Junkkari

SIMULTA

AREA COUNTER
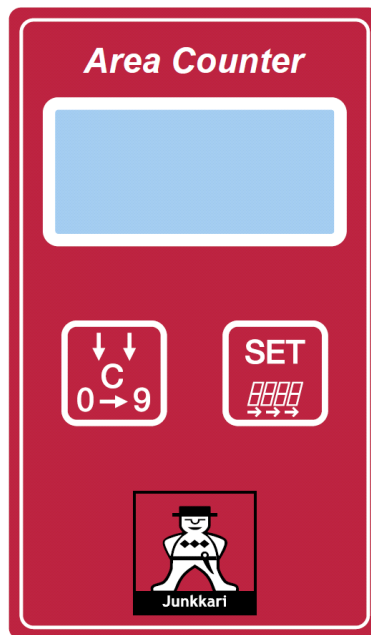
Area Counter

USER MANUAL

ENGLISH ϵ

DEAR CUSTOMER

We thank you for your trust and wish you the best success in your work. We ask you to familiarize yourself with this user guide, because complete understanding of the accessory, correct adjustments and careful maintenance guarantee user safety and the continued operation of the device on busy work days.
It is important to understand every section in this guide and to follow the instructions. In unclear cases you should contact the seller of the machine.

1. TECHNICAL DATA

Display: 4 digits.

Power supply: 2 x 1,5V (AA).

Temperature limits: The Area Counter is fully operational within -10°C to +70°C. This does not necessarily apply for all types of batteries please check with your local battery dealer.

Pulse signals from the sensor: Max. 167 pulse signals per second.
Min. pulse-time: 0,6 ms ~ the magnet must activate the sensor for 1/10 of the time at 9999 rpm.

Area Counter: Max. 0,100 Ha. per second = 360 Ha. per hour.

2. OVERVIEW OF AREA COUNTING FUNCTION

The Area Counter contains both a partial and total area counter (Area I and Area II), both are resettable.

A flashing segment in the bottom left corner of the display indicates when area counting is taking place, indicating that pulse signals are received.

The Area Counter calculates the area with more decimals, than it is able to show on the display. Therefore it may sometimes appear that counting errors are occurring, even though it is not the case.

In order to use the area counter, the wheel circumference and the working width of the machine used must first be entered.

Regarding the wheel/axle circumference a distance equal to ten (10) wheel revolutions should be driven. This distance is measured and divided by ten. The resulting factor is the wheel circumference. In case multiple magnets are used the wheel circumference has to be divided with the number of magnets. Ex. 15 meters divided by 10 = 1.5 divided by 4 magnets = 0.375 meters, which is to be entered in centimeters = 37.50 cm.

The condition of the soil affects the accuracy of the circumference. It is therefore an advantage to generate a circumference for hard, soft and very soft soil, so that the right factor is available for the various conditions.

The circumference is to be entered in centimeters. The table right below shows how different circumferences are displayed, and how the comma must be positioned.

Intervals for indicating the wheel circumference	
Interval	Display example
<100 cm	87.25
=>100 cm	315.8

