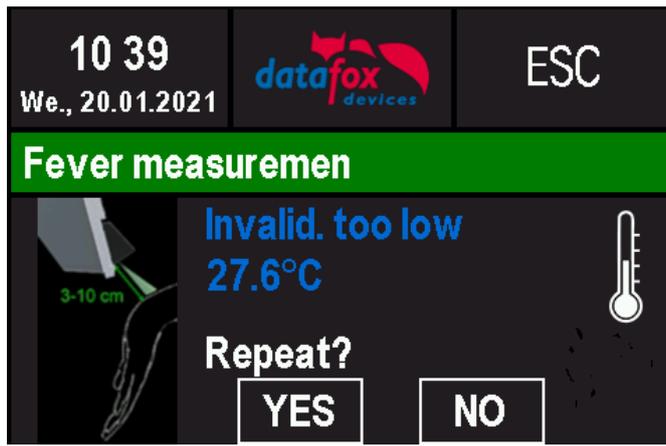
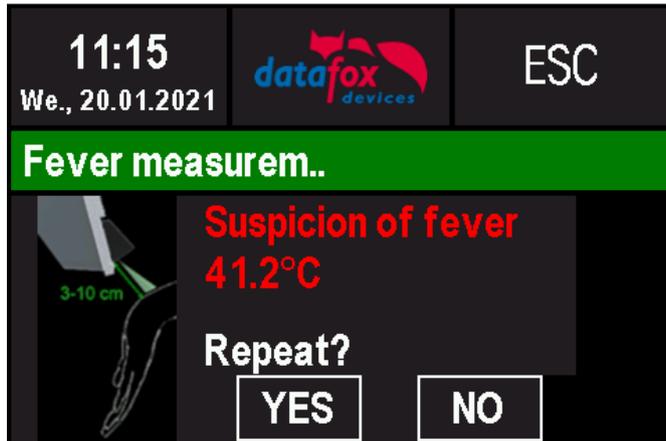


In this case the wrist is **too far** from the sensor.

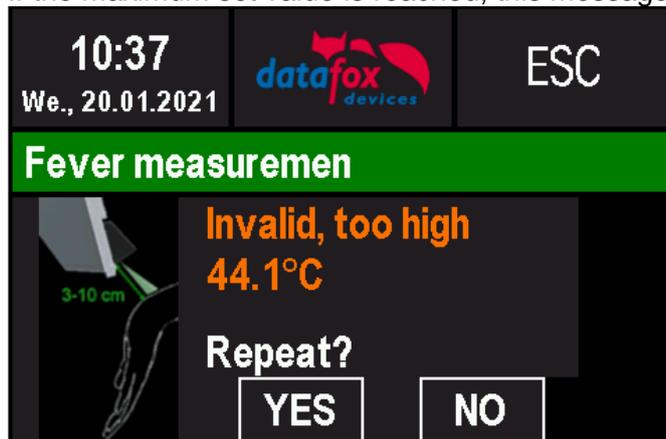


In this case the wrist is **too close** to the sensor.





