MwManager

COMPUTER SOFTWARE

USER MANUAL

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R A D W A G RADWAG BALANCES AND SCALES
ADVANCED WEIGHING TECHNOLOGIES

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PRECAUTIONS

⚠️	This user manual is accordant with „MwManager" software, version 3.0.0.0 and later.
⚠️	This user manual is accordant with MW-01-A mass converter, version 201201 MW-01 and later.
⚠️	For correct operation of the software, Microsoft.NET Framework version 4.0 or later is required.
⚠️	For correct operation of the software, you need an operating system with the latest Microsoft ServicePack installed.
⚠️	Due to software update you may find that the provided information is partly incomplete.
⚠️	RADWAG does not bear responsibility for any effects of software operation and potential errors being a result of inappropriate use.
⚠️	RADWAG does not bear responsibility for loss of the data being a result of inappropriate use of the software or a computer.

CONTENTS

1. INTENDED USE

The **„MwManager"** software is intended for control of:
- MW-01-A and MW-04 mass converters,
- TWM1 and TWM4 scales.

The software enables: mass readout, taring, zeroing, filter modification, simulation of inputs operation, checkweighing and dosing.

2. „MwMANAGER" INSTALLATION

2.1. Hardware Requirements

For correct operation of the software, you need:
- computer operating in Windows Vista/7/10 environment:
- 2.4 GHz processor or faster,
- 512 MB internal memory or more (1 GB recommended),
- at least 1 GB of free space on a hard drive,
- computer monitor with at least 800x600px resolution.

2.2. Installation Procedure

	Upon obtaining installation version of the software, run **MWMH-Manager x.x.x.x.exe** file, select language version and press **„OK"**.
	Software wizard opens, press **„Next"** button.

Setup - MwManager **Select Destination Location** Where should MwManager be installed? Setup will install MwManager into the following folder. To continue, click Next. If you would like to select a different folder, click Browse. C:\Program Files\RADWAG Browse... At least 49,1 MB of free disk space is required. < Back Next > Cancel	Select directory (do not change the directory list) and press **"Next"** button.
Setup - MwManager **Select Additional Tasks** Which additional tasks should be performed? Select the additional tasks you would like Setup to perform while installing MwManager, then click Next. ☑ Run MwManager < Back Next > Cancel	In the window with task selection, upon selecting /deselecting options, press **"Next"** button.
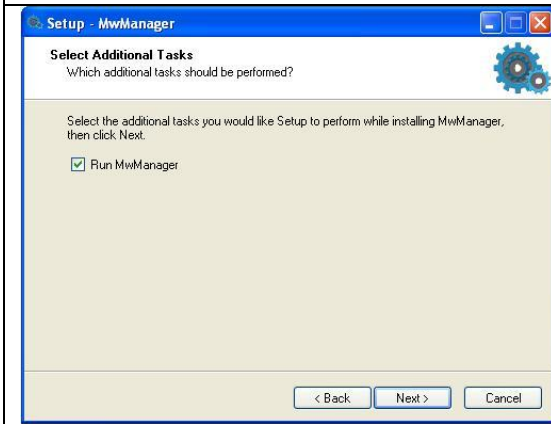
Setup - MwManager
 	
 Ready to Install
 Setup is now ready to begin installing MwManager on your computer.
 	
 Click Install to continue with the installation, or click Back if you want to review or change any settings.
 	
 Destination location:
    C:\Program Files\RADWAG
 	
 Additional tasks:
    Run MwManager
 	
 < Back   Install   Cancel
	Press **"Install"** button to continue.

	Press **„Finish"** button to continue.
	Software shortcut is created on the desktop.

3. OPERATING THE MENU

In order to operate the **'MwManager'** software use a mouse and a PC keyboard. In case of active touch screen interface (MW-04 mass converter operating with PUE 5.15, PUE 5.19 indicators) use your finger.
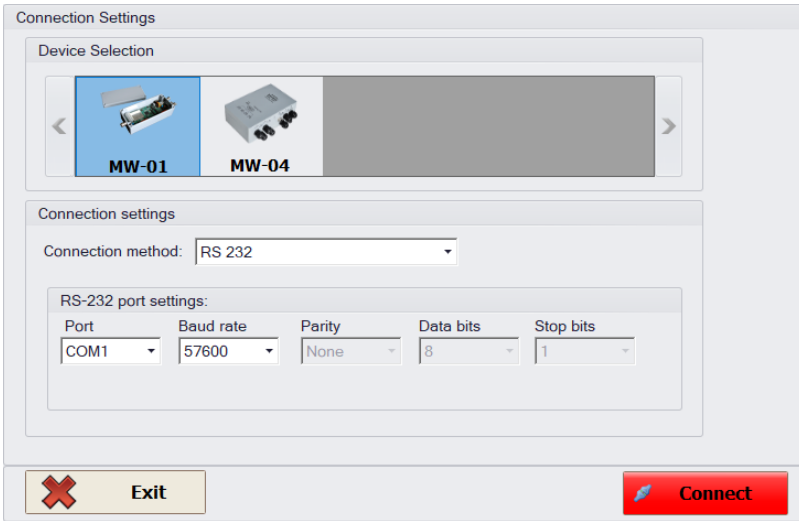
All temporary parameters that are not saved to the mass converter are marked red. To confirm the entered parameter values press **<ENTER>** key on the keyboard.

Buttons:

Refresh	Refresh button. Parameter structure readout. In the case of no unsaved modifications, at the readout of parameter structure, the following message is displayed: **<Readout successful>**. In the case of some unsaved modifications, at the readout of parameter structure, the following information is displayed: **<Unsaved modifications will be lost. Continue anyway?>** (where: **<Yes>** - press to read parameter structure, wherein the unsaved modifications are lost; **<No>** - press to go back to the program menu).
Read from file	Parameter import. For detailed information read section 7.2.
Save to file	Parameter export. For detailed information read section 7.1.
Save	Save button. Press to save parameter values. The following message is displayed: **<Save parameters?>**. (where: **<Yes>** - record of the parameters confirmed with **<Changes saved>** message; **<No>** - press to go back to the program menu).

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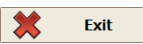# 4. CONNECTION SETTINGS

 tab features **<Connection settings>** button, press it to edit connection settings of the mass converter.

Connection settings

Where:

MW-01	MW-01-A mass converter, TWM1 scale.
MW-04	MW-04 mass converter, TWM4 scale.
Exit	Exit button. Press to close the program. The following message is displayed: **<Close program?>** (where: **<Yes>** - press to stop the program; **<No>** - press to go back to the program menu).
Connect	Connect button. Press to connect with the mass converter. Upon establishing connection, the button changes its function to **<Disconnect>** and the colour to green.
Disconnect	Disconnect button. Press to disconnect with the mass converter. Upon disconnection, the button changes its function to **<Connect>** and the colour to red.

