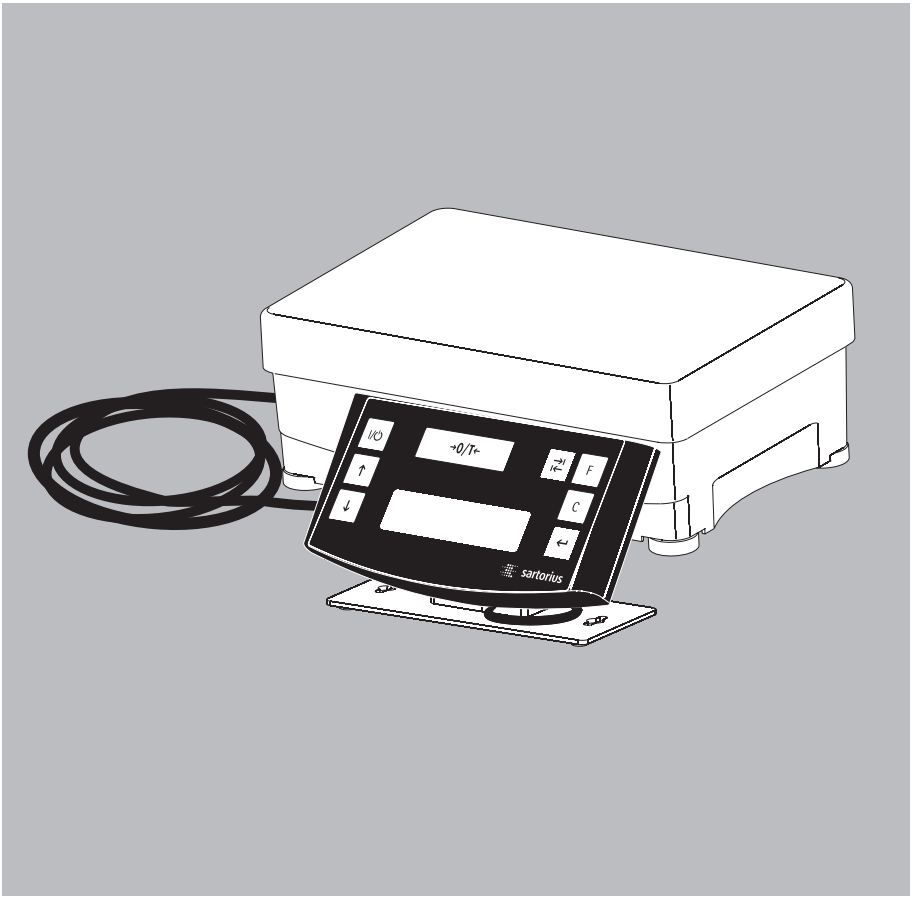
Installation Instructions

Sartorius PMA.Power
Model PMA35001-Y

Electronic Paint-mixing Scale for Use in Zone 2 Hazardous Areas



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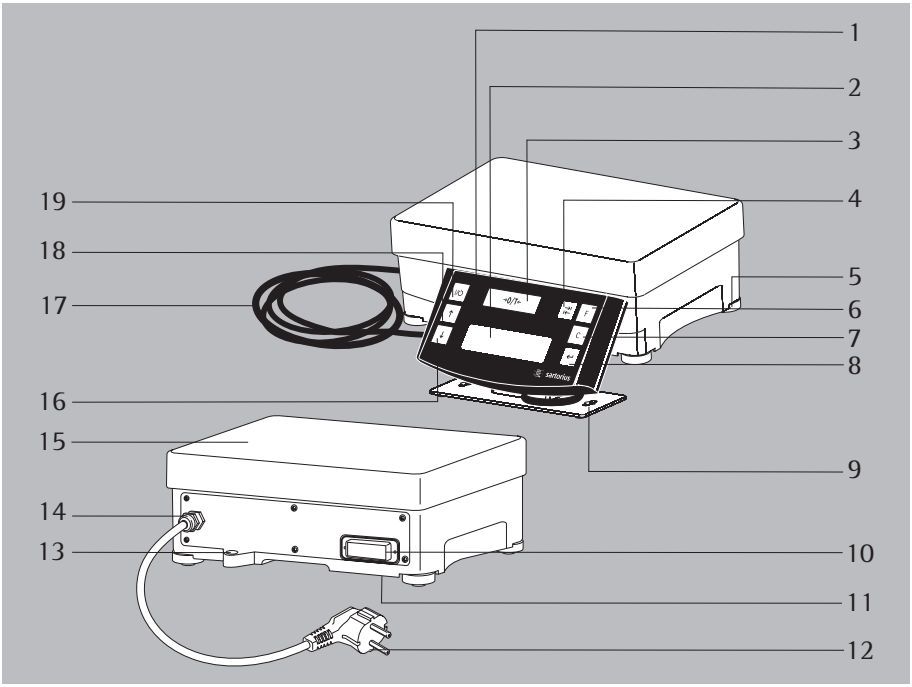
General View of PMA35001-Y (PMA.Power)

For Use in Zone 2 Hazardous Areas



1 Display and control unit
2 Display
3 [→0/T←] Zero/tare key
4 [⇄] Toggle key depending on the menu setting: You can configure the PMA35001-Y menu to enable toggling between grams (g) and parts per pound (p)
5 Leveling foot
6 [F] Factor key for paint-mixing applications
7 [C] [Clear] key and [REC] key for paint-mixing applications
8 [↵] key [ENTER] and [MEM] key for paint-mixing applications
9 Mounting bracket for display and control unit
10 Interface (25-contact D-Sub socket)
11 Grounding terminal
12 Power cord with plug
13 Level indicator
14 Cable connection
15 Load plate
16 [↓] 'Down' key
17 Power supply and data cable for the display and control unit
18 [↑] 'Up' key
19 [I/⏻] On/Off (standby) key

Symbols

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

Contents

Intended Use

The PMA35001-Y (PMA.Power series) scale is specially designed for use in paint-mixing applications. This scale can be operated via the keypad in stand-alone operation or using application software (such as a paint-mixing program from a paint manufacturer) installed on a connected PC.

If you wish to create your own application software, Sartorius can supply the required drivers for DOS or Windows operating systems.

Note:

– Make sure that you read the warnings and safety precautions carefully before installing and operating your PMA35001-Y scale.