The working width must be programmed in meters, and the position of the comma is fixed with two digits on both sides (e.g. 12.00).
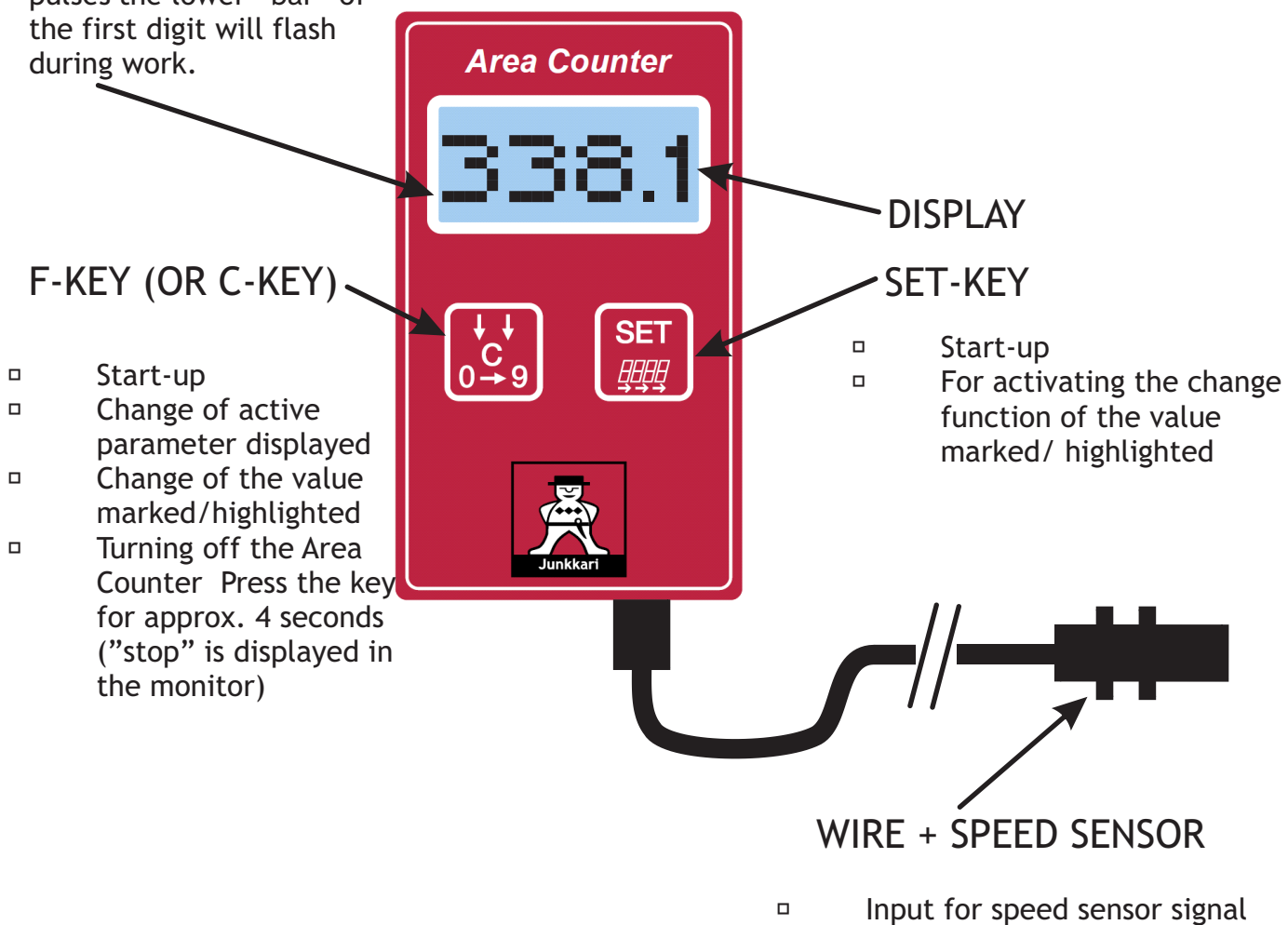
Chapter 2.2 "Changing and resetting values" gives further instructions on how to enter the circumference and working width.

Furthermore, please refer to "Installing the sensor and magnet", where the mounting/use of the sensor is described.

3. OPERATION GUIDE

3.1 Overview

While geting speed pulses the lower "bar" of the first digit will flash during work.

Area Counter

338.1

DISPLAY

F-KEY (OR C-KEY)

- Start-up
- Change of active parameter displayed
- Change of the value marked/highlighted
- Turning off the Area Counter Press the key for approx. 4 seconds ("stop" is displayed in the monitor)

SET-KEY

- Start-up
- For activating the change function of the value marked/ highlighted

WIRE + SPEED SENSOR

- Input for speed sensor signal

The programming rules of the Area Counter are described below.

3.2 Changing and resetting values

The table below shows which values that may be changed and which may only be reset. Values that may be changed (indicated by a C) are all input factors, and values that may only be reset (indicated by an R) are all output factors.