Connection procedure:

- In **<Connection settings / Device selection>** tab select respective device.

- In **<Connection settings>** tab select connection method: RS232, TCP/IP, RS485, Offline.
- Select transmission parameters for selected port:

RS232

Port	Number of port to which the mass converter is connected.
Baud rate	Baud rate. **57600 bit/s** by default.
Parity	Parity value. **none** value by default (disabled for editing).
Data bits	Quantity of data bits. **8** by default (disabled for editing).
Stop bits	Quantity of stop bits. **1** by default (disabled for editing).

TCP/IP

IP address	IP address of the device. **192.168.0.2** by default.
Port	Port set in the device. **4001** by default.

RS485

Port	Number of port to which the mass converter is connected.
Baud rate	Baud rate. **57600 bit/s** by default.
Parity	Parity value. **none** value by default (disabled for editing).
Data bits	Quantity of data bits. **8** by default (disabled for editing).
Stop bits	Quantity of stop bits. **1** by default (disabled for editing).
Address	Mass converter address in the network. **1** by default.

Offline

Offline mode enables running selected options of the software when there is no connected mass converter. This way of connection enables saving and editing crucial parameters in the configuration file. Detailed information concerning saving parameter configuration to a file is to be found further down this manual.

- Press **<Connect>** button.
- Upon establishing connection, mass value is displayed in the weighing result window and **<Connect>** button changes its function to **<Disconnect>** and its colour to green.

| ⚠	*If the connection attempt fails, a message is displayed: <Connection attempt failed>. Press <OK> button to confirm. Check the cabling and transmission parameter settings and try again.*

	If the active connection between the mass converter and the computer software is broken, the following message is displayed: <Connection with the device broken>. (where: <Close application> - press to close computer software; <Reconnect> - press to reconnect; <Show options of connection> - press to return to <Connection settings> tab).

5. COMMUNICATION WITH MW-01-A MASS CONVERTER

5.1. Weighing Result Window
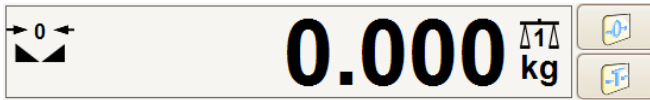
Weighing result window

After completed start-up procedure the following symbols are displayed:

➔ 0 ➔	Zero indication.
◣◢	Stable weighing result.
kg	Weighing unit.
△1△	Weighing platform number.

Buttons:

	Zeroing
	Taring

5.2. Application Settings

 tab comprises the following settings: mass converter connection (see section 4 of the manual), language and miscellaneous parameters.

5.2.1. Language

 tab features **<Language>** button, press it to open a window for software language selection.
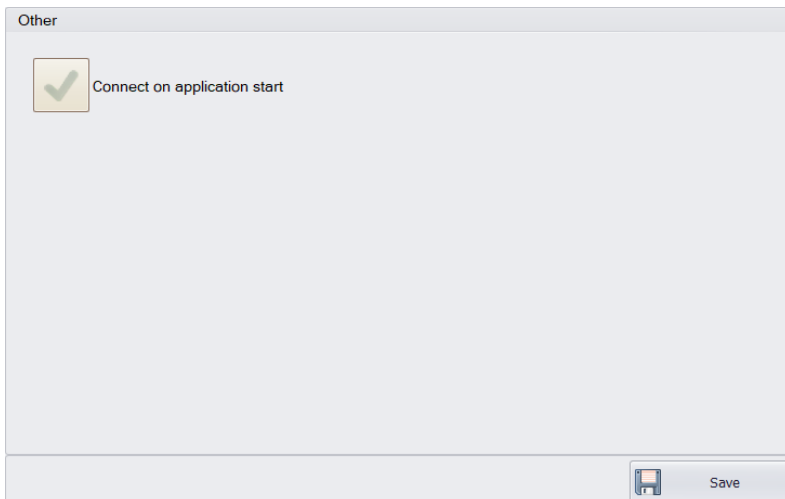
Language selection window

Press **<Apply>** to confirm selected language. Available languages: Polish, English, French, German, Spanish.

5.2.2. Misc.

 Application Settings tab features **<Other>** button, press it to run miscellaneous software options.

Miscellaneous parameters window
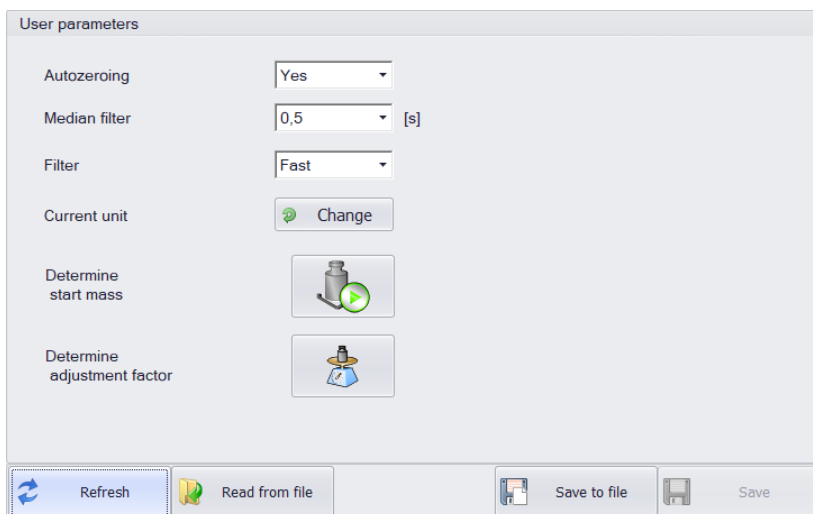
Select **<Connect on application start>** option, software automatically connects with the mass converter in accordance with the default or last selected connection method.

5.3. Parameters

Parameters tab features user parameters, communication parameters and input/outputs settings.

5.3.1. User Parameters

Parameters tab features **<User parameters>**, press it to run the window with user parameters.

User parameters

Where:

Autozeroing	Enter this parameter to enable automatic control and correction of zero indication. There are, however, some cases when this function can be a disturbing factor for the measuring process, e.g. very slow placing of a load on the weighing pan (load adding, e.g. pouring, filling). In such a case, it is recommended to disable the function. Values: **NO** - function disabled, **YES** - function enabled.
Median filter	Enter this parameter to eliminate short impulse interferences (e.g. mechanical shocks). Values: **None** - median filter off, **0.5**, **1**, **1.5**, **2**, **2.5** - median filter on.
Filter	Enter this parameter to adjust your weighing device to ambient conditions. The higher filter level, the longer the indication takes to stabilise. Values: **None** - median filter off, **Very fast**, **Fast**, **Average**, **Slow**.

|	
Current unit	Press **<Change>** button to change the weighing unit of currently selected platform. Options: • When [kg] is the main unit, then you can select the following units: [kg, lb, oz, ct, N, g]. [lb, oz, N] unavailable for verified balances. • When [g] is the main unit, then you can select the following units: [g, kg, lb, oz, ct, N]. [lb, oz, N] unavailable for verified balances.
Determine start mass *	Enter this parameter to determine a new start mass value (refer to section 5.6).
Determine adjustment factor *	Enter this parameter to determine a new adjustment factor value (read section 5.6).

