Installation Instructions

Sartorius PMA.Quality
PMA7501, PMA7501-000...

Electronic Paint-mixing Scales
General View of the Equipment
PMA7501

The following symbols are used in these instructions:
- Indicates required steps
○ Indicates steps required only under certain conditions
> Describes what happens after you have performed a particular step
- Indicates an item in a list
△ Indicates a hazard
The PMA7501 has been specially designed for use in the paint-mixing sector. This scale can be operated either using the keypad on the display and control unit (in “stand alone” mode) or using the application software (e.g., paint manufacturers’ paint-mixing applications) installed on your PC.

If required, Sartorius can supply you with DOS or Windows®-based device drivers to generate application programs.

Note:

- Read the installation and operating instructions carefully before connecting the scale and putting it into operation.

- The application examples and menu settings described in these installation instructions are not valid for PMA7501-000W.
Warnings and Safety Precautions

This scale meets the guidelines and standards governing electronic equipment, electromagnetic compatibility and the stipulated safety standards. Improper use or handling can result in property damage and/or personal injury. To prevent damage to the equipment, read these operating instructions thoroughly before using your scale. Keep these instructions in a safe place.

- If the equipment is not used in accordance with the operating instructions, product liability may be affected.
- Do not expose the scale to extreme temperatures, aggressive chemical vapors, moisture, shocks or vibrations.
- The displayed values can be affected when subjected to extreme electromagnetic influence. When the negative influence has subsided, the scale will again be fully operational.

⚠️ The equipment must be used indoors only.

⚠️ The scale may not be operated in hazardous /EX Zone areas.

⚠️ To ensure safety, disconnect the equipment from power before connecting or disconnecting the cables or electronic peripheral devices.

- If you use cables purchased from another manufacturer, check the pin assignments in the cable against those specified by Sartorius before connecting the cable to Sartorius equipment, and disconnect any wires that are assigned differently. The operator shall be solely responsible for any damage or injuries that occur when using cables not supplied by Sartorius.

- When connecting the scale to the power supply, the laws valid in your country must be observed. If you should have any questions, please contact your supplier or Sartorius Customer Service for information on the legal regulations applicable in your country. The scale must be installed by a certified technician to avoid forfeiture of all claims under the manufacturer’s warranty.

⚠️ If you see any indication that the scale cannot be operated safely (for example, due to damage), turn it off and lock it in a secure place or otherwise prevent use of the equipment for the time being. Adhere to the accident prevention regulations and inform the operators accordingly.

⚠️ Always make sure the equipment is disconnected from AC power before performing any installation, cleaning, maintenance or repair work on the scale. To avoid forfeiture of all claims under the manufacturer’s warranty, all repair and maintenance work must be performed by authorized Sartorius service technicians.

- All other cables connecting the weighing equipment and peripheral devices, as well as the wiring inside the devices, are cased in PVC materials. Chemicals that corrode these materials must be kept away from these cables.

⚠️ Never use a hammer to close the lid of a paint can while it is still on the weighing pan. Otherwise, you will damage the weighing system.
Getting Started

- Remove the scale from its packaging.

- After unpacking the scale, check it immediately for any visible damage as a result of rough handling during shipment.

Equipment Supplied
- Scale
- Weighing pan
- Table adapter with country-specific mains cable
- 2x protective plugs (in the column)
- Model PMA7501-000U only: USB data cable

Setting Up the Scale
Choose a suitable place to set up the scale. Avoid exposure to drafts, heat, moisture and vibration. Make sure to read the instructions carefully before connecting the scale to AC power.

⚠️ Observe the safety instructions and warnings in this manual.

- Place the weighing pan on the scale.
Connection to AC Power

The equipment is powered through the AC adapter supplied.

- Insert the right-angle plug into the DC jack (13) on the scale.
- Connect the country-specific mains cable to the adapter.
- Plug the mains cable into an electrical AC power outlet.

