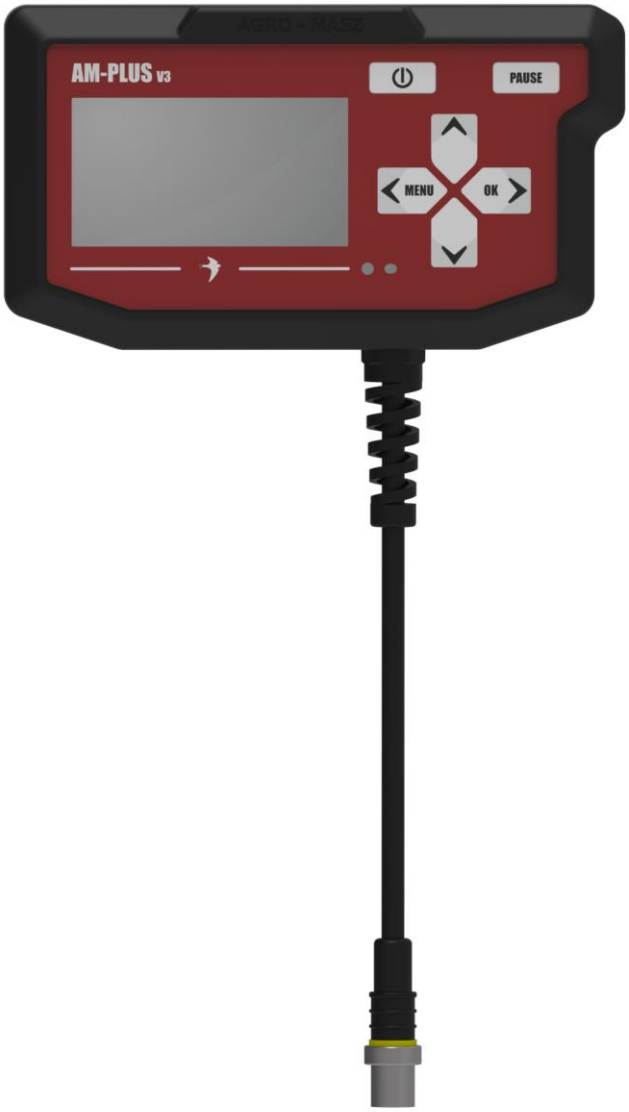
AM PLUS System



AM PLUS v3 controller

Software version 3.01

User manual

Last updated 31 July 2025

IMPORTANT!!!

Only switch on the controller once the control panel has been correctly connected.

Connecting or disconnecting the control panel whilst the power is on may result in permanent damage to the controller and void the warranty.

Characteristics and intended use of the controller.

The AM PLUS v3 controller is an automatic tramline controller for seed drills utilising electrically controlled mechanisms for creating tramlines, including pre-emergence tramlines. Tramlines are created to facilitate subsequent work with a sprayer or fertiliser spreader. Pass counts are calculated automatically using a sensor. By using an additional wheel-mounted sensor, it is possible to display the seed drill's working speed and to calculate the area covered using two independent counters.

The tramline mode can be selected from a range of available combinations, allowing the chosen seed drill type to be adapted to typical field sprayer widths.

A large, easy-to-read display with automatic brightness adjustment ensures comfortable operation in all lighting conditions.

Information and operating instructions.

1. Use the original cabling supplied by the manufacturer.

2. It is prohibited to connect the controller to a faulty electrical system. A faulty electrical system is defined as one containing a damaged battery, causing overvoltage, voltage drops or voltage loss.

WARNING!!!

Connecting the controller to a power source other than an electrical system containing a battery may result in permanent damage to the controller and voiding the warranty!!!

3. The controller, which is designed for use inside the tractor cab, is not sealed. Do not pour water or other liquids over it. In particular, the use of organic solvents may damage the controller's casing or keypad.

4. The controller can be kept clean by wiping it with a soft, damp cloth. It is strictly forbidden to use any cleaning agents containing corrosive substances. A dirty casing may reduce the brightness of the display.