*) - Option available for non-verified mass converters exclusively.

5.3.2. Communication

Parameters tab features **<Communication>** button, press it to run the window with communication parameters.

5.3.2.1. RS 232

Communication parameters of **<RS 232>** port.
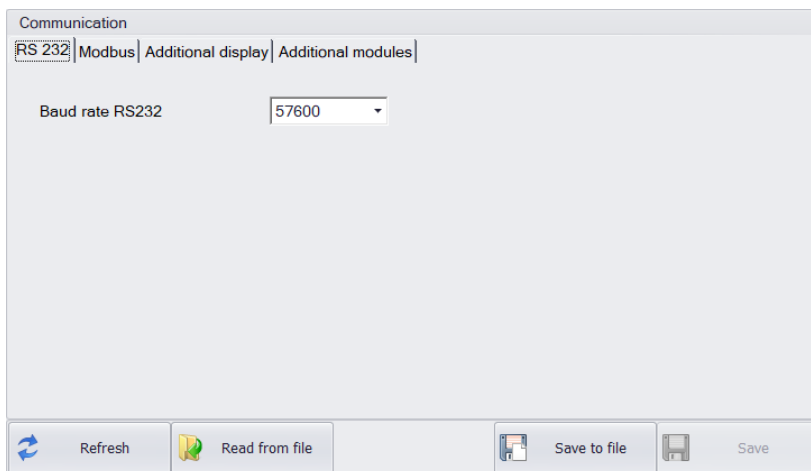
Where:

Baud rate RS232	Baud rate for RS232 communication interface. **57600 bit/s** by default.

5.3.2.2. Modbus

<Modbus> protocol settings configuration.

⚠	*Operation of the <Modbus> communication protocol requires the <RS485> or <Ethernet> additional module to be activated in the <Additional modules> tab.*

Where:

Communication protocol	Combo box for protocol type selection. Options: **Modbus RTU (RS485)**, **Modbus RTU over TCP**, **Modbus TCP**.
Modbus address offset	Setting module address offset. Default value **0**.
Port	Port number for the following protocols: Modbus RTU over TCP, Modbus TCP. Default value **502**.

5.3.2.3. Additional Display

Additional display settings configuration.

Where:

Type	Combo box for additional display type selection. Options: **WD-4**, **WWG-2**.
Port	Combo box for additional display port selection. Options: **None** (default value), **RS232**, **RS485**.

⚠	*If you set the display to RD232 port, it will be impossible to connect computer software using the same port. Display operation via this port will be resumed after the mass converter is restarted.*

5.3.2.4. Additional Modules

Configuration of additional module settings (RS485, Ethernet, Ethernet/IP**™**, Profinet, Profibus modules, analog output module) the mass converter can be optionally equipped with.

⚠	*EtherNet/IP™ is a trademark of ODVA, Inc.*

- **RS 485**

Where:

Baud rate RS485	Address of the mass converter. **1** by default, range: **1 - 254**.
Address	Setting baud rate for RS485 communication interface. **57600 bit/s** by default.

- **Ethernet**

Where:

IP address	IP address of the device. **192.168.0.2** by default.
Subnet Mask	Ethernet subnet mask. **255.255.255.0** by default.
Default Gateway	Ethernet default gateway. **192.168.0.1** by default.
Port	TCP communication port. **4001** by default.
Timeout	Timeout after which connection is broken, expressed in seconds. **0** by default, range: **0 – 300 [s]**.

- **Profibus**

Where:

Address	Mass converter address (in the Profibus network it is necessary to set different addresses for each device). **1** by default, range: **1 – 254**.

- **EtherNet/IP^{TM}**

Where:

IP Address	IP address of the device. **192.168.0.2** by default.
Subnet Mask	Ethernet subnet mask. **255.255.255.0** by default.
Default Gateway	Ethernet default gateway. **192.168.0.1** by default.

- **Profinet**

Where:

IP Address	IP address of the device. **192.168.0.2** by default.
Subnet Mask	Ethernet subnet mask. **255.255.255.0** by default.
Default Gateway	Ethernet default gateway. **192.168.0.1** by default.
Name	Profinet module name. By default: **RPROFINET**.

- **Analog Outputs Module**
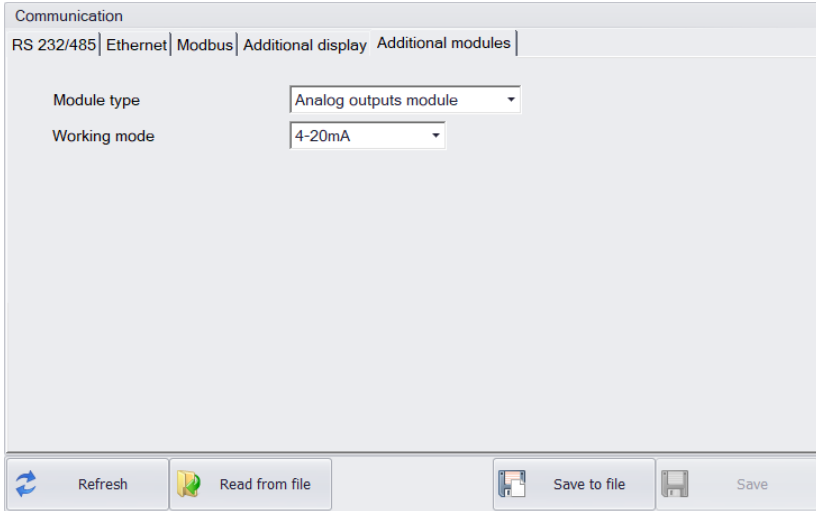
Where:

Working mode	Combo box for mass converter's working mode selection. Values: **4-20mA**, **0-20mA**, **0-24mA**, **0-10V**.

5.3.3. I/O Functions

The MW-01-A mass converter is equipped with two inputs and three outputs
Parameters tab features **<I/O functions>** button, press it to run window
for configuration of inputs and outputs.

Inputs/outputs configuration window

- **Input setup:**

None	Input inactive.
Taring	Platform taring.
Zeroing	Platform zeroing.
Start dosing	Dosing process start.
Stop dosing	Dosing process stop.
Record the measurement	Measurement record in the ALIBI database.