Warnings and Safety Precautions

Note:

Improper use or handling can result in damage and/or injury. The scale should only be installed and operated by qualified personnel. When operating the equipment in a Zone 2 hazardous area, make sure you observe the warnings and safety precautions in their entirety during installation and operation, as well as while performing maintenance and repair work on the equipment. All relevant standards (e.g. EN60079-14), regulations, occupational safety requirements and environmental protection laws valid in your country must be observed. Please ask your supplier regarding the regulations applicable in your country. It is important that all personnel using the equipment understand this warning and safety information and have access to all relevant documents at all times. Furthermore, the warning and safety information supplied with any electrical equipment, such as peripheral devices, must be observed as well. These warnings and safety precautions must be supplemented by the operator as required. All operating personnel must be informed of any additions to these instructions. Make sure the equipment is accessible at all times.

General Provisions for Installing the PMA35001-Y

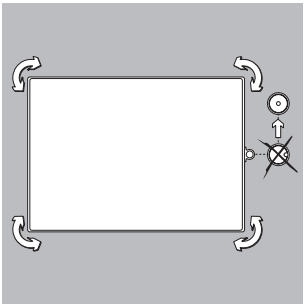
PMA35001-Y models meet the requirements defined in EC Directive 94/9/EG for Class II, Category 3G equipment and can be operated in Zone 2 hazardous areas in accordance with manufacturer certification: SAG 08ATEX002 X.

The safety precautions listed in drawing 36287-010-20-A4 (refer to Documents) must be strictly observed.

- PMA35001-Y models meet the requirements of the EC Directives for electromagnetic compatibility and electrical safety (refer to the chapter on CE Marking).
  The area of use for the PMA35001-Y is defined in the included documentation. All restrictions listed in the included documentation must be observed.
- Operating the PMA35001-Y beyond the restrictions indicated is not permitted, and is considered use of the equipment for other than its intended purpose. Any installation work that does not conform to the instructions in this manual results in forfeiture of all claims under the manufacturer's warranty.
- If the equipment is modified by anyone other than persons authorized by Sartorius, authorization is withdrawn and all claims under the manufacturer's warranty are forfeited.
- The installation of the PMA35001-Y in a hazardous area must be carried out by a certified electrician.
  A certified electrician is someone who is familiar with the assembly, start-up and operation of the system.
  He is also familiar with all relevant guidelines and regulations, and has the required qualifications for performing the installation. If you need assistance, contact your Sartorius dealer or the Sartorius Service Center.
- Avoid electrostatic charges. Connect an equipotential bonding conductor. Disconnecting equipotential bonding conductors is not permitted. The location is marked by a "ground" symbol.
  The grounding cable must have a min. cross section of 4mm^2.
  Connect all equipment, including peripheral devices, to the equipotential bonding conductor.
- Do not expose the weighing instrument to harsh chemical vapors or to extreme temperatures, moisture, shocks, or vibration.
- The display values can be impacted when subjected to extreme electromagnetic influence.
  When the negative influence has subsided, the scale will again be fully operational.
- The equipment must only be used indoors.
- Make absolutely sure to disconnect the scale from power (unplug the power cord) before you connect or disconnect a peripheral device (printer or PC) to or from the interface port.
- 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.
- The power connection must be made in accordance with the regulations applicable in your country. If you need assistance, contact your Sartorius dealer or the Sartorius Service Center. Any installation work that does not conform to the instructions in this manual results in forfeiture of all claims under the manufacturer's warranty.
- To avoid generating static electricity when using the dust cover:
  The cover should only be cleaned using a moist cloth.

For the User

- Always make sure the equipment is disconnected from AC power before performing any installation, cleaning, maintenance or repair work on the scale.
- If you see any indication that the scale cannot be operated safely (for example, due to damage), disconnect the scale from AC power and prevent use of the equipment for the time being.
- Chemicals (e.g. gases or liquids) that can corrode and damage the inside or outside of the device must be kept away from the equipment.
  Handle the equipment and any accessories in accordance with the IP rating (EN 60529).
- The casing on all connecting cables, as well as the casing on wires inside the equipment housing, is made of PVC or rubber.
- The permitted ambient temperature range during operation is 0°C to +40°C.
  Make sure that the equipment is properly ventilated to prevent the buildup of excessive heat.
- Only use original Sartorius spare parts.
- Never use a hammer to close a paint can while is it still on the load plate, as this will damage the weighing system.



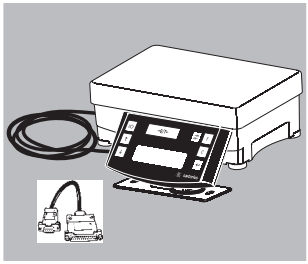
Leveling the Weighing Platform

Purpose:

- To compensate for uneven areas at the place of installation
- To ensure that the equipment is placed in a perfectly horizontal position for consistently reproducible weighing results
  Always level the weighing platform again any time after it has been moved to a different location.

● Level the weighing platform using the four leveling feet. Turn the feet until the air bubble is centered in the level indicator.
● Check to ensure that all leveling feet rest securely on the work surface.
> Each of the leveling feet must support an equal load.
> Adjusting the leveling feet:
  To raise the weighing platform, extend the leveling feet (turn counterclockwise).
  To lower the weighing platform, retract the leveling feet (turn clockwise).

Getting Started

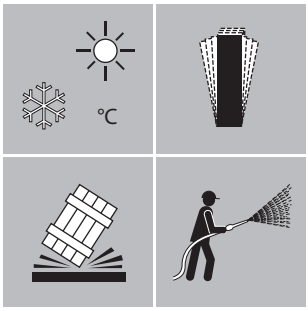


- Unpack the scale carefully.

- After unpacking the equipment, inspect the device immediately for any visible damage that may have been caused by rough handling during shipment.

Package Contents

– Scale
– Load plate
– Adapter cable

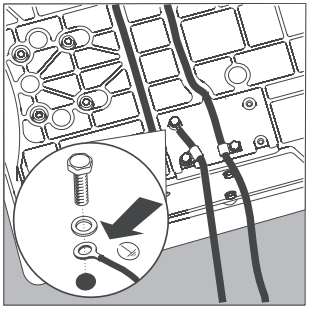


Setting up the Scale

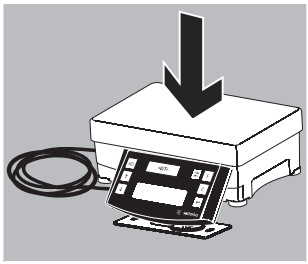
Choose a suitable location where your scale will not be exposed to drafts, heat radiation, moisture or vibrations.

Make sure that you read these operating instructions carefully before connecting the scale to the power supply.