5. Ensure that sockets and plugs are kept clean; in particular, do not connect sockets and plugs that are already dirty. Poor electrical contact may cause the device to malfunction.

6. Cables must be routed in such a way as to prevent the insulation from being cut, frayed or crushed, and to prevent a short circuit to the machine's or tractor's chassis.

7. Any damaged cable must be replaced without fail.

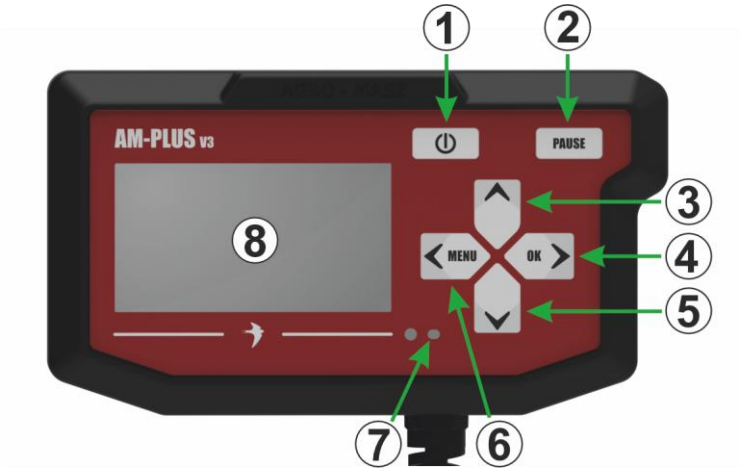
8. The use of non-original wiring for plugs and sockets is prohibited.

9. Do not touch the control panel with sharp or angular objects that could damage the keyboard casing.

10. The power supply to the controller must be protected by a 16A ‘ ’ fuse.

11. The manufacturer reserves the right to make design and software changes.

Controller components



1. On/Off button **[1]**
2. Pause button **[2]**
3. Up arrow button **[3]**
4. OK button (right arrow) **[4]**
5. Down arrow button **[5]**
6. MENU button (left arrow) **[6]**
7. LED **[7]**
8. Graphic display **[8]**

Switching the controller on and off:

Once the cables have been correctly connected and the power has been switched on, the flashing red LED **[7]** indicates that the controller is ready to be switched on.

To **switch** the controller ON, press and hold the power button **[1]** for approximately 2 seconds. Whilst the device is in operation, the indicator LED **[7]** lights up green and the display **[8]** shows the current operating status.

To **switch** the controller OFF, press and hold the power button **[1]** for approximately 2 seconds.

Once started, the controller automatically switches to the tramline work screen.

The pass counting cycle is set automatically by the controller, depending on the selected seed drill type and the sprayer's working width.

During normal operation of the machine, the following control adjustments are possible:

- Pressing the pause button **[2]** pauses the pass count, which may be undesirable, e.g. when manually lifting the machine to avoid an obstacle.

Operation in this mode is indicated by the indicator light **[7]** alternating between green and red in sequences of approximately 2 seconds, and by the display of the '⏸' symbol on the working screen.

- The pass number displayed on the operating screen can be adjusted manually by pressing button **[3]**.

- Setting the initial pass, as shown on the working screen, by pressing and holding button **[5]** for approximately 4 seconds.

Area counters and the seed drill's working speed:

In the option with the wheel-mounted sensor, area measurement takes place automatically. This function is based on the seed drill's working width (depending on the selected machine type) and the distance measurement via the sensor mounted on the wheel. The controller is equipped with two independent counters**, A1** and **A2**. Both counters measure the area simultaneously, but each can be reset separately. Thus, one counter can be used as a daily counter and the other as a seasonal or total counter. The area is measured to the nearest ara (0.01 ha), with a maximum measured area of 999,999.99 hectares.

In this option, the working speed of the seed drill is also shown on the controller display **[8]**. The speed reading is accurate to 0.1 km/h, and the maximum speed that can be displayed is 99.9 km/h. The minimum speed that can be displayed is 2.0 km/h.