- **Output setup:**

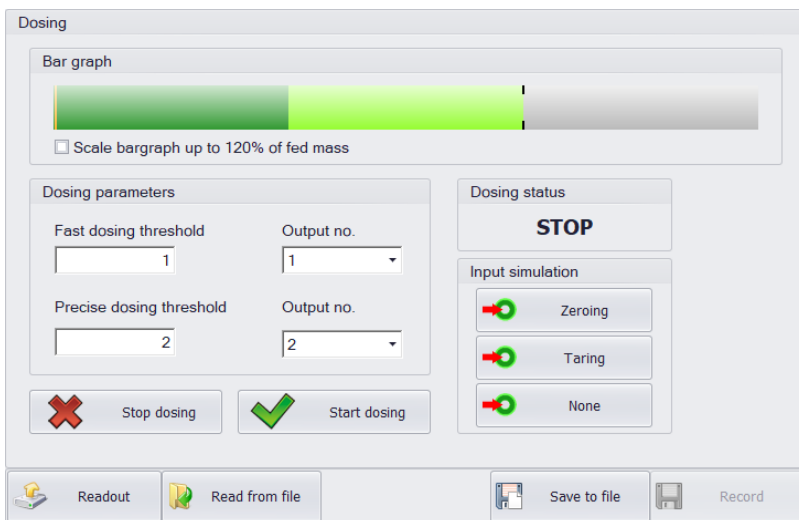| None	Output inactive.
Stable	Stable weighing result above LO threshold value.
MIN stable	Stable weighing result above LO and below MIN threshold value.
MIN	Unstable weighing result above LO, below MIN threshold value.
OK stable	Stable weighing result between MIN and MAX thresholds.
OK	Unstable weighing result between MIN and MAX thresholds.
MAX stable	Stable weighing result above MAX threshold.
MAX	Unstable weighing result above MAX threshold.

⚠	*If you set specific function to an output to which quick or accurate dosing function has already been assigned, then during dosing process start and in the course of it, the output operates in accordance with the settings of dosing parameters. Upon dosing process completion the output switches to the set function.*

5.4. Functions

F Functions tab features dosing and checkweighing functions and enables to check the status and simulation of inputs/outputs.
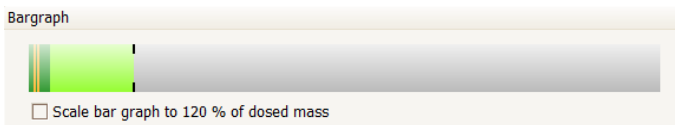
5.4.1. Dosing

Dosing is a working mode enabling precise filling, wherein the filling takes as long as it is necessary to obtain the pre-defined target weight. To open dosing settings, enter **< F Functions /Dosing>** submenu.
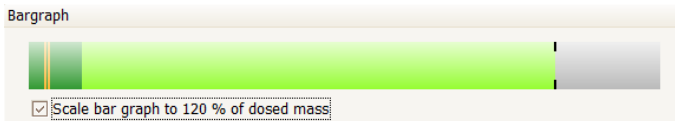

Dosing process window

- **Bar graph**

Dosing mode home screen features a bar graph showing mass indication within mass converter range. Upon selecting **<Scale bar graph up to 120% of dosed mass>** option the bar graph zooms up to 120% of the preset mass. If the precise dosing threshold is disabled (set to 0), the bar graph is zoomed according to the fast dosing threshold.

Bar graph for small mass value, zoom off

Bar graph for the same mass value, zoom on

- **Dosing Parameters**

1- or 2-stage dosing parameters:

Fast dosing threshold	Enter to set mass value for fast dosing in the case of 2-stage dispensing.
Fast dosing output no.	Enter to declare outputs for fast dosing in the case of 2-stage dispensing.
Precise dosing threshold	Enter to set target mass value to be dosed in case of the automatic dispensing.
Precise dosing output no.	Enter to declare outputs for precise dosing in the case of 2-stage dispensing.

Available outputs setup: 1, 2, 3, 1&2, 1&3, 2&3, 1&2&3, - (dosing inactive).

- **Dosing Status**

Window with dosing status informs on current state of dosing process that is carried out on a platform displayed in the weighing window.
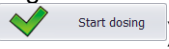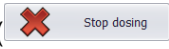
DOSING	Dosing in progress.
ABORTED	Dosing aborted upon pressing **<Stop dosing>** button.
STOP	Dosing stop.
COMPLETED	Dosing completed.

- **Simulation of Inputs**

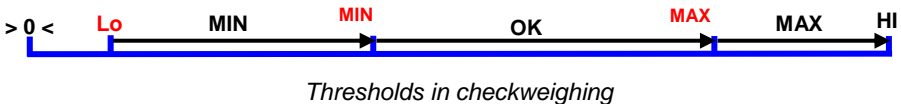Inputs simulation enables simulating operation of a function assigned to a particular input.

	Function button assigned to input 1.
	Function button assigned to input 2.

- **Dosing Process Simulation**

Start and stop dosing buttons are located at the bottom of the window. The buttons start ([✔ Start dosing]) and stop ([✖ Stop dosing]) dosing process operate independently from functions assigned to the inputs.

5.4.2. Checkweighing

Checkweighing function enables entering checkweighing thresholds values (**Min**, **Max**). Such solution enables fast evaluation of sample mass. There is no need for constant control of the weighing result. Thresholds values are signalled with colours or presented by means of control of external equipment systems.

Thresholds in checkweighing

To open checkweighing settings, enter < [F. Functions] **/Checkweighing>** submenu.

Checkweighing process window

Where:

|	
LO threshold	Net weight value above which checkweighing function is active.
MIN threshold	Net weight value of MIN checkweighing threshold.
MAX threshold	Net weight value of MAX checkweighing threshold.

Checkweighing thresholds signalling:

MIN	*OK*	*MAX*

⚠️	***In order to enable checkweighing signals, set the checkweighing function for outputs.***

5.4.3. I/O Status

Inputs signalling and outputs state settings. To open I/O status settings, enter < F Functions **/I/O status>** submenu.
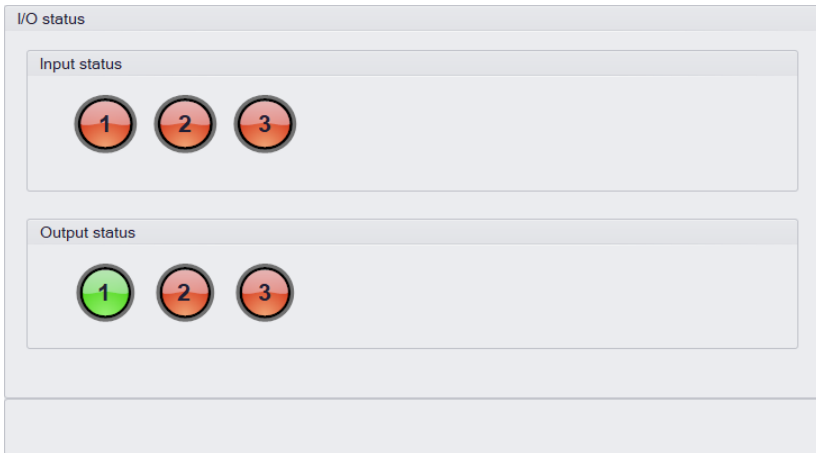
Inputs/outputs status window

Inputs/outputs numbers in the software reflect numeration in the mass converter.