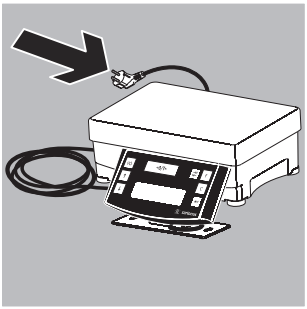
⚠ Observe all warnings and safety precautions.



- The scale must be grounded before installing the device in a Zone 2 hazardous area. Connect the cable to the grounding terminal (11); see illustration.

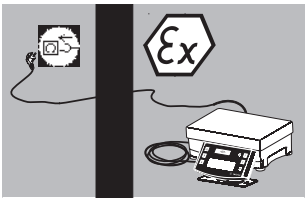


- Place the load plate on the scale.



Connecting to AC Power

The equipment is powered through the scale's power cord. Make sure that the voltage rating printed on this unit is identical to your local line voltage.
If the stated supply voltage or the plug design of the power cord does not comply with the standard you use, please inform your nearest Sartorius representative or your supplier.



Installation

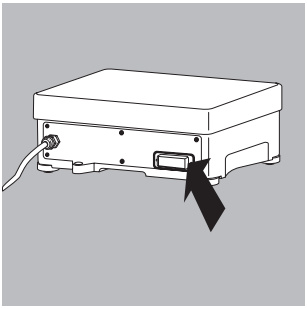
The device must be plugged into a properly installed wall outlet which has a protective grounding conductor (PE) and a max. (16A) fuse.

- Connection of the power supply (12) outside of the hazardous area or mechanically secured (refer to "Safety Information" documents).
- Plug the power cord into a wall outlet (mains). Observe all warnings and safety precautions.

⚠ See also: "Safety Information" documents.

Note:

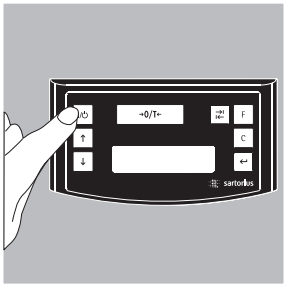
When installing the scale in a Zone 2 hazardous area, connectors may only be plugged in or disconnected in a currentless/dead-voltage state. Disconnect the scale from the power line before connecting peripheral devices (printer, PC) to the data interface of the device.



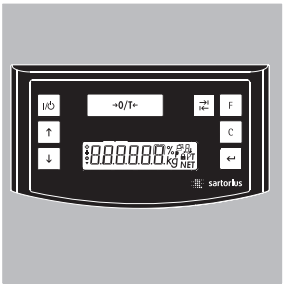
- When connecting peripheral devices (printer, PC) to the scale's data interface, make sure that the screws on the data plug are tightened securely.

⚠ Observe all warnings and safety precautions.
See also: "Safety Information" documents.

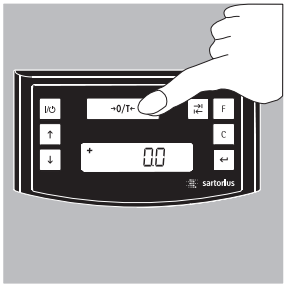
Operation



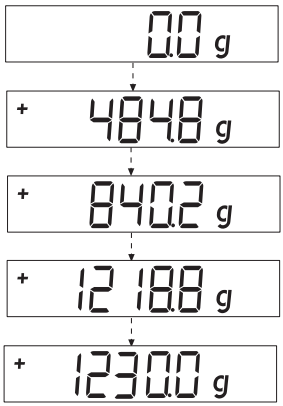
Press the I/⏻ key (19) to turn on the scale.



Once the scale has been turned on, it will run an automatic self-test. This is concluded with the readout **0.0** g.



If a different value is displayed: Tare the scale using the →0/T← key (Zero/tare) (3).



Weighing with One Decimal Place
Place an empty paint can on the load plate.
Press the →0/T← key (Zero/tare) (3).
The display shows »**0.0** g«. Pour the first component of your formula into the can and read off the weight when the stability symbol (in this example) »**g**« is displayed.
Add the other components up to the desired weight (formula).
Remove the filled paint can from the load plate.

Never use a hammer to close a paint can while is it still on the load plate, as this will damage the weighing system.

Applications

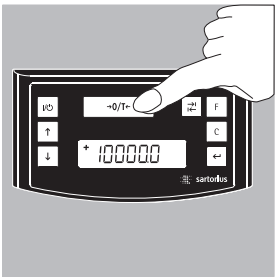
Formulation Mode (Calculation by a Factor)
This mode enables you to weigh in amounts that are smaller or larger than that of your basic formula for a specific paint color (e.g. 250 ml of a 1 l formula). You can select various factors (amounts) by pressing the [F] factor key (6):
0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 10.0 15.0 20.0 25.0.

By pressing the	'Up' (18) [↑] key
or	'Down' (16) [↓] key
you can change the value	– in 1.0 increments, as a factor of 5.0
	– in 0.1 increments, as a factor of 1.0
or	– 0.01 increments, up to a factor of 1.0.

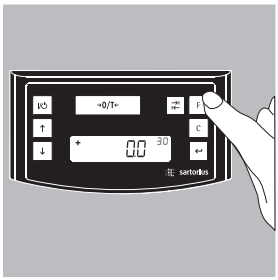
Note:
A flashing arrow ▼ on the display indicates that the weight value displayed is not valid in legal metrology (i.e., not legal for trade).

Example:
As you pour the components of your formula, the weight is displayed in »**g**«.
Let's suppose you want to weigh 3 kg for a basic formula that has a total of 1kg, and you don't want to have to manually recalculate the individual components of the formula.
The basic formula for 1 kg is:

	250 g	First component
+	250 g	Second component
+	500 g	Third component
Total:	**1000 g**	

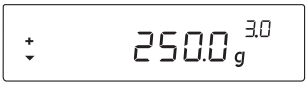


1. Place the empty paint can on the load plate and tare the scale.



2. Press the [F] factor key (6) repeatedly to set the factor to "3.0" for this example.

3. »**3.0**« appears next to the weight readout.



4. Slowly pour in the first component until the display shows »**250 g**«.

5. Pour in the second component until »**500 g**« is displayed.

6. Pour in the last component until »**1000 g**« is displayed.

   This concludes the recalculation example.
   According to the display, exactly 1000 g was poured in, but the paint can actually contains 3 kg by weight in accordance with the factor you selected (3).
   The procedure is the same for any other conversion factor.