⚠️ Observe the safety instructions and warnings in this manual. Check that the voltage rating of the AC adapter matches that of your local line voltage (mains supply). If it does not match your local voltage rating or if the plug design differs from your local standard, contact your Sartorius office or dealer. Use only original Sartorius AC adapters. The use of AC adapters from other manufacturers, even if these units have a registered approval rating from a national testing laboratory, requires the approval of a certified technician.
Operation

Turn on the scale using the \( \text{\textcircled{2}} \) key.

After the scale has been turned on, it will automatically run a self-test. At the end of this test, 0.0 g is displayed.

If a different readout is displayed, zero or tare the scale using the tare key \( \text{\textcircled{5}} \).

Weighing with One Decimal Place

Place an empty paint can on the weighing pan. Press the tare key \( \text{\textcircled{5}} \). The display shows “0.0 g.” Pour in the first component, and read off the weight as soon as the stability symbol appears; in this case, “g.” Pour in additional components until the desired weight of your formula is reached. Remove the filled paint can from the weighing pan.

Never use a hammer to close the lid of a paint can while it is still on the weighing pan. Otherwise, you will damage the weighing system.
Weighing with Two Decimal Places

Note:
To weigh using two decimal places, you must first adapt the settings (refer to the chapter entitled “Menu Settings”)

Press the toggle key \[ \text{(6)} \]. The display shows “0.00 g.”

Place an empty paint can on the weighing pan (11).

Press the tare key \[ \text{ - } \text{(5)} \]. The display shows “0.00 g.”

Pour in the first component: 205.50 g.
Read off the weight as soon as the stability symbol appears; in this case, “g.”

Pour in additional components until the desired weight of your formula is reached.
Remove the filled paint can from the weighing pan.

Important Note:
If you tare the scale, and then press the toggle key \[ \text{(6)} \] to toggle to the second decimal place with a resolution of 0.05 g, you can continue weighing with two decimal places up to 999.95 g.
For weights exceeding 999.95 g, only one decimal place will be displayed.

Never use a hammer to close the lid of a paint can while it is still on the weighing pan.
Otherwise, you will damage the weighing system.
Applications

Formulation Mode (Calculation by a Factor)
This mode enables you to weigh in amounts that are smaller or larger than that of your basic formula for a specific paint color (e.g., 250 ml of a 1-L formula).
You can select various factors (amounts) by pressing the formulation key (7): 0.25 0.5 0.75 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0.

By pressing the \( \pm \) key (3): upwards
or
\( \pm \) key (4): downwards,
you can alter the value – in 0.1 increments, as of factor 1.0
or
– 0.01 increments, from factor 0.25 to 1.0.

Important Note:
The flashing arrow \( \downarrow \) on the display means that the weight shown is not verified for use in legal metrology (not legal for trade).

Example:
As you pour in the components of your formula, the weight is displayed in “g.”
Let’s suppose you want to weigh only 250 ml of a basic formula that is for a total amount of 1 L. With the recalculation mode, you do not need to manually recalculate the individual components.
The basic formula for 1 liter is:
\[
250 \text{ g} \quad 1^{\text{st}} \text{ component} \\
+ \quad 250 \text{ g} \quad 2^{\text{nd}} \text{ component} \\
+ \quad 500 \text{ g} \quad 3^{\text{rd}} \text{ component} \\
\text{Total: } 1000 \text{ g}
\]

1. Place the empty paint can on the weighing pan and tare (zero the display).
2. Press the formulation key (7) several times to select the conversion factor “.25” used in this example.
We have come to the end of our example. According to the display, exactly 1,000 g was poured in, but the paint can actually contains only 250 g by weight according to the factor you selected, .25. Follow the same procedure for any other conversion factor or to convert a 1-gallon formula into quarts.

Weighing Using the Recalculation Mode
Let's suppose that you poured in too much of one color component for a given formula (e.g., one consisting of 4 components).
In addition, let's assume that you previously poured in all of the other amounts exactly according to each of the values you entered and stored by pressing the [MEM] (9). Press the [S] key (4) to start the recalculation program. "C" will begin flashing on the display.
To correct the weight displayed to the same value you entered for the given formula, either scroll upwards using the [R] key (3), or downwards using the [S] key (4). When you then press the [L] key (9), the scale will automatically calculate and display the amounts of paint in "g" to add for each of the other components that you already poured in. This mode thus ensures that the total result of your formula for these components will be correct.
After pouring in these amounts, you can continue to add the remaining components of your formula.