The relationship between functions and input-/output factors				
Function	Factors	Display symbol	May be Reset or Changed	Limits
Area Counter	Area I	HA. 1	R	0,000 - 9999 ha
	Area II	HA. 2	R	0,000 - 9999 ha
	Wheel circumference	o	C	00,01 - 999,9 cm
	Working width	|----|	C	00,01 - 99,99 m

The following description, describes the value change of the wheel circumference:

Example: Changing the wheel circumference from 87.25 cm to 315.8 cm		
Key	Display	Explanation
[F]	o 87.25	The wheel circumference is found on the display - first the symbol is displayed, then the current wheel circumference value.
[SET]	87.25	Press the key for app. 2 sec. - the comma starts flashing, indicating that its position may be changed.
[F]	872.5	Push repeatedly until the position is correct.
[SET]	872.5	The first digit starts flashing, indicating that its value may be changed.
[F]	372.5	Push repeatedly until the digit value is correct.
[SET]	372.5	The second digit starts flashing.
[F]	312.5	Push repeatedly until the digit value is correct.
[SET]	312.5	The third digit starts flashing.
[F]	315.5	Push repeatedly until the digit value is correct.
[SET]	315.5	The fourth digit starts flashing.
[F]	315.8	Push repeatedly until the digit value is correct.
[SET]	315.8	Press the key for app. 2 sec., leaving programming.

Not all factors contain a comma, just as it is not always possible to change its position. In those cases, please disregard the instructions on changing the position of the comma!

Example: Resetting the Area counter		
Key	Display	Explanation
[F]	HA.1 7.192	The HA. I is found on the display - first the symbol is displayed, then the current accumulated area.
[SET]	7.192	Press the key for app. 2 sec. - the accumulated area starts flashing, indicating that it can be reset.
[F]	0	Press until the area counter is reset.
[SET]	0	Press the key for app. 2 sec., leaving programming.

Furthermore, programming-mode is automatically exited, if the Area Counter does not receive signals from the keys within a 10 second interval.

3.3 Turning the Area Counter on and off - stop-mode

In order to lower the power consumption of the Area Counter, and thereby increasing the lifetime of the batteries, the computer may be set in stop-mode. The display will then be turned off and the computer is paused until a new signal is received from the sensor or by pressing a key.

The Area Counter may be set in stop-mode manually. This is done by pressing the ⌨-key for app. 4 seconds. The display shows 'stop' in app. 1 second, and the display is then turned off.

If the Area Counter within a period of ½-1½ hour has not received any pulse or key-press signals, the computer is automatically set in stop-mode.

3.4 Power Supply

The Area Counter must be supplied with power from 2 1,5V AA-batteries.

When the Area Counter is re-started having been in stop-mode, the display first shows the version number of the specific computer.

The computer then checks the power level - if this is too low the display shows '-bL'. If the Area Counter is then automatically turned off, the batteries must be changed. If the power supply from the batteries is too low the computer will occasionally flash the '-bL-' message during use. The batteries must then be changed, as counting errors may occur.

If display-problems occur after battery replacement, wait for 2 minutes, and then reinstall the batteries. In case this doesn't help please check the accumulated voltage from the batteries (min. 3V).

3.5 Storing data – The memory of the Area Counter

The Area Counter is supplied with a memory facility, which remembers the values of the input- and output factors.

The values of the input-factors (e.g. the wheel circumference) are automatically stored when they are changed.

The value of output factors (e.g. Area I) is stored once every hour, and when the Area Counter is automatically or manually set in stop-mode - please refer to the "*Turning the Area Counter on and off - stop mode*".

- When changing the batteries, the Area Counter must first be manually set in stop-mode, using the ⌨-key. Then the batteries may be changed without risk of losing data

4. Installing the sensor and magnet

The magnet must be mounted on the rotating element, e.g. the wheel or the shaft.