Weighing Using the Recalculation Mode
Let's suppose that you poured in too much of one color component for a given formula (in this example, a 4-component recipe).
This example further assumes that you previously poured in all of the other amounts exactly according to each of the values you entered and saved by pressing the ↵ key [MEM] (9).
To correct for the overpour, press the ↓ key (16) to start the recalculation program; **C** flashes on the display. Use the ↑ key (18; up) or ↓ key (16; down) to correct the value so that it matches the amount called for in the formula. Then press ↵ [MEM] (8) to have the scale calculate the amount to be added for each of the components that were already poured.
The display shows the amounts required to correct the formula up to the point at which the overpour occurred. After the correction has been completed, you can continue filling the remaining components.

Note:
You can correct overpours as often as needed.
Keep in mind that the total quantity of paint at the conclusion of filling increases each time you correct a component. Press the c key (7) to check how much the total quantity will be. The **C** stands for "Correction factor."

A flashing arrow ▼ on the display indicates that the weight value displayed is not valid in legal metrology (i.e., not legal for trade).

Example (Cumulative Weighing)

1. Center an empty paint can on the load plate (15).
+ 118.0 g

2. Press the [→0/T←] key (zero/tare; 3).
0.0 g

3. Add first component
+ 50.0 g

4. Press the [↵] key [MEM] (8)
STO 01

5. Add the second component
+ 110.0 g

6. Press the [↵] key [MEM] (8)
STO 02

7. Add the third component
+ 203.0 g
Oops! You poured in too much. The correct value for the formula is 200.0 g.

8. PPress the [↓] key (16) to start the recalculation mode. A »C« (“Correction”) flashes on the display.

9. Press the [↓] key (16) repeatedly to correct the value.
+ 200.0 g

10. Press the [↵] key [MEM] key (8)
COR 01

11. The readout shows the amount of the first component to be added, and “C1” is shown in the upper right-hand corner of the display.
–1.7 g.

12. Add until value reaches 0.0 g.
0.0 g

13. Press the [↵] key [MEM] key
COR 02

14. The readout shows the amount of the second component to be added, and “C2” is displayed. – 2.0 g

15. Add until value reaches 0.0 g.
0.0 g

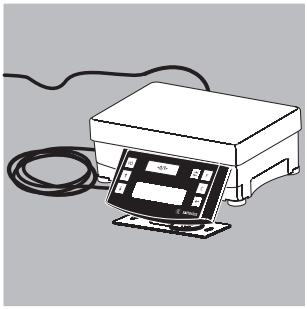
16. Press the [↵] key [MEM] key (8). The scale returns to the formulation program. »**C**« is no longer displayed.
+ 200.0 g.

17. Press the [c] key (7) [REC] to view the factor by which the total weight will exceed the original target defined in the recipe. (**C** = “Correction;” in this example, 1.03).
(Total weight = original target × correction factor)

18. Add fourth component
+1000.0 g

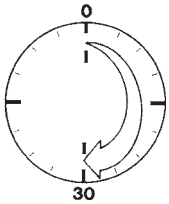
This concludes the recalculation example.

Calibration/Adjustment

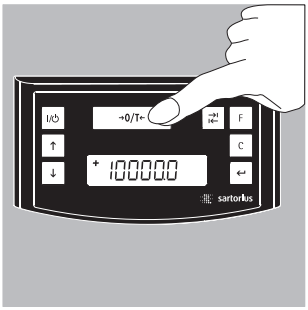


You can calibrate/adjust the scale by pressing the →0/T← key (Zero/tare) (3).

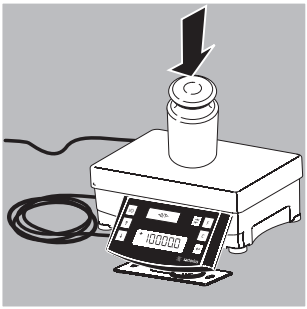
Calibration weights: 10,000 g; resolution: ± 0.016 g.



Always allow approximately 30 minutes for the scale to warm up after connecting it to AC power and before performing calibration/adjustment.

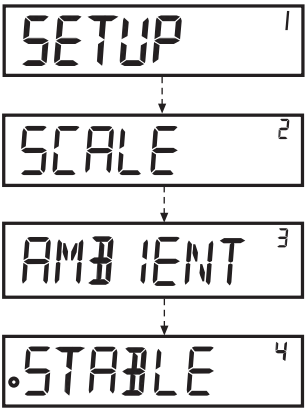


Press the →0/T← key (Zero/tare) (3) for 2 seconds;
"10000" is displayed.
Release the key.



Center the calibration weight on the load plate (15).
Adjustment is performed automatically.
Remove the calibration weight.

Menu Settings



Accessing the SETUP Menu
Example:
Menu item: Adapting the Scale to Ambient Conditions

- Hold down the ↵ key [ENTER] for approximately 2 seconds; "SETUP" is displayed.
- Use the ↑ ↓ keys to select the desired menu item on this level.
- Press the ↵ key [Enter] to select the next menu level.

- The second menu level is displayed. Use the ↑ ↓ keys to select the desired menu item on this level.

- Press the ↵ key [ENTER] to select the next menu level.

- The third menu level is displayed. Use the ↑ ↓ keys to select the desired menu item on this level.

- Press the ↵ key [ENTER] to select the next menu level.

- The fourth menu level is displayed. Use the ↑ ↓ keys to select the desired menu item on this level.

  This concludes the example.

- Press the ↵ key [ENTER]; **o** is displayed, indicating that this item is set.

- Press C key (Clear) repeatedly to exit the menu.

Note:
Contact your local Sartorius office for a detailed list of the menu codes.

Configuring the Main Menu Settings

- Hold down the ↵ key [ENTER] for approximately 2 seconds; "SETUP" is displayed.

Level 1

SETUP

Language Setting

Level 1	Level 2	
LANGUAGE		● Press the ↑ key to select LANGUAGE ● Press the ↵ key [ENTER]
	o GERMAN	● Press the ↑↓ keys to select a language
	ENGLISH	● Press the ↵ key [ENTER]; **o** indicates the active setting
	FRENCH	
	ITALIAN	● Press the c key repeatedly to exit the menu
	etc.	