	Input/output on.
	Input/output off.

Simulation of output operation is possible upon pressing output number. The output is immediately activated on condition that no other function is assigned to it. Simulation of inputs operation is available in the dosing home screen.

5.5. Reports

5.5.1. Measurement Result Record

Recording the weighing result in the Alibi report table is possible by:
- Pressing **<Save>** button in the **<Reports / Alibi / Data>** submenu.
- Triggering a digital input signal **<Record measurement>** set in the **<I/O functions>** submenu.

The software offers option of record of 130 000 weighings. Preview of data for performed weighing is possible in the following submenu: **<Report / Alibi / Data>**.

Completed weighing data:

Date	Weighing date.
Time	Weighing time.
Net mass	Net weight of the performed weighing in a current unit
Tare	Tare value (in an adjustment unit).

5.5.2. ALIBI Weighing Records Export

Option to export ALIBI weighing records to a file. The exported ALIBI report file has a special extension and the data stored in the file is encrypted, so the contents of the file are not visible to standard computer programs. Files can be read using **ALIBI Reader**, PC software designed by RADWAG. You can download the software from RADWAG website: www.radwag.pl.

Procedure:

- Enter**<Report / Alibi>** submenu and go to **<Data> tab**.
- Press **<Save to file>** button, **<Saving as>** window is opened.
- Select where to save the file and press **<Save>** button.
- Correctly saved Alibi weighing records result in displaying the following message:
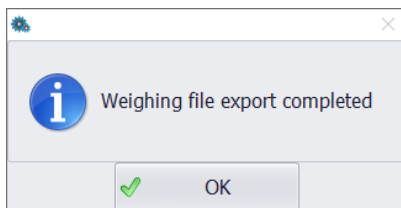
File name and extension: xxxxxx.ali, where xxxxxx – serial number of the mass converter.

5.5.3. Settings

Date and time settings with the possibility of synchronization. Access path: **<Reports / Alibi / Settings>**.

Options of the <Settings / Date and time> tab:

Date	Date settings.
Time	Time settings.
⟳ Synchronization	Date and time synchronization.

5.6. Adjustment

Option available for non-verified scales exclusively

In order to ensure high weighing accuracy, it is necessary to correct indications periodically against a mass standard, this requires entering a corrective factor to the converter's memory. Adjustment has to be carried out prior to the first weighing or if the ambient temperature has changed dynamically. Prior to the adjustment, unload the weighing pan.

5.6.1. Start Mass Determination

If the scale does not require adjustment or you do not have suitable amount of adjustment weights, you can determine start mass only.

Procedure:
- Unload the weighing pan.
- Go to **<Parameters / User Parameters>** tab, press **<Determine start mass>** button, message **<Unload the pan>** is displayed.
- Press **<OK.>** button to confirm, start mass determination begins.
- Upon completion, message **<Start mass determination completed successfully>** is displayed.
- Press **<OK.>** to confirm.
- Press **<Save>** button, message: **<Save parameters?>** is displayed.
- Press **<Yes>** to confirm, message: **<Changes saved>** is displayed.
- Press **<Yes>** to confirm. Determined start mass gets saved to converter's memory.

5.6.2. External Adjustment

External adjustment is carried out using an external mass standard of the right accuracy and weight value, which value depends on scale type and capacity. The process is carried out semi-automatically, successive process stages are signalled with prompts displayed in **„MwManager"** software.

Procedure:

- Unload the weighing pan.
- Press **<Determine adjustment factor>** button, message: **<Unload the pan>** is displayed.
- Press **<OK.>** button to confirm, start mass determination begins.
- Upon completion, message **<Put on the pan weight xxx>** (where: xxx – declared adjustment weight mass) is displayed.
- Load the weighing pan with weight of specified mass value and press **<OK>** button.
- Upon completion, message: **<Adjustment factor determination completed successfully>** is displayed.
- Press **<OK.>** to confirm.
- Press **<Save>** button, message: **<Save parameters?>** is displayed.
- Press **<Yes>** to confirm, message: **<Changes saved>** is displayed.
- Press **<Yes>** to confirm. Determined adjustment factor gets saved to mass converter's memory.

6. COMMUNICATION WITH MW-04 MASS CONVERTER

6.1. Weighing Result Window

Weighing result window

After completed start-up procedure the following symbols are displayed:

➔ 0 ➔	Zero indication.
◣◢	Stable weighing result.
kg	Weighing unit.
⏛1⏛	Weighing platform number.

Buttons:

⬚	Zeroing
⬚	Taring
>>1<< 2 3 4	Press to select a weighing platform if the mass converter communicates with more than one platform (applies to the MW-04 mass converter exclusively).

⚠	***Zero and tare functions are available for the currently selected platform.***

6.2. Application Settings

⚙ Application Settings tab comprises the following settings: mass converter connection method (see section 4 of the manual), language and miscellaneous parameters.

6.2.1. Language

⚙ Application Settings tab features **<Language>** button, press it to open a window for software language selection.
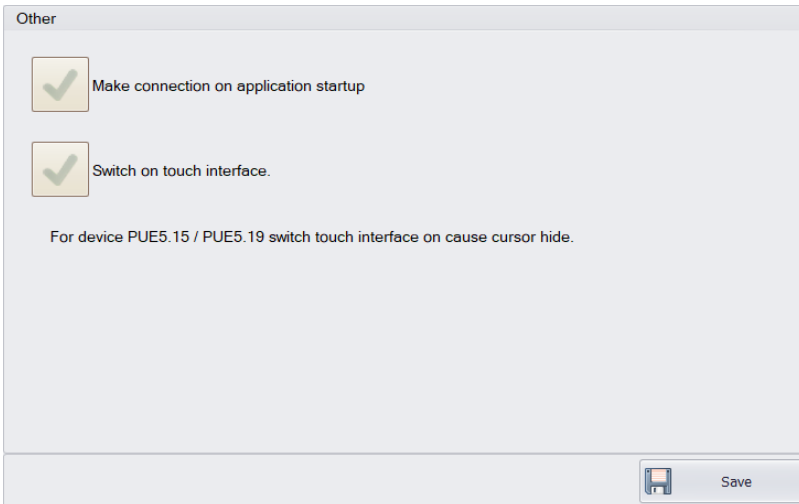
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Language selection window

Press **<Apply>** to confirm selected language. Available languages: Polish, English, French, German, Spanish.