The sensor must be installed on a non magnet bracket, securing that the magnet passes the sensor end within a distance of 2-8 mm - please see pictures below.
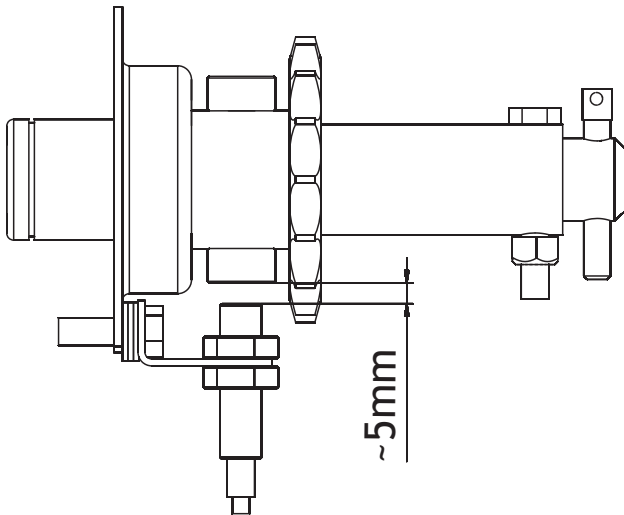
Please take notice that the cable from the sensor will be protected and not break when the tractor is turning, or the hydraulic is activated.
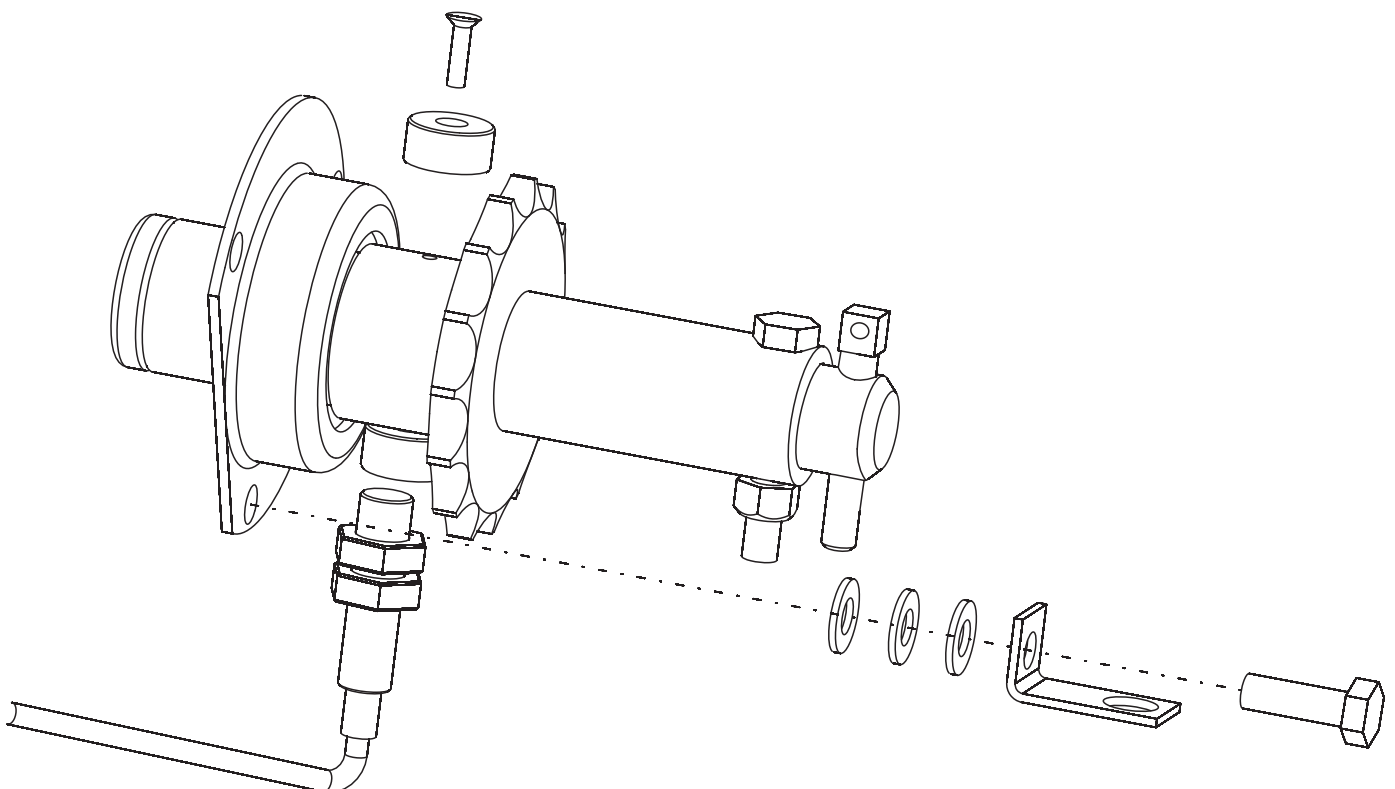
5. Setup

Factor	Symbol	S4000T/ST	S3000T/ST	S3000NL	S2500NL
Wheel circumference	O	57.34	56.88	53.59	57.14
Working width	|----|	4.00	3.00	3.00	2.50