Important Note:
You can correct an incorrect amount any number of times. However, the total (liter) quantity in the paint can will increase each time you correct a component. Therefore, press the [C] key (8) to check how much the total quantity (in liters) will be. ("C" = correction factor)

The arrow ⬇ in the display means that the weight shown is not verified for use in legal metrology (not legal for trade).
Example (cumulative):

1. Place an empty paint can on the weighing pan (11).
   + 118.0 g

2. Press the [mem] key (5) 0.0 g
   + 50.0 g

3. Pour in the first component.
   + 50.0 g

4. Press the [mem] key [MEM] (9). STO 01
   + 110.0 g

5. Pour in the 2nd component. + 110.0 g
   STO 02

6. Press the [mem] key [MEM] (9). STO 02

7. Pour in the 3rd component. + 203.0 g
   Oops!
   You poured in too much!
   The correct weight for the formula is 200.0 g.

8. Press the [mem] key (4) to start the recalculation mode.
   A “C” = correct flashes on the display
   + 200.0 g

9. Press the [mem] key (4) several times to correct the value to:
   + 200.0 g

10. Press the [mem] key [MEM] (9)
    COR 01

11. 1. Add the first component. “C1” is displayed –1.7 g
    + 117.0 g

12. Pour in paint until 0.0 g is displayed. 0.0 g
    + 0.0 g

13. Press the [mem] key [MEM] (9) COR 02

14. Add the second component. “C2” is displayed. –2.0 g
    + 20.0 g

15. Pour in paint until the value 0.0 g is obtained 0.0 g
    + 0.0 g

16. Press the [mem] key [MEM].
    The scale will automatically return to the formulation program “C” disappears.
    + 200.0 g

17. To check the total weight, press the [mem] key (8) [REC].
    “C” = Correction factor, in this example 1.03.
    (Total formula weight × correction factor = total weight)
    + 203.0 g

18. Add the fourth component + 1000.0 g
    We have come to the end of our example.
Calibration/Adjustment

You can calibrate/adjust the scale by pressing the tare key \( U \) (5). To do so, menu code 1 5 1 must be selected.

Calibration weight: 5,000 g; accuracy: + 0.075 g.

After connection to AC power and before each calibration/adjustment, allow the scale to warm up for approx. 30 min.

Hold down the tare key \( U \) (5), for 2 sec. When 5000 is displayed, release the key.

Center the calibration weight on the weighing pan (11). Calibration/adjustment is performed automatically. After calibration and adjustment, remove the weight.
Menu Settings

Navigating the SETUP Menu

Example: Adaptation to ambient conditions

- Hold down the [Enter] key for approx. 2 sec. “SETUP” will appear on the display (Level 1).
- Use the [ ] keys to select the desired menu item in the first level.
- Press the [Enter] key to select the second level (Level 2).
- Use the [ ] keys to select the desired menu item in the second level.
- Press the [Enter] key to select the third level (Level 3).
- The menu items in the third level (Level 3) will be displayed.
- Use the [ ] keys to select the desired menu item.
- Press the [Enter] key to select the fourth level (Level 4).
- Call up the menu item desired in the fourth level. Use the [ ] keys to select the desired menu item. (We have come to the end of our example.)
- Press the [Enter] key. “o” will appear; the desired setting is defined.
- Press the [Clear] key several times to exit the menu.

Note:
To obtain a detailed list of the menu codes, please ask your nearest Sartorius office.
Important Menu Settings

Hold down the [L] key [ENTER] for approx. 2 sec. “SETUP” will appear on the display (Level 1).