Default Unit: Grams or Parts per Pound

The default settings is active when the scale is switched on; defined under "SETUP > SCALE > UNIT":

Level 1	Level 2	Level 3	Level 4	
SETUP				● Press the ↵ key [ENTER]
	SCALE			● Press the ↵ key [ENTER]
		UNIT		● Use the ↑↓ keys to select the desired setting; e.g., "UNIT"
			o GRAMS	● Press the ↵ key [ENTER]
			PT./PD.	● Use the ↑↓ keys to select the desired unit; e.g., "GRAMS"

⇄ Activating the Toggle Key

When the toggle key ⇄ (4) is active, you can configure it to toggle the weight unit between grams and parts per pound. The unit is toggled when the key is pressed.

Level 1	Level 2	Level 3	Level 4	
SETUP				● Press the ↵ key [ENTER]
	APPLICATION			● Use the ↑↓ keys to select "APPLICATION"
				● Press the ↵ key [ENTER]
		TOGGLE		● Use the ↑↓ keys to select "TOGGLE"
			OFF	● Press the ↵ key [ENTER]
			o ON	● Use the ↑↓ keys to select "ON"
				● Press the ↵ key [ENTER]; **o** indicates the active setting
				● Press the c key (Clear) repeatedly to exit the menu.

⇄ Configuring the Toggle-key Function

Pressing the toggle key ⇄ (4) toggles the scale between the default unit (defined under SETUP > SCALE > UNIT; see page 13) and the unit defined as follows under SETUP > APPLICATION > UNIT.

Level 1	Level 2	Level 3		Level 4	
SETUP					● Press the ↵ key [ENTER]
	APPLICATION				● Use the ↑ ↓ keys to select "APPLICATION"
		UNIT			● Press the ↵ key [ENTER], press ↓ to select "UNIT" and press ↵ to confirm.
			o	PT./PD.	● Use the ↑ ↓ keys to select the desired unit; e.g., "PT./PD."
				GRAMS	● Press the ↵ key [ENTER]; **o** indicates the active setting.
					● Press the C key (Clear)

Activating the "LOCK" Function 🔒

The LOCK function protects the scale from unauthorized use. When this function is active, the scale readout shows weight values only when there is active communication between the scale and a PC. If communication is interrupted, the readout goes blank and the display shows a padlock symbol. Activation of the LOCK function is configured under "EXTRAS."

Level 1	Level 2	Level 3	Level 4	
SETUP				● Press the ↵ key [ENTER]
	EXTRAS			● Use the ↑ ↓ keys to select "EXTRAS"
				● Press the ↵ key [ENTER]
		LOCK		● Use the ↑ ↓ keys to select "LOCK"
				● Press the ↵ key [ENTER]
			OFF	● Use the ↑ ↓ keys to select ON and
			o ON	press ↵ to confirm
				● Press the C key (Clear) repeatedly to exit the menu.

Configuring Password Protection
In addition to the LOCK function, you can configure password protection for additional security. With this feature, the LOCK function can be deactivated only by entering the password you configure. The password is numeric and can have up to 6 digits. Use the [↑][↓] keys to select the digits (0 through 9) for your password. The password is hidden on the readout; only dashes ("------") are shown. The first dash flashes to prompt input. Press the [↑][↓] keys as needed to select the desired digit (0 to 9) and then press the [↵] key [ENTER] key. The digit is stored and the second dash flashes on the display. Repeat the input procedure as described for the first digit. To store a space as a character in the password, press the [↵] key [ENTER] while the corresponding dash is flashing. Once all 6 characters have been stored, press the [↵] key [ENTER] to store the password.

Note:
Keep a copy of your password in a safe place.
The LOCK function can be deactivated only with this password.

Level 1	Level 2	Level 3	
INPUT			● Use the [↑][↓] keys to select "INPUT"
	PASSWORD		● Press the [↵] key [ENTER]
			● Press the [↵] key [ENTER]
		PW.NEW	● Use the [↑][↓] keys to select "PW.NEW"
		--------	● Enter the desired password and press the [↵] key [ENTER]
			● Press the [c] key (Clear) repeatedly to exit the menu

Changing the Password
To define a new password, the existing password must be entered first in the SETUP menu under "PASSWORD." "PW.OLD" prompts this input. Once the old password is entered, the "PW.NEW" prompt is shown automatically. Enter the new password or press [↵] at each position to enter spaces. The display shows spaces.
Note:
Entering 6 spaces deletes the password, which deactivates the password function.

Level 1	Level 2	Level 3	
INPUT			● Use the [↑][↓] keys to select "INPUT"
	PASSWORD		● Press the [↵] key [ENTER]
		PW.OLD	● Press the [↵] key [ENTER]
		--------	● Enter the existing (old) password
		PW.NEW	> After the old password have been entered correctly, "PW.NEW" is displayed.
		--------	● Enter the desired password and press the [↵] key [ENTER]
			● Press the [c] key (Clear) to return to the menu

Configuring Text Length ("LONG" or "SHORT")

You can define the length of the operator guidance texts shown on the display.

Level 1	Level 2	Level 3	Level 4	
SETUP				● Press the ↵ key [ENTER]
	EXTRAS			● Use the ↑ ↓ keys to select "EXTRAS"
				● Press the ↵ key [ENTER]
		TEXTS		● Use the ↑ ↓ keys to select "TEXTS"
				● Press the ↵ key [ENTER]
			LONG	● Use the ↑ ↓ keys to select "SHORT"
			o SHORT	and press ↵ to confirm
				● Press the C key (Clear) repeatedly to exit the menu

Resetting the Scale: "RESET"

You can restore the factory settings in the scale.

Note:

If you have activated the password function, this feature is password-protected.

Level 1	Level 2	Level 3	Level 4	
SETUP				● Press the ↵ key [ENTER]
	RESET			● Use the ↑ ↓ keys to select "REST"
				● Press the ↵ key [ENTER]
		MENU		● Use the ↑ ↓ keys to select "MENU"
				● Press the ↵ key [ENTER]
			YES	● Use the ↑ ↓ keys to select "YES"
			o NO	● Press the ↵ key. Factory settings are restored. "MENU" is displayed
				● Press the C key (Clear) repeatedly to exit the menu

Code Settings

Select the "CODES" menu item to have menu items identified by numeric codes rather than texts.

Level 1	Level 2	
LANGUAGE		● Press the ↑ key to select LANGUAGE
		● Press the ↵ key [ENTER]
	GERMAN	● Use the ↑ ↓ keys to select "CODES"
	etc.	● Press the ↵ key [ENTER]; **o** indicates the active setting
	o CODES	● Press the C key (Clear) repeatedly to exit the menu

Note:

Contact your local Sartorius office for a detailed list of the menu codes.

Troubleshooting Guide

Problem	Cause	Solution
No segments appear on the display	– No AC power is available	– Check the AC power supply
The weight readout shows “LOW”	– No load plate on the scale	– Position the load plate
The weight readout shows “HIGH”	– Weighing capacity exceeded	– Unload the scale
The weight readout changes constantly	– Unstable ambient conditions – Too much vibration, or the scale is exposed to a draft	– Set up the scale in another area – Access the menu to select the appropriate code for the ambient conditions (see “Menu Settings”)
The weight readout is obviously incorrect	– The sample is not stable – Scale not tared before weighing	– Tare the scale before weighing
No weight value is shown and the padlock symbol is displayed 🔒	– PC connection to the scale has been interrupted activating the LOCK function	– Access the menu settings to deactivate the LOCK function – Check the connection

Care and Maintenance

Cleaning

⚠ Never use concentrated acids, alkali solutions or pure alcohol to clean the equipment.

⚠ Do not allow liquids to penetrate the equipment housing.

○ Use a brush or a soft, dry, lint-free cloth to clean the scale.

Storage and Shipping Conditions

○ The packaging used for shipping your Sartorius equipment is optimally designed to prevent damage during transport. It is a good idea to save the box and all parts of the packaging for future storage or shipment of the equipment.

○ Storage temperature: –20°C ... +70°C

○ Allowable humidity during storage: max. 90%

○ Please refer to the information under "Safety Inspection" below.

Safety Inspection

Safe operation of the scale is no longer ensured in the following cases:

- There is visible damage to the AC adapter/power supply or cables
- The equipment no longer functions properly
- The equipment has been stored for a relatively long period under unfavorable conditions
- The equipment has been subjected to rough handling during shipment

● Observe all warnings and safety precautions.
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 authorized Sartorius service technicians who have access to the required maintenance manuals and have received the necessary training.

Information and Instructions on Disposal and Repairs

The packaging is made from environmentally-friendly materials that can be used as secondary raw materials. If you no longer need this packaging, bring it to your local recycling and waste disposal facility according to the regulations applicable in your country.
In Germany, you can dispose of this material using the VfW dual system (contract number D-59101-2009-1129).
The equipment, including accessories and batteries, must not be disposed of in general household waste, and must be recycled similar to electrical and electronic devices. For further information about disposal and recycling options, please contact your local service staff. The partners listed on the following website can be used for disposals within the EU:

1) Go to http://www.sartorius.com.

2) Select the summary under “Service.”

3) Then select “Information on Disposal.”

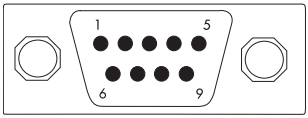
4) Addresses for local Sartorius disposal contacts can be found in the PDF files given on this webpage.

Sartorius will not take back equipment contaminated with hazardous materials (ABC contamination) either for repair or disposal.

Insert heading:
“Service Address for Disposal”
Please refer to our website (www.sartorius.com) or contact the Sartorius Service Department for more detailed information regarding repair service addresses or the disposal of your device.

Interface Description

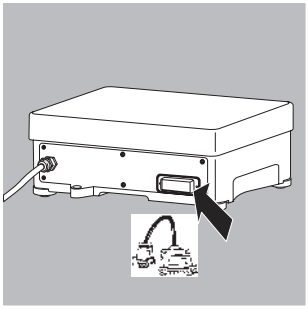
Connector on adapter cable



Pin Assignments
Adapter cable
Pin assignments:
9-contact interface port
Pin 2: (RXD) Receive data
Pin 3: (TXD) Transmit data
Pin 4: (DTR) Data terminal ready
Pin 5: (GND) Ground
Pin 6: BPI bridge
Pin 8: (CTS) Clear to Send

Installing the Adapter Cable
The adapter cable is required for operation of the scale with a PC.
If you wish to create your own application software, Sartorius can supply the required drivers for DOS or Windows operating systems.

⚠ Make sure to observe the safety instructions.



● Remove the protective cover from the interface port. Keep the protective cover in a safe place.

○ Replace the interface cover when storing or shipping the scale.

● Plug in the adapter cable and tighten the retaining screws.

Specifications

Type		PMA 35001-Y
Weighing range	g	35000
Readability	g	0.1
Tare range (subtractive)	g	-35000
Max. linearity	g	<±0.2
Stabilization time, configured via menu	digit	0.25 to 4
Humidity class	F	non-condensing
Ambient operating temperature range	°C	0...+40
Storage temperature	°C	-20...+70
Highest rel. humidity	%	80, for temperatures up to 31°C, decreasing linearly up to 50% relative humidity for 40 °C.
IP protection	IP	43, as per EN60529
Ambient conditions		Use indoors, height up to 2000 m. Supply voltage fluctuations up to +10% of the supply voltage. Excess voltage category II, Pollution level 2
Load plate dimensions	mm	350 × 240
Scale housing (WxDxH)	mm	350 × 243 × 132.5
Net weight, approx.	kg	11.4
Calibration weight	kg	10, Class E2 or better
Power consumption	VA	Average: 8, max. 16
Interface		RS-232
– Format		7-bit ASCII, 1 start bit, 1 or 2 stop bits
– Parity		Even, odd, none
– Transmission rates		1200 to 38,400 bps
– Handshake		Software or hardware

Accessories

In-use dust cover		YDC01PMA
RS232 Data cable (SBI)	(2m)	YCC01-0027M2
RS232 Data cable (BPI)	(2m)	YCC01-0028M2
RS232 Data cable (BPI)	(20m)	YCC01-0028M20
USB/RS 232 Data cable (SBI)	(1.8 m)	YCO12
USB/RS 232 Data cable (BPI)	(1.8 m)	YCO13

CE Marking

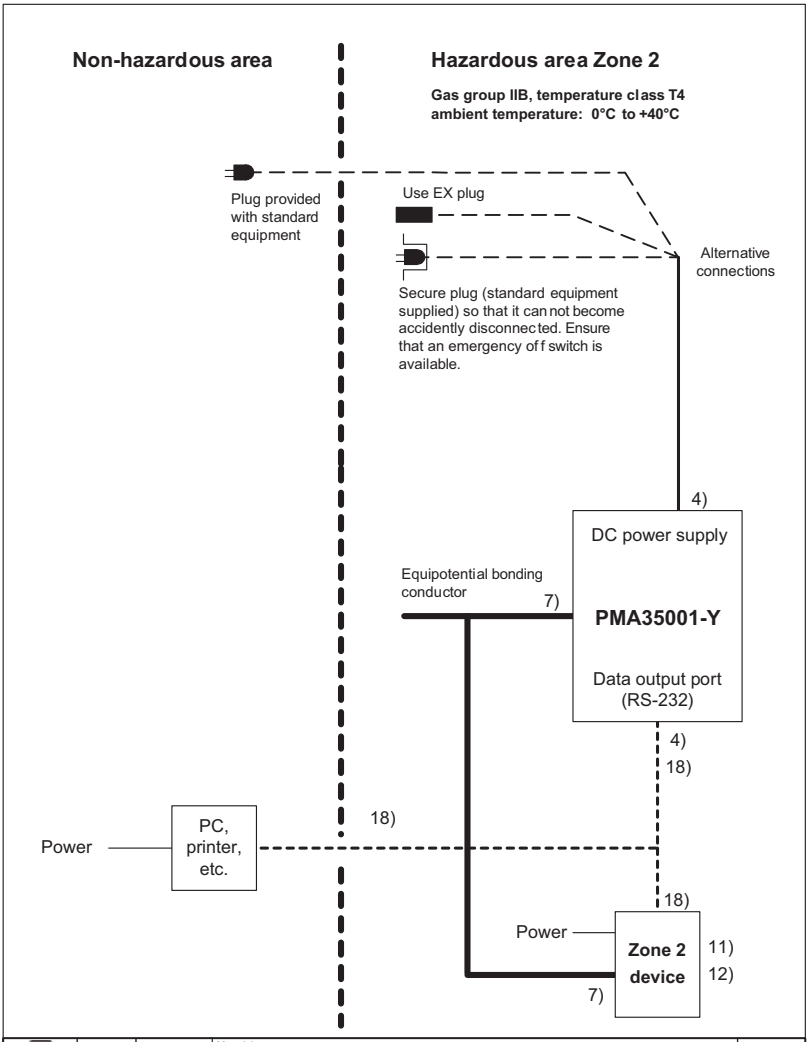
The scale complies with the following EC Directives and European Standards:
Council Directive 89/336/EEC: "Electromagnetic compatibility (EMC)"
Applicable European Standards:
Limitation of emissions:
In accordance with product standard EN 61326-1 Class B (residential area)
Defined immunity to interference:
in accordance with product standard EN 61326-1
(minimum test requirements, un-monitored operation)

Note:
Modifications to the device, along with the connection of cables or equipment not supplied by Sartorius, are the responsibility of the operator and are to be inspected (and rectified if necessary) by the operator accordingly.
Information on operational quality is available on request from Sartorius (in line with the abovementioned norms pertaining to immunity).

73/23/EEC "Electrical equipment designed for use within certain voltage limits"

Associated European Standards:
EN61010-1
Safety requirements for electrical equipment for measurement, control, and laboratory use
Part 1: General requirements
The requirements pertaining to applicable installation regulations must be followed when using electrical equipment in systems and environmental conditions with increased safety requirements.

Documents



	Datum Date	Name	Material PMA35001-Y			Maßstab / Scale
Erstellt Written by	20.03.08	Klausgrete	sartorius mechatronics		Benennung / Title: Safety Instructions	---
Geprüft Reviewed by	20.03.08	Klausgrete				Blatt Sheet 1
Freigabe Released by	20.03.08	Klausgrete	Ausgabe / Revision: 00	Änderung / Alteration: ---	Zeichnungs-Nr. / Drawing number: 36287-011-20-A4	von of 2

Safety Instructions

These safety instructions apply to the installation, operation, maintenance and repair of the equipment

1) Install the equipment in compliance with applicable laws, rules and regulations, ordinances and standards. Inparticular, be sure to conform to the European Standards EN 60079-14 (Electrical apparatus for use in potentially explosive gas atmospheres).

2) Be sure to follow the installation, operating, maintenance and servicing instructions given in the manuals supplied.

3) The PMA35001-Y must be installed so that the IP protection rating (IP4x) is maintained. Reduce the risk of mechanical damage to a minimum. Take measures to ensure that neither foreign objects (particles) nor direct or indirect water spray can penetrate into the equipment. Connections not in use must be sealed by appropriate sealingcaps (do not remove using pressure). Exposure to UV radiation is not allowed!

4) The **external connecting cables must be installed in a protective tube and secured** to prevent damage and stress caused by strain. The cable glands must be secured to prevent them from working loose.

5) Prior to opening the equipment, disconnect the power supply or make sure that there is no potentially explosive atmosphere or any other explosion hazard in the surrounding area! **Never connect or disconnect cables while the power is on in a hazardous area!**

6) If the equipment does not operate properly, unplug it immediately from line power (mains supply)!

7) **All metal parts** (housing, column, load plate, bench, etc.) must be electrically connected to the **terminal for thequipotential bonding conductor (PA)**. The equipment operator is obligated to connect a lead with a gauge of atleast 4 mm^2 (cross section) to the PA terminal located on the side of the housing. The low resistance of this connection to the PA busbar must be checked when the system is installed at the intended place of use. The shielding of the connecting cables may only be used for grounding if no impermissible difference in voltage is generated and the shielding is able to conduct any equipotential current.

8) Avoid generating static electricity. Use only a damp cloth to wipe down the equipment. The equipment operator shall be responsible for preventing any risks caused by static electricity.

9) Keep chemicals and other agents, which can corrode the housing seals and cable sheaths, away from the equipment. These agents include oil, grease, benzene, acetone and ozone. If you are not sure about the safety of a certain substance, please contact the manufacturer.

10) Use equipment only in the temperature ranges indicated. Avoid exposing the equipment to heat.

11) If you wish to use other category 3 equipment in a zone 2 hazardous area, be sure that it has the required group for gases and temperature class. The outputs must have EEx nA electrical circuits.

12) The equipment operator is responsible for any non-Sartorius cables used.

13) Check the Ex approval marking (particularly the group for gases and temperature class) on all equipment in the hazardous area before operation to ensure that this category 3 Ex approved equipment is permitted to be operated in this area.

14) At reasonable intervals, have your equipment installation checked for proper functioning and safety by a trained and certified technician.

15) If your equipment needs to be repaired, use only genuine replacement parts supplied by the manufacturer!

16) Any tampering with the equipment by anyone, other than repair work done by authorized Sartorius service technicians, will result in the loss of Ex conformity for zones 2 and and in the forfeiture of all claims under the manufacturer's warranty. Only authorized specialists may open the equipment.

17) Modifications, including those to be carried out by Sartorius employees, may be permitted only after the express written authorization has been obtained from Sartorius.