Diagram of the Controller's **Main Menu** in the option without a wheel sensor:

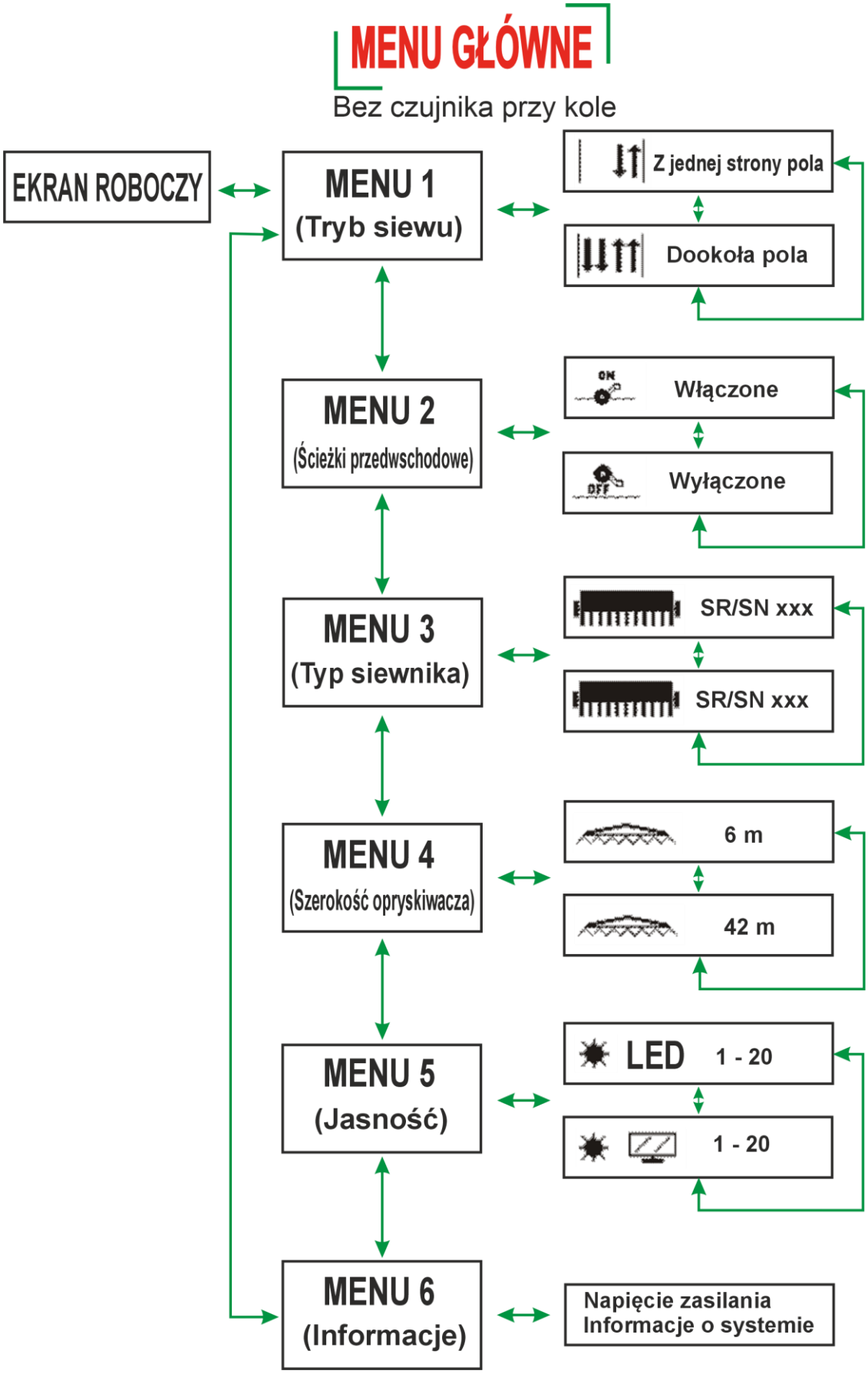
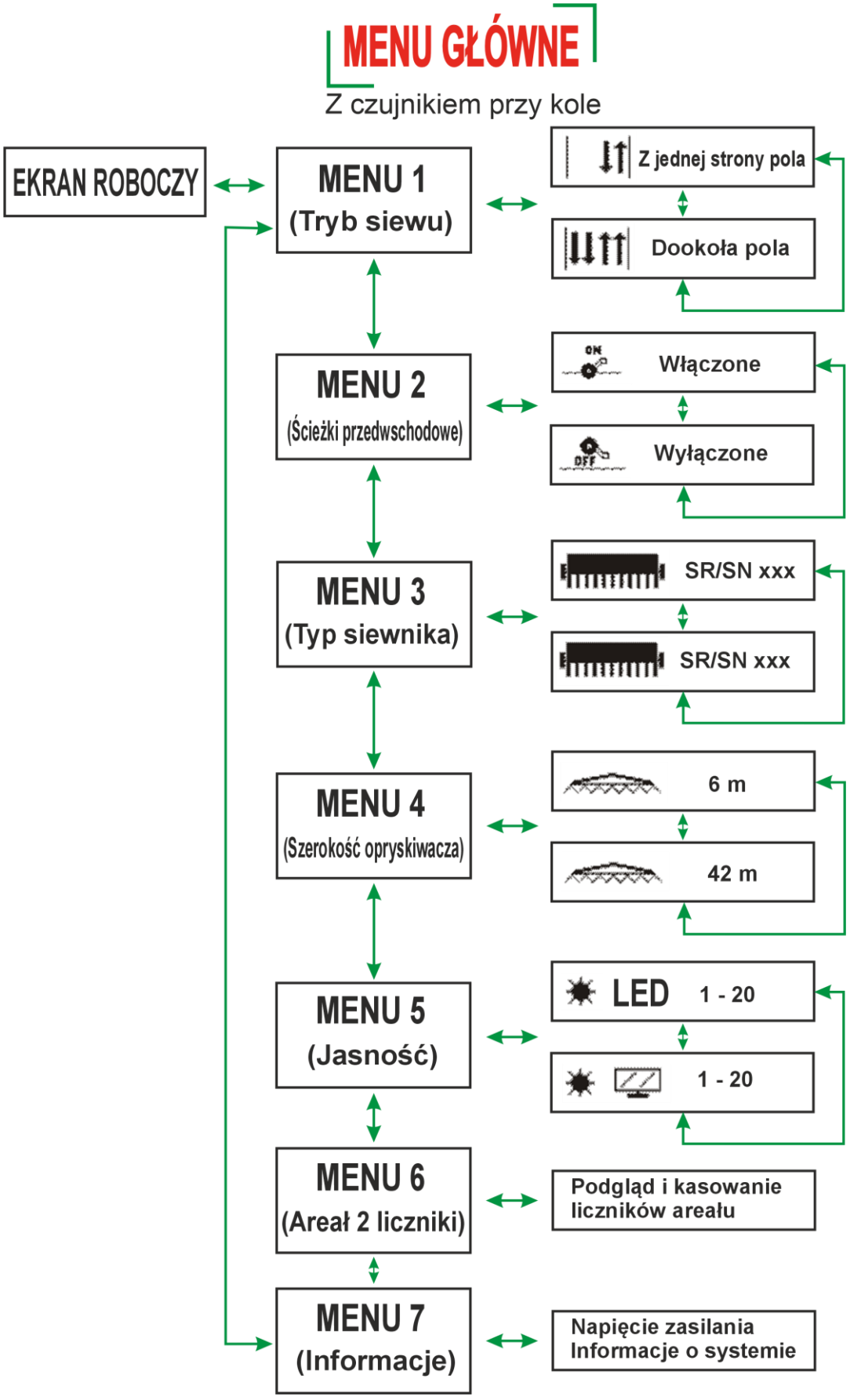


Diagram of the controller's **Main Menu** with the wheel sensor option:



Using the Main Menu

To access the **MAIN MENU** of the controller, press button **[6]**.

Depending on the machine's configuration, **the Main Menu** contains a list of six or seven options to choose from.

In the configuration without a wheel sensor, the following options are available:

1. **MENU 1 –** *Sowing Mode.*
2. **MENU 2 –** *Pre-emergence Traces.*
3. **MENU 3 –** *Seed Drill Width.*
4. **MENU 4 –** *Sprayer Width.*
5. **MENU 5 –** *Brightness.*
6. **MENU 6 –** *Information.*

In the configuration with a wheel sensor, the list of options is as follows:

1. **MENU 1 –** *Sowing Mode.*
2. **MENU 2 –** *Pre-emergence Traces.*
3. **MENU 3 –** *Sowing Width.*
4. **MENU 4 –** *Sprayer Width.*
5. **MENU 5 –** *Brightness.*
6. **MENU 6 –** *Viewing and resetting area counters.*
7. **MENU 7 –** *Information.*

You can scroll through the list of **Main Menu** options using the **[3]** and/or **[5]** buttons.

To edit a selected parameter, press the **[4]** button.

You can edit a parameter using the **[3]** and/or **[5]** buttons.

For parameters where several sub-items can be edited, e.g. *Brightness*, use the **[6]** key to navigate to the next sub-item.

To confirm the changes made, press button **[4]**. This will also take you back one level in the menu (to the **Main Menu** list).

To return to the working screen, press button **[6]**.

Whilst in the area counter preview mode (**MENU 6),** it is possible to clear individual counters. Press the **[4]** button to enter clear mode; select the counter you wish to clear using the **[3]** and/or **[5]** buttons. Press button **[4]** to delete; to exit without deleting the counter, press button **[6]**.

The *'Information'* field displays basic details about the controller, the hardware and software versions, and the current supply voltage.

Any changes to parameter values are stored in the controller's non-volatile internal memory and remain there even after the device is switched off and on again.

In addition to **the Main Menu**, the controller features **a Service Menu**, which allows the user to set operating parameters relating to the machine's mechanical systems.

Diagram of the controller's **Service Menu** in the version without a wheel sensor:

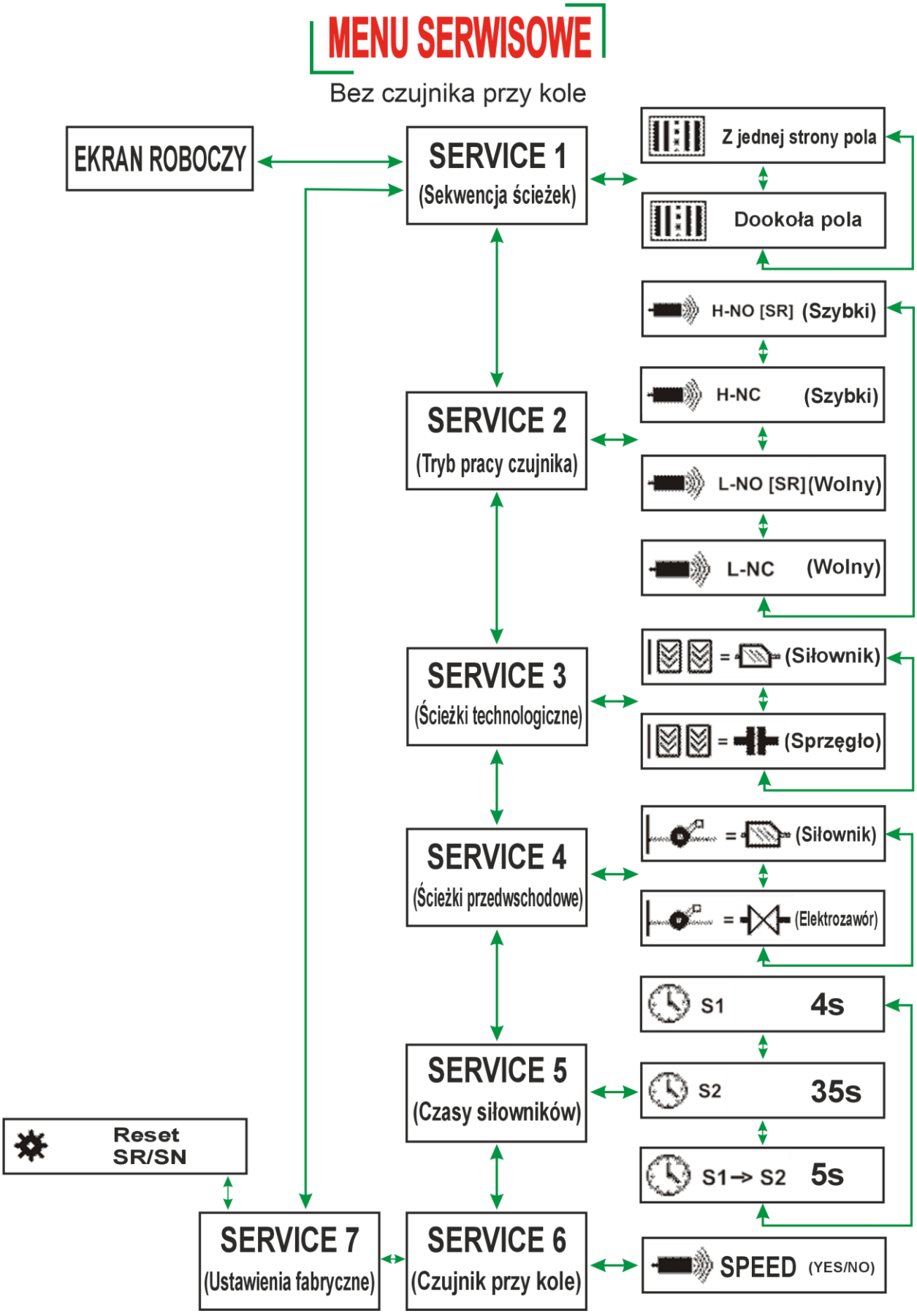
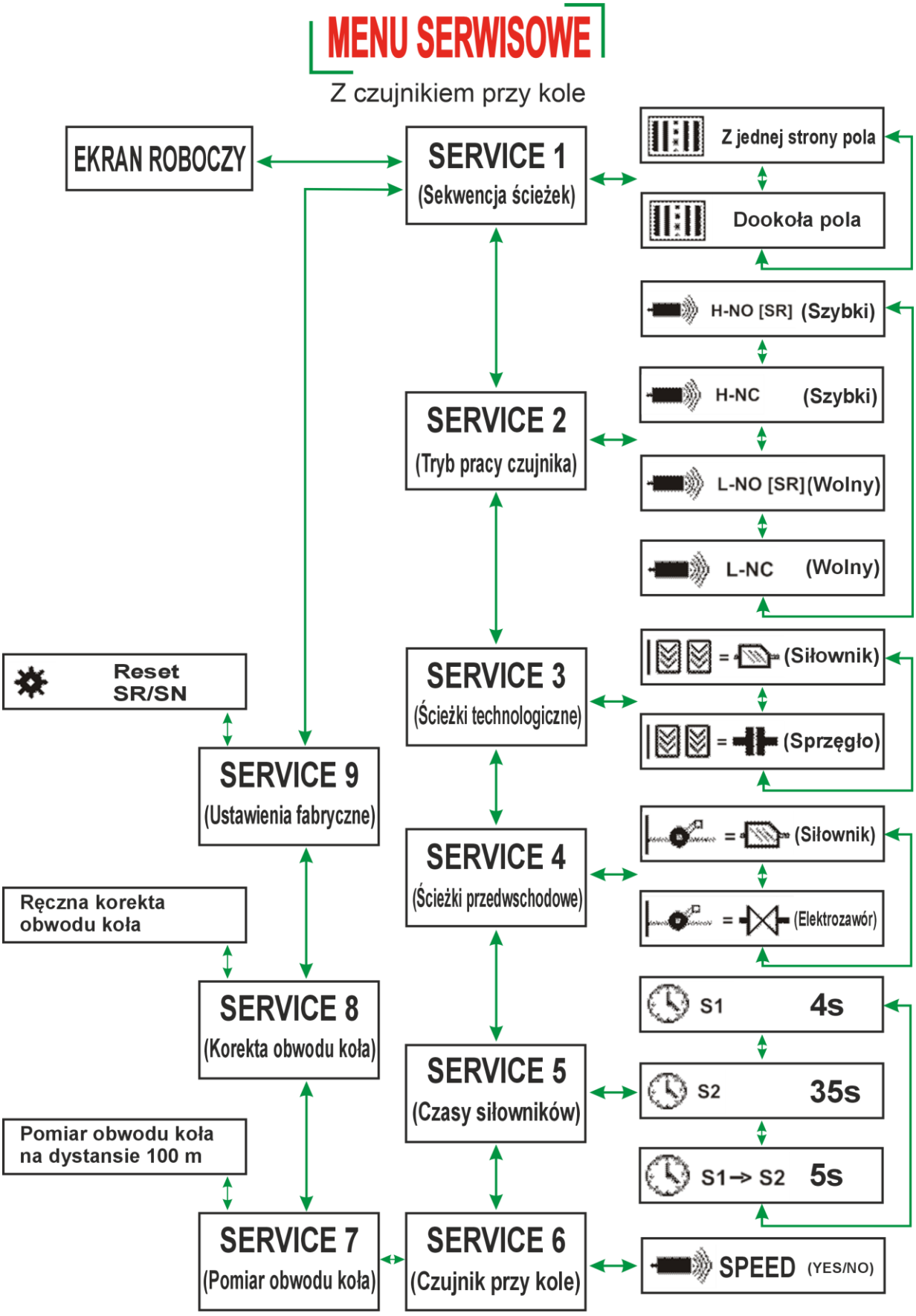


Diagram of the controller's **Service Menu** in the version with a wheel sensor:



Using the Service Menu

To access the controller's **SERVICE MENU**, press and hold buttons **[3]** and **[6]** simultaneously for approximately 4 seconds.

Depending on the machine's configuration, **the Service Menu** contains a list of seven or nine options to choose from.

In the configuration without a wheel sensor, the following options are available:

1. **SERVICE 1 –** *Track Sequence.*
2. **SERVICE 2 –** *Sensor Operating Mode.*
3. **SERVICE 3 –** *Technological Tracks.*
4. **SERVICE 4 –** *Pre-emergence Traces.*
5. **SERVICE 5 –** *Actuator Timings.*
6. **SERVICE 6 –** *Wheel-mounted sensor activation.*
7. **SERVICE 7 –** *Factory Settings.*

In the configuration with a wheel-mounted sensor, the list of options is as follows:

1. **SERVICE 1 –** *Path Sequence.*
2. **SERVICE 2 –** *Sensor Operating Mode.*
3. **SERVICE 3 –** *Planting Patterns.*
4. **SERVICE 4 –** *Pre-emergence Paths.*
5. **SERVICE 5 –** *Actuator Timings.*
6. **SERVICE 6 –** *Wheel-mounted sensor activation.*
7. **SERVICE 7 –** *Wheel circumference measurement over a distance of 100 metres.*
8. **SERVICE 8 –** *Manual wheel circumference correction.*
9. **SERVICE 9 –** *Factory settings.*

You can scroll through the list of options in **the Service Menu** using buttons **[3]** and/or **[5]**.

To edit the selected parameter, press button **[4]**.

The parameter is edited using the **[3]** and/or **[5]** buttons.

For parameters where several sub-items can be edited, e.g. *actuator times*, use button **[6]** to navigate to the next sub-item.

To confirm the changes made, press button **[4]**. This will also take you back one level in the menu (to the **Service Menu** list).