Level 1
SETUP

Language Settings

Level 1 Level 2

<table>
<thead>
<tr>
<th>LANGUAGE</th>
<th>Press the [L] key to select “LANGUAGE”</th>
</tr>
</thead>
<tbody>
<tr>
<td>GERMAN</td>
<td>Press the [R] key press [ENTER]</td>
</tr>
<tr>
<td>ENGLISH</td>
<td>Press the [LS] keys to select a language</td>
</tr>
<tr>
<td>FRENCH</td>
<td>Press the [L] key [ENTER]; “o” appears; the desired setting is defined.</td>
</tr>
<tr>
<td>ITALIAN</td>
<td>Press the [C] key (Clear) several times to exit the menu.</td>
</tr>
</tbody>
</table>

Default Setting: Standard (0.1) or PolyRange (0.05 g/0.1 g); Grams, PT or LB.

Default for these parameters are defined under “SETUP-SCALE-UNIT” and “SETUP-SCALE-DECIMALS”:

Level 1 Level 2 Level 3 Level 4

<table>
<thead>
<tr>
<th>SETUP</th>
<th>Scale</th>
<th>Press the [L] key: [ENTER]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unit</td>
<td>Press the [R] key: [ENTER]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[T] keys: select “DECIMALS”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Press the [C] key: [ENTER]</td>
</tr>
<tr>
<td></td>
<td>Grams</td>
<td>[T] keys: select “STANDARD”</td>
</tr>
<tr>
<td></td>
<td>PT/LB</td>
<td>Press the [L] key [ENTER]; “o” appears; the new code has been set.</td>
</tr>
<tr>
<td></td>
<td>DECIMALS</td>
<td>Press the [C] key (Clear), several times to exit the menu.</td>
</tr>
<tr>
<td></td>
<td>STANDARD</td>
<td>Press the [C] key (Clear), several times to exit the menu.</td>
</tr>
<tr>
<td></td>
<td>POLYRANGE</td>
<td>Press the [C] key (Clear), several times to exit the menu.</td>
</tr>
</tbody>
</table>

– Activating the Toggle Key

After the toggle key (6), has been activated, you can individually configure it with either 1 or 2 decimal places, as well as with grams or PT/LB. (see below). Once activated, pressing the toggle key toggles the display between units and decimal places.

Level 1 Level 2 Level 3 Level 4

<table>
<thead>
<tr>
<th>SETUP</th>
<th>APPLICATION</th>
<th>Press the [C] key: [ENTER]</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOGGLE</td>
<td>Press the [T] keys: select “APPLICATION”</td>
<td></td>
</tr>
<tr>
<td>OFF</td>
<td>Press the [C] key: [ENTER]</td>
<td></td>
</tr>
<tr>
<td>ON</td>
<td>Press the [T] keys: select “TOGGLE”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Press the [C] key: [ENTER],</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[T] keys: select “ON”.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Press the [C] key: [ENTER]; “o” appears; the desired setting is defined.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Press the [C] key (Clear) several times to exit the menu.</td>
<td></td>
</tr>
</tbody>
</table>
Assigning a Function to the [6] Toggle Key

Pressing the toggle key [6] toggles the scale between the default setting (see previous page) and the settings configured under “SETUP-SCALE-UNIT” and “SETUP-SCALE-DECIMALS”

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>SETUP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPLICATION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UNIT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT./LB.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o GRAMS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DECIMALS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o POLYRANGE</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activating the “LOCK” Function

By activating the “LOCK” function, you can protect the scale from unauthorized use. When the scale is connected to a PC, the two devices are in constant communication. If the “LOCK” function is activated under “EXTRAS,” and data transmission to the PC is interrupted, the lock symbol will be displayed. The scale will automatically be locked, preventing further weighing operations.

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>SETUP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXTRAS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOCK</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OFF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o ON</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Entering a Password

In addition to activating the “LOCK” function, the user may also enter a password. Should the user wish to deactivate the “LOCK” function by pressing the “OFF” key, he must first enter the valid password. The password is comprised of a 6-character numeric code. Use the [±] keys to call up numbers (0 to 9).