18) The data cables connected to the equipment are considered non-igniting EEx nA circuits. These connections must be secured to prevent accidental disconnection and may be plugged in or disconnected only if the power is completely shut off. Unused outputs must be sealed so that the IP4x protection is maintained.

	Datum Date	Name	Material PMA35001-Y			Maßstab / Scale ---
Erstellt Written by	20.03.08	Klausgrete	sartorius mechatronics		Benennung / Title Safety Instructions	
Geprüft Reviewed by	20.03.08	Klausgrete				Blatt Sheet 2
Freigabe Released by	20.03.08	Klausgrete	Ausgabe / Revision 00	Änderung / Alteration ---	Zeichnungs-Nr. / Drawing number 36287-011-20-A4	von of 2

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EU-Konformitätserklärung
EU Declaration of Conformity

Hersteller *Manufacturer*	**Sartorius Lab Instruments GmbH & Co. KG** **37070 Goettingen, Germany**

erklärt in alleiniger Verantwortung, dass das Betriebsmittel
declares under sole responsibility that the equipment

Geräteart *Device type*	**Hochlastige Farbmischwaage** ***High-capacity paint mixing scale***
Modell *Model*	**PMA35001-Y**

in der von uns in Verkehr gebrachten Ausführung allen einschlägigen Bestimmungen der folgenden Europäischen Richtlinien – einschließlich deren zum Zeitpunkt der Erklärung geltenden Änderungen – entspricht und die anwendbaren Anforderungen folgender harmonisierter Europäischer Normen erfüllt:

in the form as delivered fulfils all the relevant provisions of the following European Directives – including any amendments valid at the time this declaration was signed – and meets the applicable requirements of the harmonized European Standards listed below:

2014/30/EU	Elektromagnetische Verträglichkeit *Electromagnetic compatibility* EN 61326-1:2013
2011/65/EU	Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten (RoHS) *Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)* EN 50581:2012
2014/34/EU	Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen *Equipment and protective systems intended for use in potentially explosive atmospheres* EN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010, EN 61010-1:2010

Kennzeichnung II 3G Ex nA ic IIB T4 Gc
Marking

Herstellerbescheinigung Nummer SLI 14ATEX001
Manufacturer's Certificate number

Jahreszahl der CE-Kennzeichenvergabe / *Year of the CE mark assignment:* 16

Sartorius Lab Instruments GmbH & Co. KG
Goettingen, 2016-04-20

i.V. ppa. /ll

Dr. Reinhard Baumfalk
Vice President R&D

i. V. /dkf

Dr. Dieter Klausgrete
Head of International Certification Management

Diese Erklärung bescheinigt die Übereinstimmung mit den genannten EU-Richtlinien, ist jedoch keine Zusicherung von Eigenschaften. Bei einer mit uns nicht abgestimmten Änderung des Produktes verliert diese Erklärung ihre Gültigkeit. Die Sicherheitshinweise der zugehörigen Produktdokumentation sind zu beachten.

This declaration certifies conformity with the above mentioned EU Directives, but does not guarantee product attributes. Unauthorised product modifications make this declaration invalid. The safety information in the associated product documentation must be observed.

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Herstellerbescheinigung
Manufacturer's Certificate

Hersteller
Manufacturer

Sartorius Lab Instruments GmbH & Co. KG
37070 Goettingen, Germany

bescheinigt in alleiniger Verantwortung, dass das Betriebsmittel
certifies under sole responsibility that the equipment

Geräteart
Device type

Hochlastige Farbmischwaage
High-capacity paint mixing scale

Baureihe
Type series

PMA35001-Y

auf das sich diese Bescheinigung bezieht, mit der/den folgenden Norm(en) oder normativen Dokument(en) übereinstimmt (siehe Seite 2) gemäß den Bestimmungen der „Richtlinie 2014/34/EU des Europäischen Parlaments und des Rates vom 26. Februar 2014 zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten für Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen (Neufassung)". Das Produkt wird wie folgt gekennzeichnet:

to which this certification relates is in conformity with the following standard(s) or other normative document(s) (see page 2) pursuant to the provisions of the "Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to equipment and protective systems intended for use in potentially explosive atmospheres (recast)". This product is labelled as follows:

II 3G Ex nA ic IIB T4 Gc
SLI 14ATEX001X

Sartorius Lab Instruments GmbH & Co. KG
Goettingen, 2016-04-20

i.V.
Dr. Reinhard Baumfalk
Vice President R&D

i.V.
Dr. Dieter Klausgrete
Head of International Certification Management

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Herstellerbescheinigung
Manufacturer's Certificate

Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit:

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012
Explosionsfähige Atmosphäre – Teil 0: Geräte – Allgemeine Anforderungen
Explosive atmospheres – Part 0: Equipment – General requirements

EN 60079-11:2012
Explosionsfähige Atmosphäre – Teil 11: Geräteschutz durch Eigensicherheit „i"
Explosive atmospheres – Part 11: Equipment protection by intrinsic safety „i"

EN 60079-15:2010
Explosionsfähige Atmosphäre – Teil 15: Geräteschutz durch Zündschutzart „n"
Explosive atmospheres – Part 15: Equipment protection by type of protection „n"

* * * * * *

Technische Daten / *Specifications:*

Umgebungstemperatur / Ambient temperature range: 0°C ... +40°C

IP-Schutz / IP protection: IP4x

Versorgungsspannung (Eingang)/ Power supply input:

U = 100 ... 240 Vac, 50/60Hz, 15VA, Um = 250 V	(Standard)
U = 24 Vdc, max. 3W, Um = 30 V	(Version VF4608)

* * * * * *

Besondere Bedingungen für den sicheren Gebrauch / *Special conditions for safe use:*

Sicherheitshinweise gemäß Zeichnung 36287-010-20-A4 beachten.
Please observe the safety instructions as given in drawing 36287-010-20-A4.

* * * * * *

Prüfbericht / *Test Report*

SLI.14.ATEX.001 (Sartorius Lab Instruments GmbH & Co. KG, Goettingen, Germany)

* * * * * *

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www.sartorius.com

The information and figures contained in these instructions correspond to the version date specified below.
Sartorius reserves the right to make changes to the technology, features, specifications and design of the equipment without notice.
Masculine or feminine forms are used to facilitate legibility in these instructions and always simultaneously denote the other gender as well.

Last updated:
06 | 2016

Printed in the EU on paper bleached without chlorine. | W
Publication No.: WPM6064-e160604