

Ifm Engine and chipper control





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## Scope of functions

- Engine monitoring (oil pressure, water temperature and pre-glowing)
- Engine hours
- Engine service indicator (resettable)
- Daily hours counter (resettable)
- Total operating hours counter
- Bonnet switch
- Automatic overload cut-off (editable)
- Push time / short rewind (editable)
- Diagnosis of the inputs and outputs (switching status)

## Description

The ifm engine and chopper control monitors the oil pressure, water temperature, on-board voltage and the pre-heating of the drive engine. The feed rollers are controlled by actuating the sensor buttons and the stop bar. The green sensor buttons are used to switch the feed rollers backwards or forwards after the switch-on speed has been exceeded. Each time the green sensor buttons are pressed for the first time, the feed rollers first run backwards and then forwards when they are pressed again. This is repeated in alternation.

The automatic overload cut-off monitors the speed of the knife disc and activates the infeed when a defined cut-in speed is reached. If the knife disc speed falls below a defined switch-off speed, the intake is deactivated and the short return (push time) causes the intake rollers to run backwards by the set milliseconds. This removes the chopped material from the knife disc and facilitates recovery to the switch-on speed. The values for the overload cut-off can be edited.

The engine hours after switching on the ignition and the control unit are counted. With these hours, a service request is shown on the display, which can be reset after the service has been carried out.

The total operating hours and the daily operating hours of the chipper after switching on the control are counted. The daily operating hours can be reset to zero.

The following inputs and outputs are monitored and the switching status is displayed.

### Inputs

- Temperature switch motor
- Stop chain indent
- Engine oil pressure switch
- Speed sensor cutter disc
- Alternator D+
- Motor start button
- Bonnet switch
- Push button retract

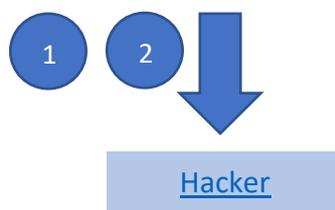
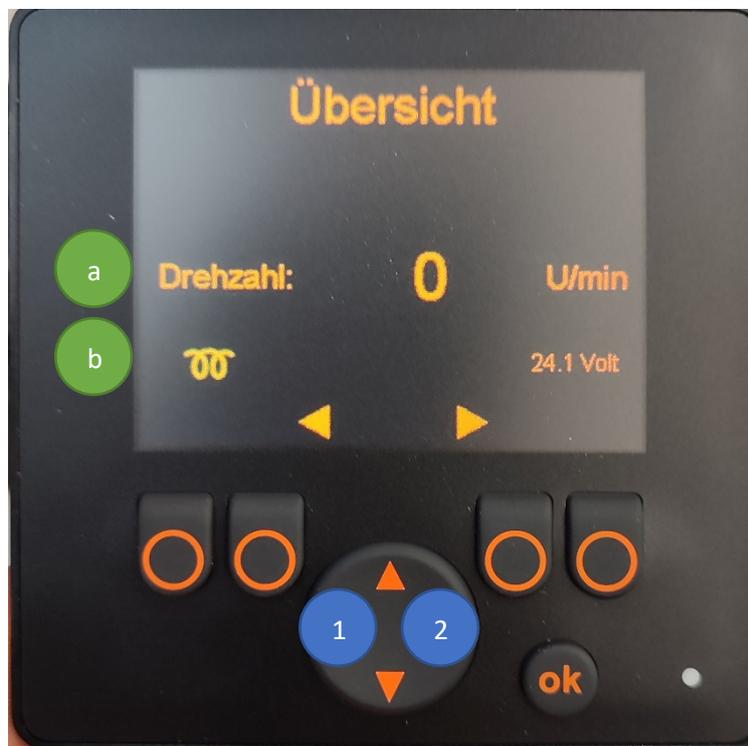
### Outputs

- Engine glow plugs
- Motor solenoid AW
- Motor Solenoid HW
- Engine Starter
- Solenoid valve intake forward
- Solenoid valve retract

This page is displayed after each start.

- a. Speed cutter disc
  - b. Engine symbols: Pre-glow - Oil pressure - Coolant - Battery - Voltage
1. left arrow key
  2. right arrow key

Press arrow key 1 or 2 to switch to the Hacker page.



On this page is the daily hour counter and the total hour counter of the chipper.

- a. Hour counter
  - b. Total hours counter
1. left arrow key
  2. right arrow key

Press arrow key **1** to return to the **Overview** page.

Press the arrow key **2** to switch to the next **engine** page.



[Overview](#)

[Motor](#)

## Reset hour counter

1. **OK button**
2. **arrow keys**
3. **ESC**

By pressing key **1 (OK)** for a longer time (approx. 3 sec), the password query for the day counter reset appears. After entering the password 1111 via the **arrow keys 2** and confirming with key **1 (OK)**, the hour counter is set to zero. The process can be cancelled with key **3 (ESC)**.



Now the hour counter is set back to zero and starts counting again.

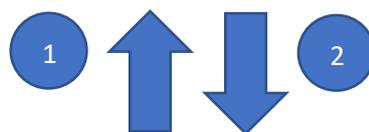
This page contains the engine hour meter and the engine service indicator.

- a. Engine hour meter
- b. Message when engine service is due

- 1. left arrow key
- 2. right arrow key

Press arrow key **1** to return to the **Hacker** page.

Press the arrow key **2** to go to the next page **Main menu**.



[Hacker](#)

[Main menu](#)

## Reset engine service

1. OK button
2. arrow keys
3. ESC

By pressing key **1 (OK)** for a longer time (approx. 3 sec), the password query for the motor service reset appears. After entering the password 2222 using the **arrow keys 2** and confirming with key **1 (OK)**, the hour counter is acknowledged. The process can be cancelled with key **3 (ESC)**.



Now the engine service is acknowledged and starts counting again.

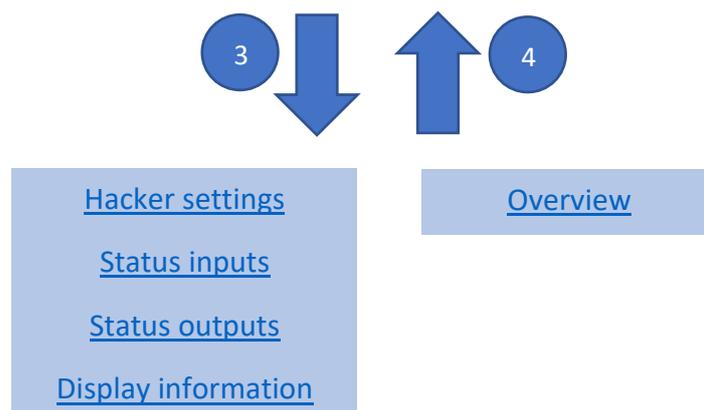
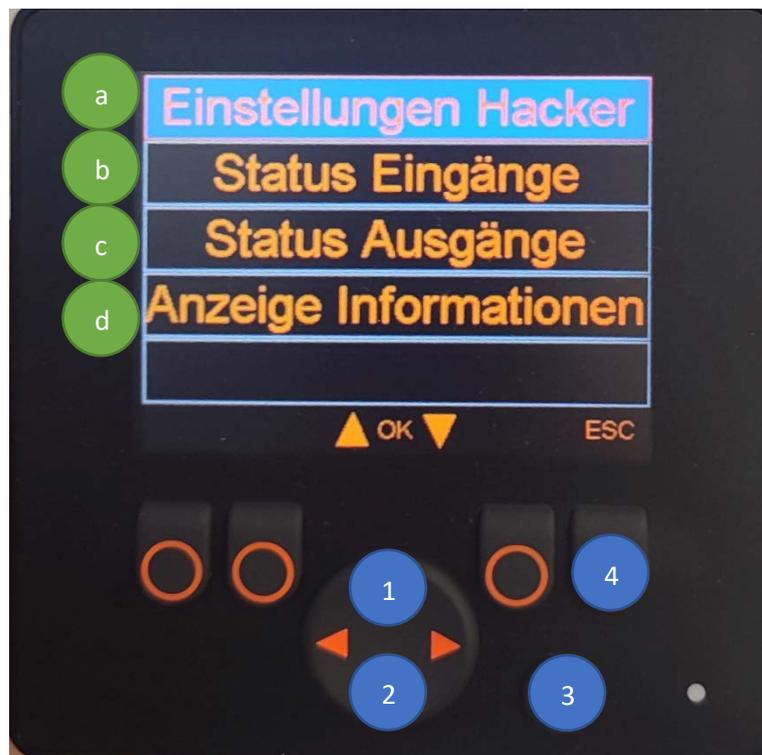
## Main menu

This page contains the settings of the automatic overload cut-off, the two diagnostic pages of the inputs and outputs and the information page of the control software.

- a. **Hacker settings (automatic overload cut-off)**
  - b. **Status of the inputs**
  - c. **Status of the outputs**
  - d. **Display information (control software)**
1. **up arrow button**
  2. **down arrow button**
  3. **OK button**
  4. **key ESC**

Press arrow keys **1** and **2** to navigate through the main menu, press key **3 (OK)** to select the menu item and go to the corresponding page.

Press key **4 (ESC)** to return to the **overview** page.



## Chipper settings

### Selection mode for the overload cut-off parameters

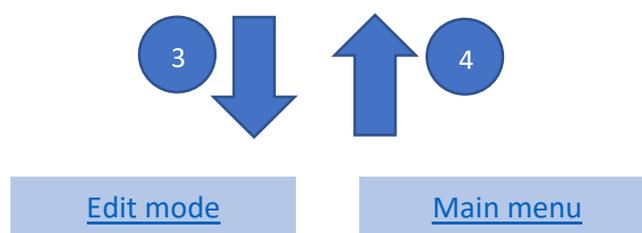
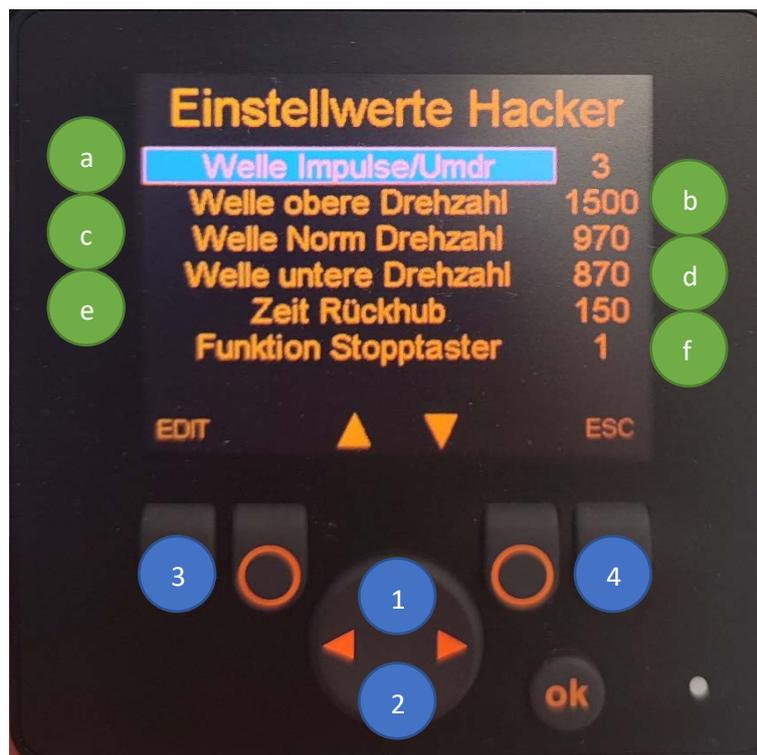
On this page, the functions of the overload cut-off can be selected.

- a. **Number of pulse generators** (number of pulses per revolution for the sensor)
  - b. **Upper speed** (If this speed is exceeded, the feed is deactivated).
  - c. **Norm Speed** (If this speed is exceeded, the feeder is automatically activated).
  - d. **Lower speed** (if the speed falls below this value, the feed is deactivated).
  - e. **Push time (short rewind)** (if the speed falls below the lower speed, the infeed is deactivated and the Retreat briefly activated for this time).
  - f. **Stop button function** (1=NO, 2=NC)
1. up arrow button
  2. down arrow button
  3. edit button
  4. key ESC

Use the arrow keys **1** and **2** to select the desired function (**a - f**) to change.

This can be edited by pressing key **3 (Edit)**.

Press key **4 (ESC)** to return to the **main menu**.



## Chipper settings

### Edit mode to change the overload cut-off values

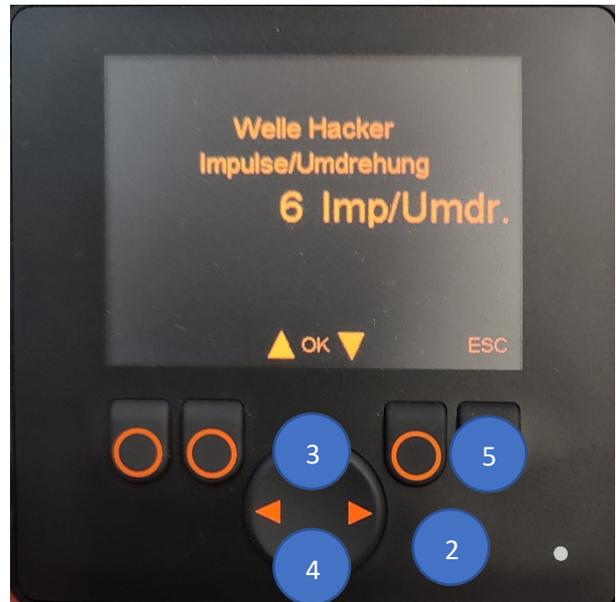
On this page, the values can be edited as on the previous page with the function selected with the **Edit** button.

1. arrow keys
2. OK button
3. up arrow button
4. down arrow key
5. ESC key

After entering the password 1000 with arrow key **1** and confirming with key **2 (OK)**, the value of the selected function can be edited with arrow keys **3** and **4**.

When the desired value has been entered, finally confirm with key **2 (OK)**.

Pressing the **5 key (ESC)** cancels the operation and switches back to the **selection mode**.



Selection mode

## Status inputs

The switching states of the inputs are displayed on these pages.

 = **Activated**

 = **Deactivated**

- a. Temperature switch motor
- b. Stop chain retraction
- c. Engine oil pressure switch
- d. Speed sensor cutter disc
- e. Alternator D+
- f. Push button motor start
- g. Bonnet switch
- h. Feed button
- 1. right arrow key
- 2. left arrow key
- 3. ESC key

Pressing arrow key **1** switches to the second status page and arrow key **2** switches back to the first status page.

Press key **3 (ESC)** to return to the main menu.



[Main menu](#)

## Status outputs

The switching states of the outputs are displayed on these pages.

 = **Switched**

 = **Not switched**

- a. Engine - Glow plugs
  - b. Motor - solenoid AW
  - c. Motor - solenoid HW
  - d. Engine - Starter
  - e. Solenoid valve - pull-in before
  - f. Solenoid valve - retract
1. right arrow key
  2. left arrow key
  3. ESC key

Pressing arrow key **1** switches to the second status page and arrow key **2** switches back to the first status page.

Press key **3 (ESC)** to return to the main menu.



[Main menu](#)

## Information

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This page contains information on the software used and the display.

### 1. key ESC

Press key **1 (ESC)** to return to the **main menu**.