Six dashes (------) will appear in the display. The first dash will blink in the display. Select a number (0 to 9) using the [±] keys, press the [±] key [ENTER] to save the number. The second dash will start to blink. Repeat the aforementioned process. Should you wish to assign a blank space to one of the six characters, simply press the [±] key [ENTER] when the dash begins to blink. Once all 6 characters have been entered, press the [±] key [ENTER] to confirm.
**Note:**
Keep a record of the numeric code in a safe place. The scale can only be accessed by entering the correct code.

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INPUT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PASSWORD</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PW.OLD</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PW.NEW</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Press the `[` key [ENTER]
- Press the `[` key [ENTER]
- Press the `[` key [ENTER]
- Press the `[` key [ENTER]

**Changing the Password**

Should you wish to change the password, you must first correctly enter the old password under "Password." "PW.OLD" will be displayed. Following the correct input, "PW.NEW" will automatically appear. You can now enter a new password, or confirm each blinking dash by pressing the `[` key [ENTER]. Blank spaces are then displayed.

**Note:**
The old password can be deleted by entering 6 blank spaces. The scale is thus reset to its original state; i.e., the scale is not password-protected.

<table>
<thead>
<tr>
<th>Level 1</th>
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<th>Level 3</th>
<th>Level 4</th>
</tr>
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<tbody>
<tr>
<td><strong>INPUT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PASSWORD</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PW.OLD</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PW.NEW</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Press the `[` key [ENTER]
- Press the `[` key [ENTER]
- Press the `[` key [ENTER]
- Press the `[` key [ENTER]
- Press the `[` key [ENTER]
- Press the `[` key [ENTER]
- Press the `[` key [ENTER]
- Press the `[` key (Clear) reset the menu.
Setting "TEXTS" in the Display, "LONG" or "SHORT"

Either short or long display prompts for operator guidance can be shown.

- Press the \[L\] key [ENTER]
- Press the \[RS\] keys to select "EXTRAS"
- Press the \[L\] key [ENTER]
- Press the \[RS\] keys to select "TEXTS"
- Press the \[L\] key [ENTER]
- Press the \[RS\] keys to select "SHORT,"
- confirm by pressing the \[L\] key.
- Press the \[c\] key (Clear) several times to exit the menu.

Resetting the Scale: "RESET"

If necessary, you can reset the scale to factory settings.

Note:
If a password was activated, the correct password must first be entered.

- Press the \[L\] key [ENTER]
- Press the \[RS\] keys to select "RESET"
- Press the \[L\] key [ENTER]
- Press the \[RS\] keys to select "MENU"
- Press the \[L\] key [ENTER]
- Use the \[RS\] keys to select "YES"
- Press the \[c\] key (Clear); "o" will appear: the new code is set
- Press the \[c\] key (Clear) several times to exit the menu.

Setting Codes

Under the setting "CODES," the menu items are displayed in code 1.1.1.1.

- Press the \[L\] key to select “LANGUAGE”
- Press the \[RS\] keys to select "CODES"
- Press the \[c\] key (Clear); "o" will appear: the new code is set
- Press the \[c\] key (Clear) several times to exit the menu.

Note:
To obtain a detailed list of the menu codes, please ask your nearest Sartorius office.
## Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>No segments appear on the weight display</td>
<td>No AC power available</td>
<td>Check the AC power supply</td>
</tr>
<tr>
<td>Weight display shows “LDW”</td>
<td>The weighing pan is not in place</td>
<td>Position the weighing pan</td>
</tr>
<tr>
<td>Weight display shows “HIGH”</td>
<td>The load on the pan exceeds the scale’s capacity</td>
<td>Unload the scale</td>
</tr>
<tr>
<td>The weight readout changes constantly</td>
<td>Unstable ambient conditions</td>
<td>Set up the scale in another area</td>
</tr>
<tr>
<td></td>
<td>Too much vibration or the scale is exposed to draft</td>
<td>Access the menu to select the appropriate code to adapt the scale to the particular weighing environment (refer to “Menu Settings”)</td>
</tr>
<tr>
<td>The weight readout is obviously wrong</td>
<td>The paint component does not have a stable weight</td>
<td>Tare prior to weighing</td>
</tr>
<tr>
<td></td>
<td>The scale was not tared before weighing</td>
<td></td>
</tr>
<tr>
<td>No weight value is shown and the lock symbol is active</td>
<td>Data communication between scale and PC has been interrupted and the “Lock” function is active</td>
<td>Access the menu settings to deactivate the “Lock” function, Check the connection</td>
</tr>
</tbody>
</table>
Care and Maintenance

Cleaning

⚠️ Do not use caustics, concentrated acids or pure alcohol.