6.2.2. Misc.

Application Settings tab features **<Misc.>** button, press it to run miscellaneous software options.

Miscellaneous parameters window

Select **<Make connection on application startup>** option, software automatically connects with the mass converter in accordance with the default or last selected connection method.
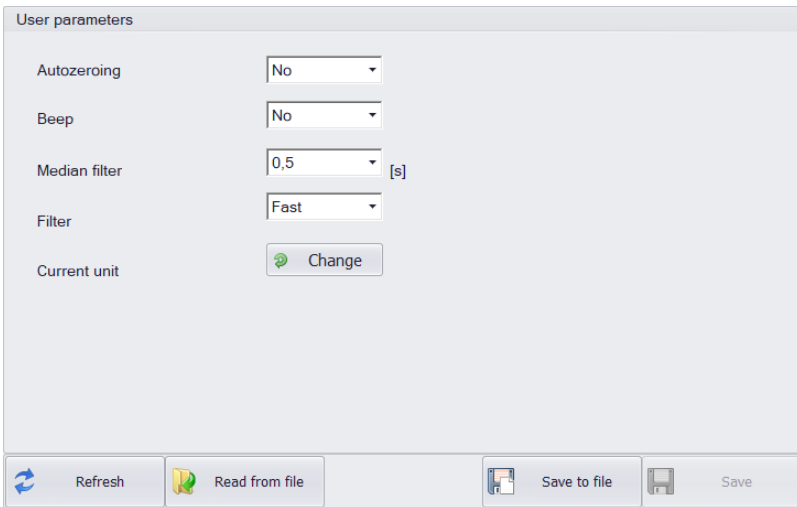
Select **<Switch on touch interface >** option to adjust the **„MwManager"** view to support PUE 5.15, PUE 5.19 weighing indicators and enable touch panel operation.

6.3. Parameters

Parameters tab features user parameters, communication parameters and input/outputs settings.

6.3.1. User Parameters

Parameters tab features **<User parameters>**, press it to run the window with user parameters. The displayed parameters are parameters of currently selected (active) platform.

User parameters

Where:

Autozeroing	Enter this parameter to enable automatic control and correction of zero indication. There are, however, some cases when this function can be a disturbing factor for the measuring process, e.g. very slow placing of a load on the weighing pan (load adding, e.g. pouring, filling). In such a case, it is recommended to disable the function. Values: **NO** - function disabled, **YES** - function enabled.
Beep	Audio signal. Values: **NO** - function disabled, **YES** - function enabled.

Median filter	Enter this parameter to eliminate short impulse interferences (e.g. mechanical shocks). Values: **None** - median filter off, **0.5**, **1**, **1.5**, **2**, **2.5** - median filter on.
Filter	Enter this parameter to adjust your weighing device to ambient conditions. The higher filter level, the longer the indication takes to stabilise. Values: **None** - median filter off, **Very fast**, **Fast**, **Average**, **Slow**.
Current unit	Press **<Change>** button to change the weighing unit of currently selected platform. Options: • When [kg] is the main unit, then you can select the following units: [kg, lb, oz, ct, N, g]. [lb, oz, N]; unavailable for verified balances. • When [g] is the main unit, then you can select the following units: [g, kg, lb, oz, ct, N]. [lb, oz, N]; unavailable for verified balances.

⚠	***In the case of few weighing platforms operated using MW-04 mass converter, the parameters are displayed and edited for the platform which is currently selected in the weighing result window.***

6.3.2. Communication

Parameters tab features **<Communication>** button, press it to run the window with communication parameters: Ethernet, RS232/485, Devices/Interfaces.

- **Ethernet**

Where:

IP address	IP address of the device. **192.168.0.2** by default.
Subnet mask	Ethernet subnet mask. **255.255.255.0** by default.
Default gateway	Ethernet default gateway. **192.168.0.1** by default.
Port	TCP communication port. **4001** by default.
Timeout	Timeout after which connection is broken, expressed in seconds. **0** by default, range: **0 – 300 [s]**.

- **RS 232/485**

Where:

Module address	Mass converter address in the RS485 network (different addresses for various devices). **1** by default, range: **1 – 254**.
Baud rate RS232	Setting baud rate for RS232 communication interface. **57600 bit/s** by default.
Baud rate RS485	Setting baud rate for RS485 communication interface. **57600 bit/s** by default.

- **Devices/Interfaces**
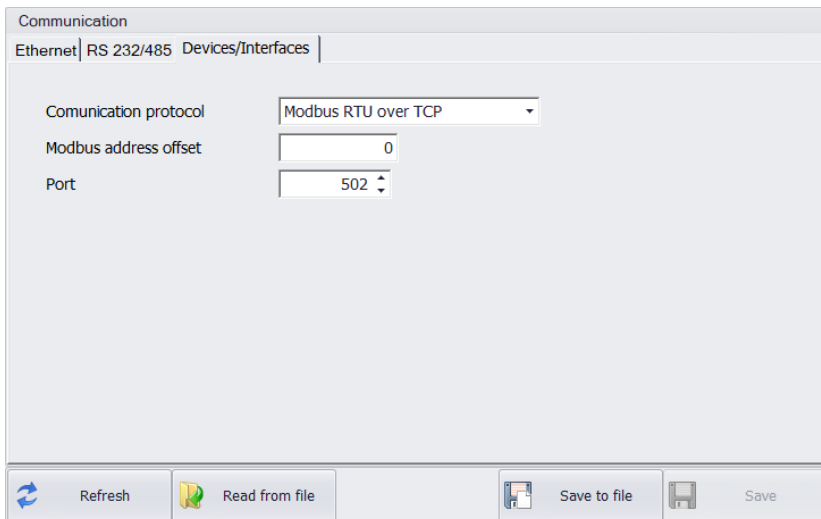
Where:

Communication protocol	Selecting communication protocol for connection with peripheral device. Options: Modbus RTU (RS485), Modbus RTU over TCP, Modbus TCP. Default value **---- (none)**.
Module address offset	Setting module address offset. Default value **0**.
Port	Setting port number for protocols: Modbus RTU over TCP, Modbus TCP. Default value **502**.

- Upon changing the communication parameter values, the following information is displayed: **<To activate the set parameters, click save button. Module restart proceeds>**.
- Save the parameters in accordance with section 3 of this manual. The device is restarted.

6.3.3. I/O Functions

The MW-04 mass converter is equipped with four inputs and four outputs. Parameters tab features **<I/O functions>** button, press it to run window for configuration of inputs and outputs. For each input and output select the number of scale/platform for which its function is to be performed.

Inputs/outputs configuration window

- **Input Setup**

None	Input inactive.
Taring	Selected platform taring.
Zeroing	Selected platform zeroing.
Start dosing	Dosing process start.
Stop dosing	Dosing process stop.