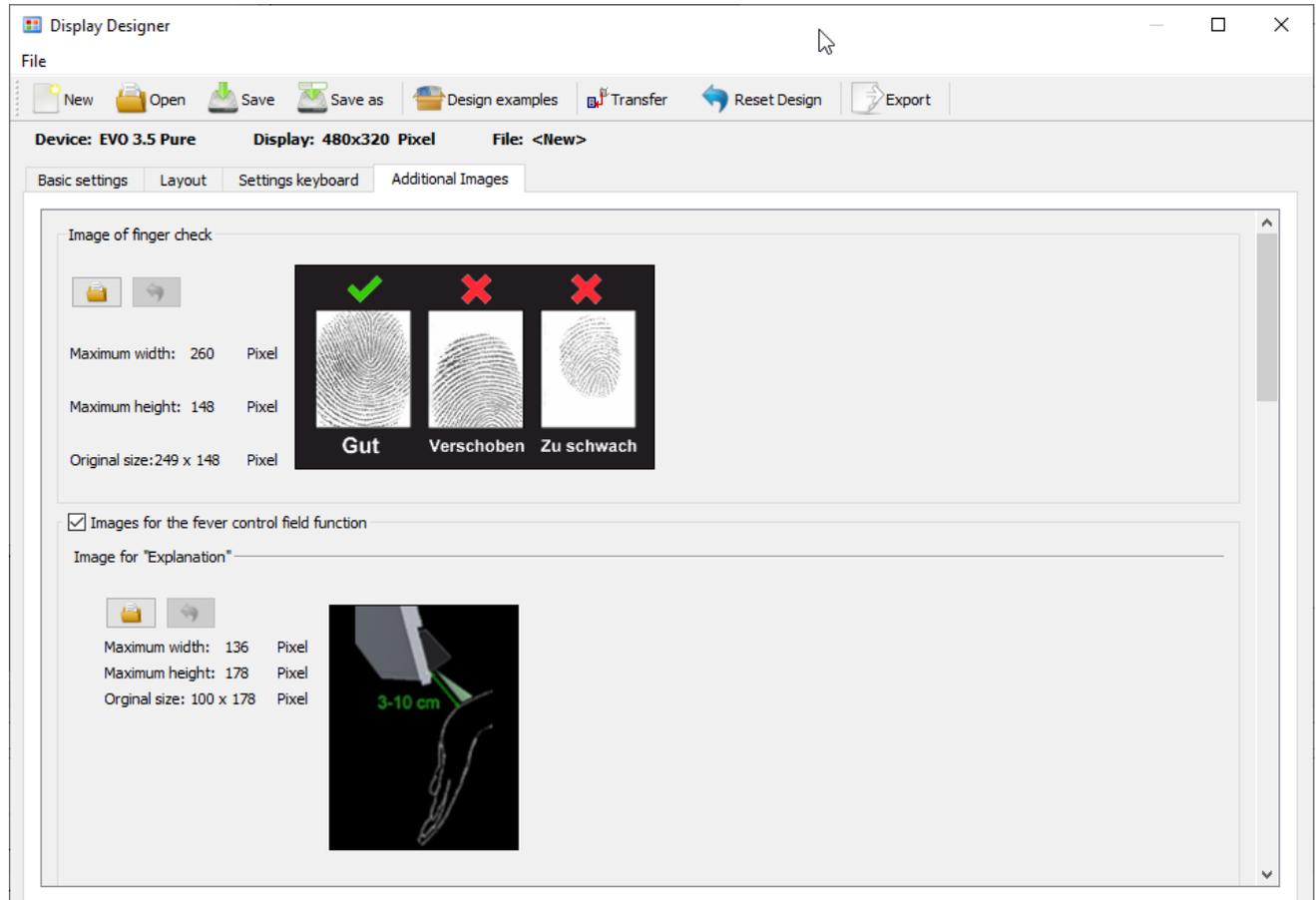
If the maximum set value is reached, this message appears.



2.3. Description of the field function in the Display Designer

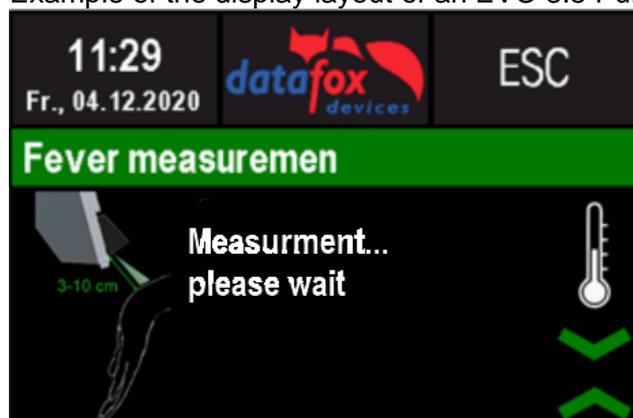
You can adapt the images and symbols that are displayed during fever measurement to your own wishes.

On the page "Additional images" you can decide whether the "Images for the field function for fever control" are displayed and also transferred to the device if the hardware is present.

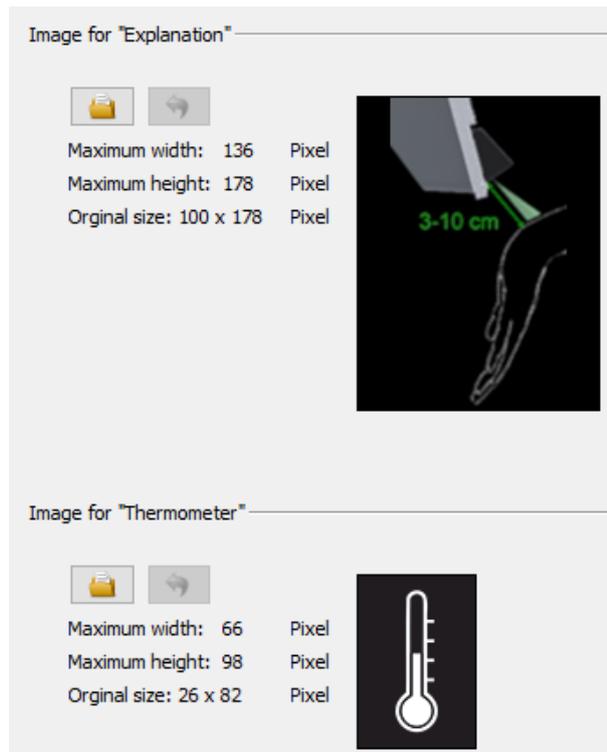


If the option "Images for the field function for fever control" is not selected, the images will not be transferred to the unit, even if a corresponding fever control function has been installed in the unit. If the option is selected, the images are only transferred to devices with a built-in fever control function.

Example of the display layout of an EVO 3.5 Pure during measurement.

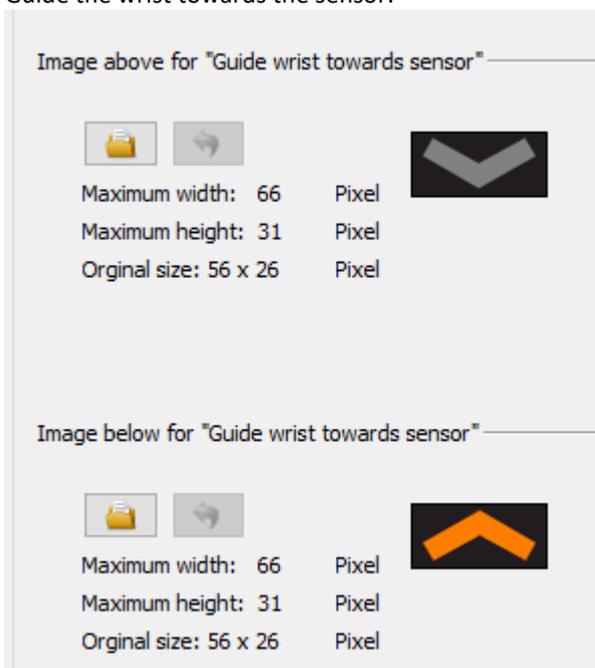


In the display designer, the images are to be specified as follows if the option is selected. Firstly, the image for the explanation (in the left-hand area) and for the thermometer (in the right-hand area).



The combination of arrow symbols for the three possible distance states.

- Guide the wrist towards the sensor.



- Guide wrist away from sensor.

Image above for "Guide wrist away from sensor"





Maximum width: 66 Pixel
 Maximum height: 31 Pixel
 Original size: 56 x 26 Pixel

Image below for "Guide wrist away from sensor"





Maximum width: 66 Pixel
 Maximum height: 31 Pixel
 Original size: 56 x 26 Pixel

- Wrist in the measuring range.

Image above for "Wrist in the measuring range"





Maximum width: 66 Pixel
 Maximum height: 31 Pixel
 Original size: 56 x 26 Pixel

Image below for "Wrist in the measuring range"





Maximum width: 66 Pixel
 Maximum height: 31 Pixel
 Original size: 56 x 26 Pixel

Please note the maximum image sizes when specifying. Images that are too large will be scaled down to the maximum possible size. Smaller images will be aligned in the centre.