⚠️ Make sure that no liquid enters the scale housing.

- Clean the scale using either a paint brush or a dry, soft and lint-free cloth.

Storage and Shipping Conditions

- To ensure safe shipment, your scale has been packaged using environmentally friendly materials. You should retain these materials in case you need to package your scale for storage or return shipment.
- Storage temperature: –20°C to +75°C
- Permissible moisture level for storage of the packaged scale: 90% max.
- Read and follow the instructions given in the section entitled “Safety Inspection.”

Safety Inspection

Safe operation of the PMA is no longer ensured when:
- There is visible damage to the AC adapter/power supply
- The AC adapter/power supply no longer functions properly
- The AC adapter/power supply has been stored for a relatively long period under unfavorable conditions
- The equipment has been exposed to rough handling during shipment

- Observe the warning and safety information

In this case, notify your nearest Sartorius Service Center or the International Technical Support Unit based in Goettingen, Germany. Maintenance and repair work may only be performed by service technicians who are authorized by Sartorius and who
- Have access to the required service and maintenance manuals, or
- Have attended the relevant service training courses

⚠️ The seals affixed to this equipment indicate that only authorized service technicians are allowed to open the equipment and perform maintenance work so that safe and trouble-free operation of the equipment is ensured and the warranty remains in effect.
Recycling

**Information and Instructions on Disposal and Repairs**

In Germany and many other countries (see www.sartorius.com, Service Download area for details), Sartorius or the organization contracted by us takes care of the proper return and legally compliant disposal of its electrical and electronic equipment on its own. These products may not be placed with the household waste or brought to collection centers run by local public disposal operations – not even by small commercial operators.

For disposal in Germany and in the other Member States of the European Economic Area (EEA), please contact our service technicians on location or our Service Center in Goettingen, Germany:

Sartorius
Service Center
Weender Landstrasse 94–108
37075 Goettingen, Germany

In countries that are not members of the European Economic Area (EEA) or where no Sartorius affiliates, subsidiaries, dealers or distributors are located, please contact your local authorities or a commercial disposal operator.

Prior to disposal and/or scrapping of the equipment, any batteries should be removed and disposed of in local collection boxes.

Sartorius, its affiliates, subsidiaries, dealers and distributors will not take back equipment contaminated with hazardous materials (ABC contamination) – either for repair or disposal. Please refer to the accompanying leaflet/manual or visit our Internet website (www.sartorius.com) for comprehensive information that includes our service addresses to contact if you plan to send your equipment in for repairs or proper disposal.

If you no longer need the packaging after successful installation of the equipment, you should return it for recycling. The packaging is made from environmentally-friendly materials and is a valuable source of secondary raw material.
# Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>PMA 7501, PMA7501–000W, PMA7501–000V2</th>
<th>PMA7501–000U</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighing range</td>
<td>g</td>
<td>999.95/7500</td>
</tr>
<tr>
<td>Readability</td>
<td>g</td>
<td>0.05/0.1</td>
</tr>
<tr>
<td>Tare range (subtractive)</td>
<td>g</td>
<td>–999.95/–7500</td>
</tr>
<tr>
<td>Max. linearity</td>
<td>g</td>
<td>±0.2</td>
</tr>
<tr>
<td>Stability range</td>
<td>digit</td>
<td>0.25 to 4</td>
</tr>
<tr>
<td>Moisture-proof rating</td>
<td>F</td>
<td>Non-condensing</td>
</tr>
<tr>
<td>Allowable ambient operating temperature range</td>
<td>°C</td>
<td>0 to +40</td>
</tr>
<tr>
<td>Weighing pan</td>
<td>⌀ mm</td>
<td>233</td>
</tr>
<tr>
<td>Scale housing (W x D x H)</td>
<td>mm</td>
<td>233 x 329 x 391</td>
</tr>
<tr>
<td>Net weight, approx.</td>
<td>kg</td>
<td>3.3</td>
</tr>
<tr>
<td>Calibration weight</td>
<td>kg</td>
<td>5, class F2 or better</td>
</tr>
<tr>
<td>Power consumption</td>
<td>VA</td>
<td>Average: 8; maximum: 16</td>
</tr>
<tr>
<td>Interface</td>
<td>RS-232C</td>
<td>USB (virtual serial interface)</td>
</tr>
<tr>
<td>- Format</td>
<td>7-bit ASCII, 1 start bit, 1 or 2 stop bits</td>
<td>7-bit ASCII, 1 start bit, 1 or 2 stop bits</td>
</tr>
<tr>
<td>- Parity</td>
<td>Even, odd or no parity</td>
<td>Even, odd or no parity</td>
</tr>
<tr>
<td>- Transmission rates</td>
<td>1200 to 38,400 bit/s</td>
<td>1200 to 38,400 bit/s</td>
</tr>
<tr>
<td>- Handshake mode</td>
<td>Software or hardware</td>
<td>Software or hardware</td>
</tr>
</tbody>
</table>

For more information, see the section entitled “USB Port”
Interfaces

9-contact interface port

<table>
<thead>
<tr>
<th>Pin Assignment</th>
<th>Pin</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pin 2: (RXD) Receive Data</td>
<td>1</td>
<td>VCC</td>
<td>+5 V</td>
</tr>
<tr>
<td>Pin 3: (TXD) Transmit Data</td>
<td>2</td>
<td>D–</td>
<td>Data –</td>
</tr>
<tr>
<td>Pin 4: (DTR) Data Terminal Ready</td>
<td>3</td>
<td>D+</td>
<td>Data +</td>
</tr>
<tr>
<td>Pin 5: (GND) Ground</td>
<td>4</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>Pin 6: BPI bridge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pin 8: (CTS) Clear to Send</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

USB Typ B
# Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-use dust cover</td>
<td>YDC01PMA</td>
</tr>
<tr>
<td>RS-232 data cable (SBI) (2 m)</td>
<td>YCC01-0027M2</td>
</tr>
<tr>
<td>RS-232 data cable (BPI) (2 m)</td>
<td>YCC01-0028M2</td>
</tr>
<tr>
<td>RS-232 data cable (BPI) (20 m)</td>
<td>YCC01-0028M20</td>
</tr>
<tr>
<td>USB/RS-232 data cable (SBI) (1.80 m)</td>
<td>YCO12</td>
</tr>
<tr>
<td>USB/RS-232 data cable (BPI) (1.80 m)</td>
<td>YCO13</td>
</tr>
<tr>
<td>USB data cable</td>
<td>YCC01-0040M3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC adapter</td>
<td></td>
</tr>
<tr>
<td>- for all countries except India</td>
<td>6971991</td>
</tr>
<tr>
<td>- for India only</td>
<td>6971983</td>
</tr>
<tr>
<td>+ country-specific cable</td>
<td></td>
</tr>
</tbody>
</table>
USB Port (PC)

Purpose
Any PMA7501-000U can be connected to a PC equipped with a USB port. A virtual serial interface (virtual COM port) is set up as a device type at the USB port. This virtual serial interface is identified and operated by the application program. The protocols xBPI and SBI can be transmitted via the USB port.

System Requirements
- Available USB port on the PC
- USB cable

Connecting the Balance via USB
⚠ The current USB port for the computer is established when the software driver is being installed. The driver must be re-installed every time you wish to change the port. Therefore, choose one USB port that can permanently or regularly be used to connect the balance.

- Switch off the balance.
- Unplug the balance from the mains.
- Connect the USB cable to the balance and to the USB port on the computer.
- Plug the balance into the mains again and switch it on.
- Windows detects the device connected to the USB port.