- **Output Setup**

None	Output inactive.
Stable	Stable weighing result above LO threshold value.
MIN stable	Stable weighing result above LO and below MIN threshold value.
MIN	Unstable weighing result above LO, below MIN threshold value.
OK stable	Stable weighing result between MIN and MAX thresholds.
OK	Unstable weighing result between MIN and MAX thresholds.
MAX stable	Stable weighing result above MAX threshold.
MAX	Unstable weighing result above MAX threshold.

	If you set specific function to an output for which quick or accurate dosing function has already been assigned, then during dosing process start and in the course of it, the output operates in accordance with the settings of dosing parameters. Upon dosing process completion the output switches to the set function.

6.3.4. Preview of Available Weighing Platforms

Parameters tab features **<4>** button, press it to run the preview of weighing result windows simultaneously for all platforms controlled by the MW-04 mass converter. Informatively for each platform the A/D converter (or converters) divisions, adjustment factor and start mass are displayed.

	The window view depends on the quantity of A/D converters used, weighing platforms connected and their configuration.

Window with four weighing platforms view

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6.3.5. Preview of Available A/D Converters

Parameters tab features **<ADC>** button, press it to preview divisions, adjustment factor, mass, correction factor and start mass of available A/D converters.

> ⚠ **_The window view depends on the quantity of A/D converters used, weighing platforms connected and their configuration._**
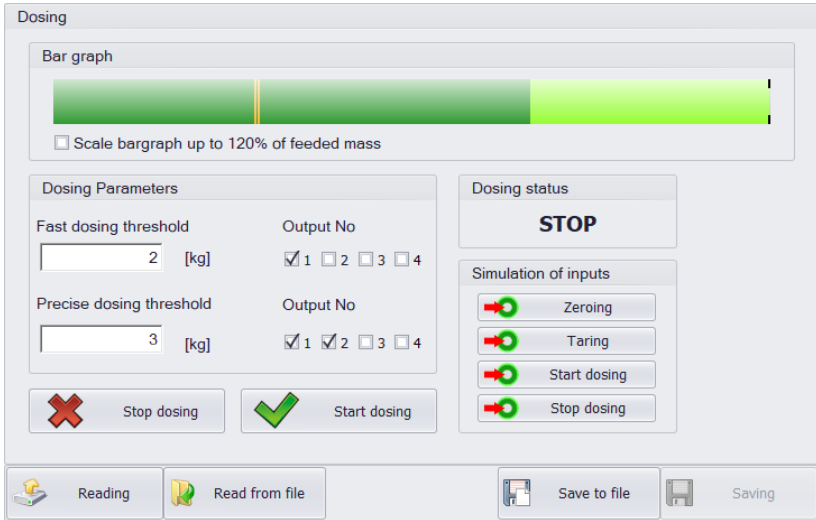

A/D converters preview window

6.4. Functions

F Functions tab features dosing and checkweighing functions and enables to check the status and simulation of inputs/outputs.

6.4.1. Dosing

Dosing is a working mode enabling precise filling, wherein the filling takes as long as it is necessary to obtain the pre-defined target weight.

To open dosing settings for currently selected weighing platform, enter
< F Functions **/Dosing>** submenu.

Dosing process window

- **Bar graph**

Dosing mode home screen features a bar graph showing mass indication
within mass converter range. Upon selecting **<**Scale bar graph up to 120%
of fed mass**>** option the bar graph zooms up to 120% of the preset mass.
If the precise dosing threshold is disabled (set to 0), the bar graph is zoomed
according to the fast dosing threshold.

Bar graph for small mass value, zoom off

Bar graph for the same mass value, zoom on

- **Dosing Parameters**

1- or 2-stage dosing parameters:

Fast dosing threshold	Enter to set mass value for fast dosing in the case of 2-stage dispensing.
Fast dosing output no.	Enter to declare outputs for fast dosing in the case of 2-stage dispensing.
Precise dosing threshold	Enter to set target mass value to be dosed in case of the automatic dispensing.
Precise dosing output no.	Enter to declare outputs for precise dosing in the case of 2-stage dispensing.

- **Dosing Status**

Window with dosing status informs on current state of dosing process that is carried out on a platform displayed in the weighing window.

DOSING	Dosing in progress.
ABORTED	Dosing aborted upon pressing **<Stop dosing>** button.
STOP	Dosing stop.
COMPLETED	Dosing completed.

- **Simulation of Inputs**

Inputs simulation enables simulating operation of a function assigned to a particular input.

Zeroing	Function button assigned to input 1.
Taring	Function button assigned to input 2.
Start dosing	Function button assigned to input 3.
Stop dosing	Function button assigned to input 4.

- **Dosing Process Simulation**

Start and stop dosing buttons are located at the bottom of the window. The buttons start (Start dosing) and stop (Stop dosing) dosing process operate independently from functions assigned to the inputs.
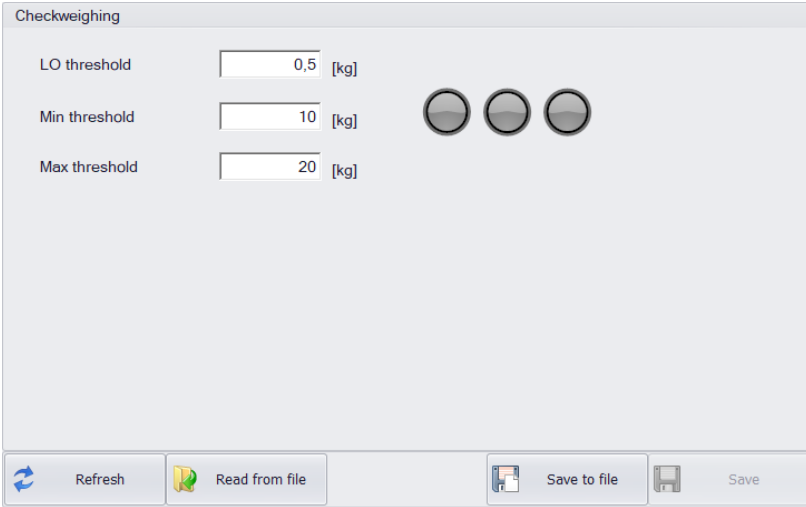
6.4.2. Checkweighing

Checkweighing function enables entering checkweighing thresholds values (**Min**, **Max**). Such solution enables fast evaluation of sample mass. There is no need for constant control of the weighing result.

Thresholds values are signalled with colours or presented by means of control of external equipment systems.

Thresholds in checkweighing

To open checkweighing settings for currently selected weighing platform, enter < F Functions /**Checkweighing**> submenu.

Checkweighing process window

Where:

|	
LO threshold	Net weight value above which checkweighing function is active.
MIN threshold	Net weight value of MIN checkweighing threshold.
MAX threshold	Net weight value of MAX checkweighing threshold.