To return to the working screen, press button **[6]**.

To measure the wheel circumference over a distance of 100 m, prepare the machine for driving, then, after entering **SERVICE 7**, press the **[4]** button and drive a distance of 100 metres. Confirm the measurement by pressing button **[4]**; if you wish to exit without confirming the measurement, press button **[6]**. Whilst driving, the display **[8]** shows the number of pulses counted and the wheel circumference in centimetres, which is calculated in real time in relation to the 100-metre distance. The wheel circumference is displayed when the calculated value is less than 1000 cm. The measurement result applies exclusively to the currently selected machine type.

When manually adjusting the wheel circumference in **SERVICE 8**, confirm the change by pressing button **[4]**; if you wish to exit without confirming the change, press button **[6]**. The adjustment applies only to the currently selected machine type.

When restoring factory settings, you can choose between two options: **SR301** and **SN301**. Selecting an option restores the factory settings for the relevant machine group, whilst also making it the currently active group. Use buttons **[3]** and/or **[5]** to select an option. Confirm with button **[4]**; if you wish to exit without restoring the settings, press button **[6]**.

Technical Specifications of the AM PLUS v3 Controller:

PARAMETER	VALUE	UNIT
Length of the console	163	mm
Dashboard width	90	mm
Dashboard thickness	47	mm
Minimum supply voltage	10	V =
Maximum Permissible Supply Voltage	16	V =
Controller Current Consumption (Control Panel) During Operation	75	mA =
Current consumption of the controller (Control Panel) in Standby Mode	28	mA =
Load Capacity of the Process Path Actuator Output	4	A =
Output current capacity of the pre-emergence tramline actuator	7	A =
Maximum total output capacity	11	A =

Table of seed drill and sprayer/fertiliser spreader widths:

Width of the seed drill	Sprayer width	Track number for sowing on one side of the field / initial pass number	Track number for sowing on both sides of the field / initial pass number	We start with half the sowing rate
2,5 m	10 m	4 / 2	7 and 8 / 3	YES
	12,5 m	5 / 3	9 and 10 / 5	NO
	15 m	6 / 3	11 and 12 / 5	YES
	20 m	8 / 4	15 and 16 / 7	YES
	30 m	12 / 6	23 and 24 / 11	YES
2,7 m	13,5 m	5 / 2	9 and 10 / 3	YES
	27 m	10 / 5	19 and 20 / 9	YES
3,0 m	6 m	2 / 1	3 and 4 / 1	YES
	9 m	3 / 2	5 and 6 / 3	NO
	12 m	4 / 2	7 and 8 / 3	YES
	15 m	5 / 3	9 and 10 / 5	NO
	18 m	6 / 3	11 and 12 / 5	YES
	21 m	7 / 4	13 and 14 / 7	NO
	24 m	8 April	15 and 16 July	YES
	27 m	9 May	17 and 18 / 9	NO
	30 m	10 / 5	19 and 20 / 9	YES
	33 m	11 June	21 and 22 / 11	NO
	36 m	12 / 6	23 and 24 / 11	YES
	39 m	13 July	25 and 26 / 13	NO
	42 m	14 July	27 and 28 / 13	YES
3,5 m	7 m	2 / 1	3 and 4 / 1	YES
	14 m	4 / 2	7 and 8 / 3	YES
	21 m	6 / 3	11 and 12 / 5	YES
	28 m	8 / 4	15 and 16 / 7	YES
	42 m	12 / 6	23 and 24 / 11	YES
4,0 m	12 m	3 February	5 and 6 / 3	NO
	16 m	4 / 2	7 and 8 / 3	YES
	20 m	5 / 3	9 and 10 / 5	NO
	24 m	6 / 3	11 and 12 / 5	YES
	28 m	7 / 4	13 and 14 / 7	NO
	32 m	8 / 4	15 and 16 / 7	YES
	36 m	9 May	17 and 18 / 9	NO

When starting work with half the seed drill, the symbol **(H)** appears on the display **[8]**