If the device is being connected for the first time, the Windows Installation Wizard will run.

Installing Software Drivers
- Run the Installation Wizard for the driver.
- Follow the instructions that appear.
- To complete the installation, click on Finish.
- The virtual interface is now ready for operation.

Windows® usually adds the virtual port in the position following your highest-numbered COM port.

Example:
For a PC with up to 4 COM ports, the new virtual port would then be COM5 (see Device Manager).
Installation Guides for Windows XP®, Windows Vista® and Windows 7®

Changing the Port Number
If you use the USB interface with a program that limits the number of COM port designations (e.g., only COM1, 2, 3, 4), you may have to assign one of these port numbers to the new virtual port.

- Open the setting for the USB serial port in the Windows® Control Panel:
  - START > My Computer > Control Panel
  - System > Hardware > Device Manager
  - Open the Connections submenu.
  - Double-click on USB Serial Port.
  - Select Port Settings > Advanced.

Changing Latency Time
- Open the settings for the USB serial port, following the above instructions.
- For a faster rate of communication, change the setting for the latency timer to 1msec.

Plug & Play Mode in Autoprint (SBI)
- Open the settings for the USB serial port, following the above instructions.
- Stop the Plug & Play mode from running.

Uninstalling the Driver
The software driver for the USB connection can be uninstalled with the Windows® Uninstaller.
EG-Konformitätserklärung

Sartorius Weighing Technology GmbH
Weserer Landstrasse 94 - 108
D-37075 Goettingen, Germany

Hersteller: Sartorius Weighing Technology GmbH

Geräteart: Digitale Waage

Geräteag: PM4100, PM4100 - 5000, PM4100 - 5000

In der von uns in Verkehr gebrachten Ausführung entspricht das Produkt den grundlegenden Anforderungen der folgenden Europäischen Richtlinien:

- Richtlinie 2011/65/EG: Direktive 2011/65/EG

Das Gerät entspricht den Anforderungen folgender harmonisierter Europäischer Normen:

- EN 55011:2004: Electromagnetic interference (EMI), power frequency (PFC) und Sicherheit

Jahr der Erstellung der CE-Konformitätserklärung: 2011

Dr. Reinhard Hensel
Vorstand Expert

Sartorius Weighing Technology GmbH
Goettingen, 2011-08-23


SARTORIUS

3840-0400-5E
505-3 RD-MAS-102
Konformitätserklärung

Declaration of Conformity

Sartorius Weighing Technology GmbH

Weddeler Landstr. 34 – 103
27607 Bielefeld, Germany

erkläre, dass das Gerät

declare that the equipment

Qualitätsmerkmal: Elektronische Sartorius-Platinenwaage

Device type: Electronic balance

Baureihe / Type: PMA 501, PMA 501-002, PMA 501-003, PMA 501-004, PMA 501-005, PMA 501-006, PMA 501-007, PMA 501-008

unterschreitet die Regelungen der Europäischen Richtlinie (in der letzten gültigen Fassung)

complies with the regulations of the European Directive (in the latest valid version)

Richtlinie 2014/30/EU Zur Beschränkung der Verwendung bestimmter gefährlicher Substanzen in Elektro- und Elektronikgeräten

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment

soweit das Gerät als neues Produkt gekennzeichnet ist mit

provided that the equipment is marked with:

Sartorius Weighing Technology GmbH

Bielefeld, 2011-06-23

Dr. Reinhold Baumruk

Werner Heiler-Reinhold

Vize Präsident R&D

Head of International Certification Management

Diese Erklärung beinhaltet die Übereinstimmung mit der genannten EU-Richtlinie, ist jedoch keine Unterschrift von einem Lebensmittel. Sie erweist mit der Unterschrift die Akzeptanz der Compliance der GUSkosten.

The declaration of conformity with the above mentioned EC Directive, but does not guarantee product attributes. Unauthorized product modifications make this declaration invalid.

SÜT: 100/5011

SÜT: 300/405-001

SÜT: 300/405-002

SÜT: 300/405-003