Checkweighing thresholds signalling:

MIN	*OK*	*MAX*

⚠	***In order to enable checkweighing signals, set the checkweighing function for outputs.***

6.4.3. I/O Status

Inputs signalling and outputs state settings. To open inputs/outputs status settings, enter **< F̲ Functions /Dosing>** submenu.
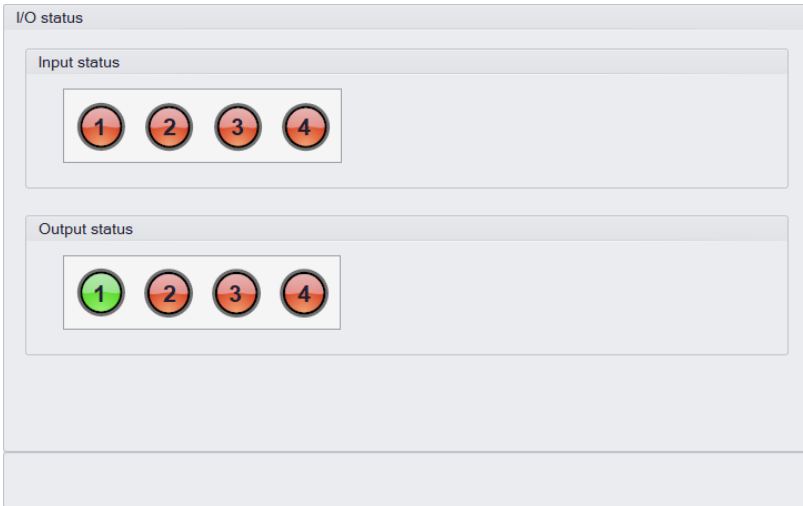

Inputs and outputs window

Inputs/outputs numbers in the software reflect numeration in the device.

	Input/output on.
	Input/output off.

Simulation of output operation is possible upon pressing output number. The output is immediately activated on condition that no other function is assigned to it. Simulation of inputs operation is available in the dosing home screen.

7. PARAMETERS EXPORT / IMPORT

This option enables creating backup and copying parameters between devices. The files feature ***.sav** extension. File-stored data is encoded therefore the file content is not readable for standard computer programs.
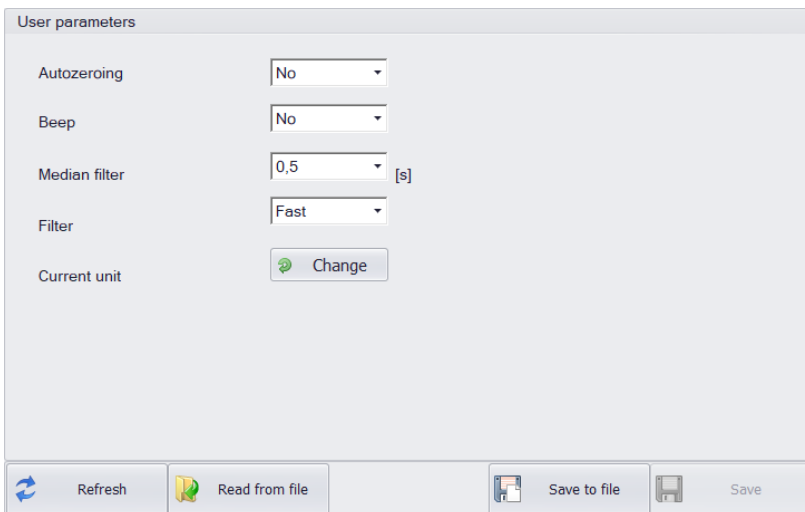
An exemplary window with parameters import/export option.

File format:

| **MW-01-A**	MW01_(serial number)_RRRR-MM-DD_HH-MM.sav.
MW-04	MW04_(serial number)_RRRR-MM-DD_HH-MM.sav.

7.1. Parameters Export

- Upon setting mass converter parameters press **<Save to file>** button. An operating system window **<Saving as>** is opened.
- Select where to save the file and press **<Save>** button.
- Correctly saved parameters result in displaying the following message:
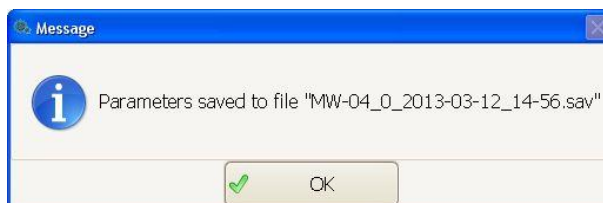
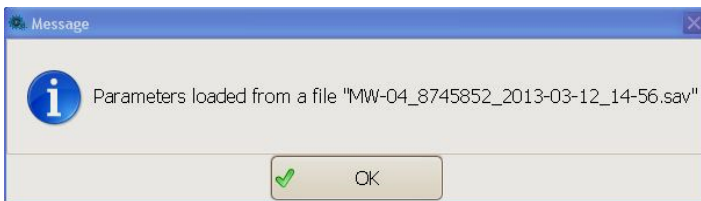### 7.2. Parameters Import

- Press **<Read from file>** button to import parameters, **<Opening>** window is opened.
- Select previously saved file and press **<Open>** button, **<Select parameter group>** window is opened:
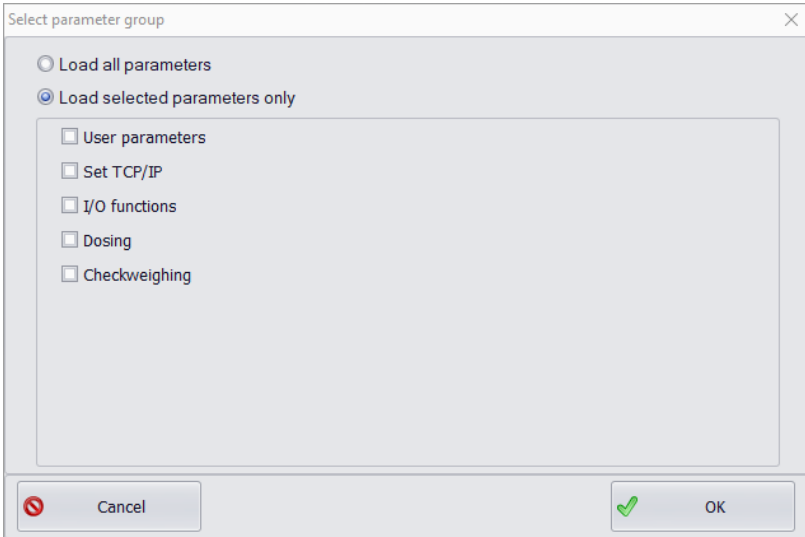
- Select respective parameters to be uploaded and press **<OK>** button to confirm.
- Correctly uploaded parameters result in displaying the following message: