

# User Manual

## Hour meter AGRETO RotoCounter II

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# 1 Introduction

Thank you for choosing an AGRETO hour meter. You have acquired a robust tool for daily use.

Please read this manual carefully before using the equipment.

## 2 Scope of delivery

- 1 Display unit with sensor
- 1 Mounting plate
- 2 AAA batteries
- 5 Seals
- Mounting parts
- Manual

## 3 Intended use

The AGRETO RotoCounter II is designed to measure operating hours on all machines and equipment where it is possible to mount a sensor on a rotating part.

## 4 Security

### 4.1 Safety instructions for the buyer



Important!

Make sure that every person who works for the first time with the AGRETO RotoCounter II, has read and understood this manual.

## 4.2 Safety instructions for the operator



**DANGER!**

The AGRETO RotoCounter II may only be operated by persons who are familiar with the operation of the device.



**CAUTION!**

Keep the work area clean! Soiled areas contributes to accidents.



**RISK!**

Risk of injury from tip-over / fall and inattention while working with the measuring instrument during getting on and off the tractor.

## 4.3 Personal protective equipment



**WARNING!**

For individuals who work with the device or reside in the working area the wearing of safety shoes are required.

## 4.4 Residual risks

When using the device residual hazards for persons and objects may occur that can't be prevented by design or technical protection measures.



**WARNING!**

The AGRETO RotoCounter II must not be operated in explosive areas.

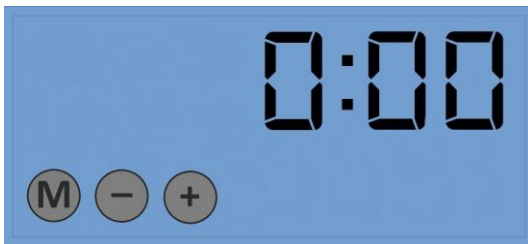
## 5 Technical specifications

- Packaging dimensions: 220x160x50 mm (LxWxH)
- Package weight: 510 g
- Device dimensions: 73 x 52 x 33 mm (WxHxD)
- Weight: 290 g
- 3 internal control buttons for configuration
- Six-digit display with 11 mm digit height
- Icons for displaying additional information
- Sensor with permanent magnet and 2 m cable length
- Powered by 2 x AAA batteries
- Battery life (with standard alkaline batteries) approx. 3 years

## 6 Configuration

### 6.1 Operating buttons

The buttons are located inside the device and accessible from the back with the mounting plate removed.



To change settings, look at the buttons and then turn the device with the display to the front to read the display.

### 6.2 Setting the display format

By default, the display is in hours and minutes, and the colon is used as the separator.

If necessary, you can change the display to decimal hours, here the comma is used as separator.

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Press the "M" key. The name "Unlt" appears briefly on the display, then the hour format is shown.

00:59 = default setting, display in hours and minutes (hhhh:mm)

00,99 = display in hours with 2 decimal places (hhhh,hh)

With the buttons "+" and "-" you can change the format.

To exit the menu, press and hold the "M" button for three seconds, or simply wait 10 seconds without pressing a button. The counter then restarts.

### 6.3 Zeroing the counter

To reset the counter, press and hold all 3 buttons together for 3 seconds. When released, the total is set to 0.

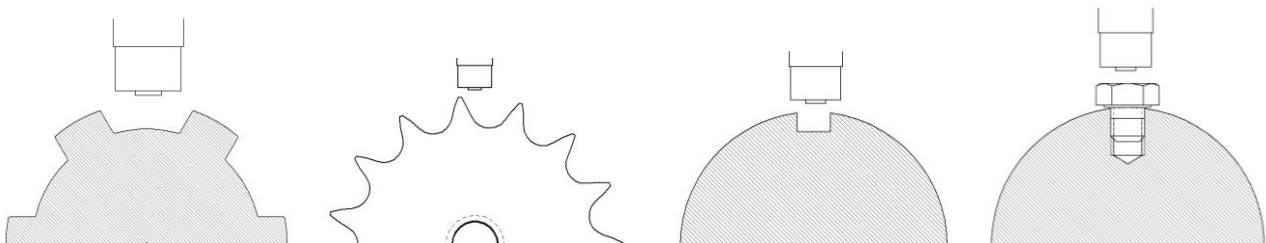
## 7 Assembly

### 7.1 Positioning of the sensor

Locate on your machine a rotating shaft, gear or other rotating part made of ferromagnetic material and a position for mounting the sensor. Ideally, for example, the hexagonal profile of the PTO.

The trigger for the sensor must be uneven (tooth of a gear, profile of a shaft, etc.) to trigger the sensor. For smooth parts, this unevenness must be created, for example, with one or more screws. The installation of a magnet is not required.

Examples:



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The count is achieved by turning the trigger past the sensor. The intensity of the pulse depends on the mass of the trigger, the rotational speed and the gap between the trigger and the sensor. The larger the mass, the higher the speed and the smaller the gap, the sooner the sensor will be triggered.

,Examples:

With a hexagonal profile of a PTO shaft at a distance of 2 mm approx. 300 revolutions per minute are required to trigger the counting.

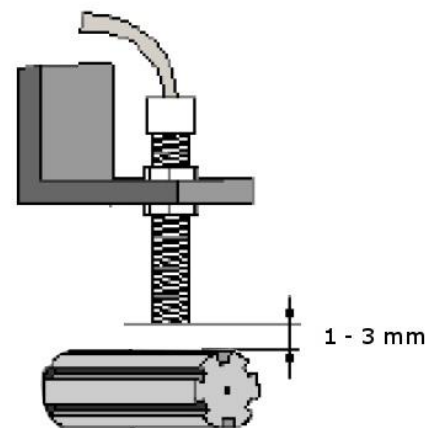
With a M6 screw head at a distance of 2 mm approx. 150 revolutions per minute are required.

### 7.2 Mounting the sensor

Place a mounting piece for the sensor (for example a flat iron piece) with a bore of 10.5 mm on the machine and fix the sensor in the hole. The sensor should point with the sensor tip to the center of the trigger.

The distance between the sensor tip and the trigger should be as small as possible (1 to 3 mm).

ATTENTION: The sensor must never touch the trigger under all working conditions of the machine, otherwise it will be irreparably damaged.

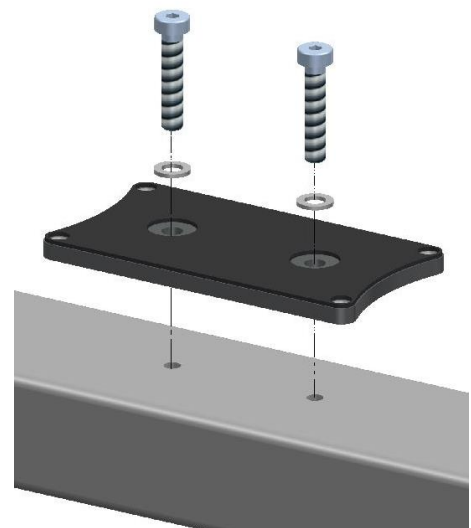


### 7.3 Positioning of the counter

Choose a mounting location on the machine that is as protected as possible from sunlight, moisture and heat and still accessible. The installation position is not relevant for the operation of the meter.

### 7.4 Fixing the mounting plate

- On delivery, the meter is mounted on the mounting plate. Disassemble the meter from the mounting plate.
- Hold the mounting plate in the desired position to the desired mounting position.
- Use the mounting plate as a template and mark the 2 holes with a pin.

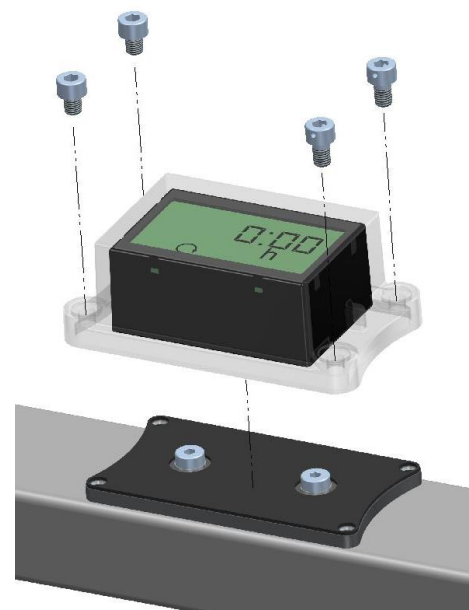


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- Hit one notch each with a grain.
- Drill the 2 holes with a 4.2 mm diameter drill.
- Deburr the 2 holes.
- Use a M5 screw tap to cut a thread in each hole.
- Use the 2 M5x25 allen screws and one of the aluminum washer each and screw the base plate to the machine. Note that the sealing surface of the base plate is pointing towards the meter.

### 7.5 Fastening the counter

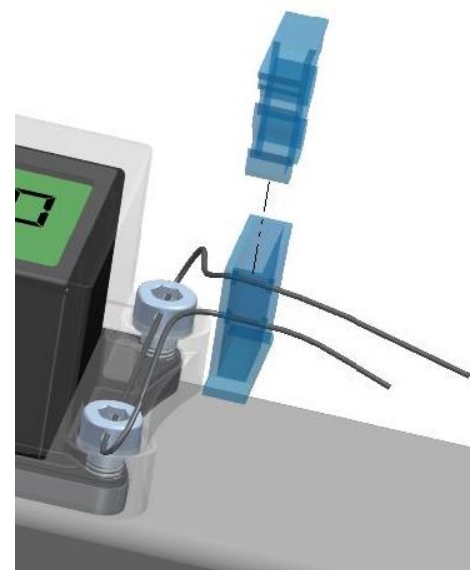
- Place the counter on the base plate.
- Use the 4 allen screws M5x8. Two of them have a small hole for the seal wire, use these two on the side where you want to attach the seal.
- First, pull slightly down all 4 screws, and then tighten every screw again so that the housing is evenly pressed against the mounting plate.



### 7.6 Attaching the seal

- Thread the seal wire through the holes in the two screws.
- Thread both ends of the wire through a hole in the seal.
- Slide the seal as close as possible to the meter and at the same time tighten the wire.
- Close the seal.

If the hole of one of the screws is not accessible, you can also drill a small hole in the housing bar between the two screws and pull through the seal wire here.

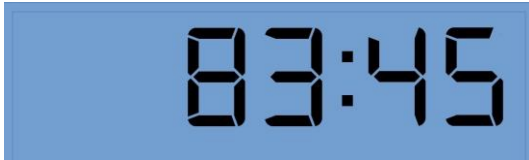




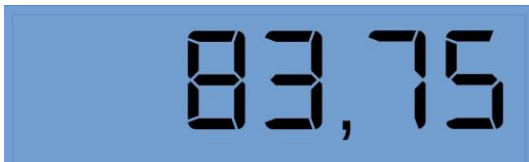
## 8 Working with the device

### 8.1 Reading the hours

The RotoCounter II permanently displays the sum of the counted hours, an operation is not provided for reading.



If the colon is visible as separator, it is hours and minutes.



If the comma is visible as a separator, it is decimal with 2 decimal places.

The display is updated every 5 seconds.

### 8.2 Symbols on the display



Below the hour display there are various icons for displaying additional information.



The rotating arrow means that the sensor is currently receiving pulses and the hours are counted.



The h means that the displayed values are hours.



The crossed-out battery icon lights when the batteries are low and you need to replace them.

## 9 Troubleshooting

### 9.1 The battery symbol lights up

The batteries need to be replaced, follow these steps:

- Remove the seal and the seal wire.
- Remove the housing and remove the meter.
- Remove the old batteries and dispose them properly.
- Insert 2 new AAA batteries into the device in the specified direction.
- Mount the counter again on the mounting plate.
- Seal the device again with a new seal wire and a new seal.

### 9.2 Operating hours are not counted (completely)

Probably the pulse strength for the sensor is too small, this can have the following causes:

- The gap between the trigger and the sensor tip is too large.
- The trigger part does not rotate fast enough past the sensor.
- The trigger part is too small.
- The trigger part is not ferromagnetic (stainless steel does not trigger a pulse).

### 9.3 Too many hours are counted

If the counter also counts when the machine is at a standstill, this may be due to the following causes:

- The sensor touches the trigger
- The sensor tip has been damaged

### 9.4 Damage to the device

- Contact the manufacturer or your dealer.

## 10 Maintenance and cleaning

The RotoCounter II basically does not require any ongoing maintenance.

- If the display is dirty, clean it for reading.
- If the battery symbol is lit, replace the batteries.

## 11 Warranty

Over and above statutory warranty for AGRETO RotoCounter following warranty provisions apply:

- The AGRETO electronics GmbH guarantees the function and repairs or replaces all the parts that have a material or manufacturing damage within the warranty period.
- Warranty services will be performed by the AGRETO electronics GmbH.
- The decision on the existence of a warranty claim is sole responsibility of the AGRETO electronics GmbH.
- The warranty period begins with the first accounting to an end customer and ends 5 years from this date of invoice.
- Prerequisite for warranty service are the presentation of the original invoice and compliance with all elements of this instruction manual.
- Excluded from warranty are wear, normal wear and tear, damage due to misuse, negligence or accident.
- When processing a warranty claim transport costs incurred will be charged to the buyer.

## 12 Disposal



Dispose of the device as part of the final shutdown or parts of it environmentally friendly and sorted (metal to the respective metal scrap, plastic to the plastic waste, etc. - do not dispose as household waste)!

Detailed information can be found in directive 2002/96 / EC

## 13 Imprint

All information, specifications and illustrations are as of 2020, subject to technical changes or design changes.

All information in this manual are supplied without liability despite careful preparation. A liability by the author is excluded.

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