

Installation Instructions

Sartorius PMA.Quality PMA 7501-X | PMA 7501-X00V1

Electronic Paint-mixing Scales for Zone 1





98648-014-43

General View of the PMA 7501-X



- 1 Display and control unit
- 2 key (On/Standby)
- 3 ↑ key: Upwards
- 4 😺 key: Downwards
- 5 →0/T* key: Zero/Tare
- 7 F factor key (FORMULATION) for paint-mixing applications
- 8 c key (Clear) and [REC] key for paint-mixing applications
- 9 e key [ENTER] and [MEM] key for paint-mixing applications

- 10 Display
- 11 Weighing pan
- 12 Interfaces (D-Sub plug, 9-contact)
- 13 Connection to AC power
- 14 Grounding terminal
- 15 Column
- 16 Joint

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

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Intended Use

The PMA7501-X (Quality) has been specially designed for use in paint-mixing applications. This scale can be controlled by a computer connected to the interface port.

Note: Read the installation and operating instructions carefully before connecting the PMA7501-X and putting it into operation.

Warnings and Safety Precautions

Note:

Improper use or handling can result in property damage and/or personal injury. Only qualified personnel may install and operate the equipment. Make sure you observe the warning and safety information in its entirety during installation and operation, as well as while performing maintenance and repair work on the equipment. The standards, regulations, occupational safety requirements and environmental protection laws valid in your country must be observed. It is important that all personnel using the equipment understand this warning and safety information, and have access to the relevant documents at all times. Furthermore, the warning and safety information supplied with any electrical equipment connected, such as peripheral devices, must be observed as well. The warnings and safety precautions may have to be supplemented by the equipment operator. 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 PMA7501-X

PMA7501-X models meet the requirements defined in EC Directive 94/9/EC for equipment group II, category 2G and are marked in accordance with the KEMA05 ATEX1247X EC type-examination certificate. In addition, they are approved for hazardous (classified) location Class I, Division 1, Groups C,D, and Class I, Zone 1, Groups IIA and IIB, in the United States and in Canada, respectively. Furthermore, PMA7501-X models meet the EC Directives for electromagnetic compatibility and electrical safety (please see the Declaration of Conformity in these installation instructions.)

- The area of use for the PMA7501-X model is defined in the type-examination certificate. All restrictions listed in the type-examination certificate must be strictly observed. Operating the PMA7501-X model 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 will result in forfeiture of all claims under the manufacturer's warranty. If you use the equipment in a hazardous area outside Germany, you must comply with the national electrical code and safety regulations applicable in your country (e.g.: EN60079-14). Ask your supplier for information on the legal regulations applicable in your country. For the USA and Canada, please refer to Control Drawing 35958-000-07-A4.
- If the equipment housing is opened by anyone other than persons authorized by Sartorius, this will negate its conformity with regulations governing its use and result in forfeiture of all claims under the manufacturer's warranty.
- Installation of the PMA7501-X in a potentially explosive atmosphere must be performed by a certified electrician who is familiar with both the assembly, start-up and operation of both the system and the 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 static electricity. Connect an equipotential bonding conductor.
 Disconnecting equipotential bonding conductors is not permitted. The bore hole is marked by a "ground" symbol. If a bore hole is provided, use a stainless steel

screw and nut to connect the grounding conductor. The wire used for the grounding conductor should have a cross-sectional diameter of at least 4 mm² and have a suitable ring lug attached. Connect all equipment, including peripheral devices, to the equipotential bonding conductor.

- Do not expose the scale to extreme temperatures, aggressive chemical vapors, moisture, shocks or vibrations.
 Exposure to excessive electromagnetic disturbance can cause the readout value to change. Once the disturbance has ceased, the instrument can be used again in accordance with its intended use.
- The equipment must be used indoors.
- 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.
- To avoid generating static electricity (e.g., when using the in-use dust cover), connect the equipotential bonding conductor.
- The equipment is protected against penetration by solid foreign objects.

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), turn it off and lock it in a secure place or otherwise prevent use of the equipment for the time being.
- Chemicals (e.g., gases or dusts) 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 (IP65 or higher) and EN 60529.
- The casing on all connecting cables, as well as the casing on wires inside the equipment housing, is made of PVC. The casing of the power cable is made of rubber.
- Do not expose the scale to aggressive chemical vapors or to extreme temperatures, moisture, shocks, or vibration. The allowable operating temperature range during operation is 0°C to +40°C +(32°F to +104F). Make sure the place of installation is adequately ventilated to prevent build-up of excessive heat.
- Use original Sartorius spare parts only.
- 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.

PMA7501-X Designed for Use in Zone 1 Hazardous Areas

Please refer to the drawings unter "Verification of Intrinsic Safety" for details.

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
- Power supply



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.

 $\underline{\wedge}$ Observe the safety instructions and warnings in this manual.



• Place the weighing pan on the scale.





Connection to AC Power

The equipment is energized by the power supply provided. Make sure that the voltage rating printed on the power supply is identical to your local AC power rating. 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. Use only genuine Sartorius power supplies. The use of power supplies from other manufacturers, even if these units have a registered approval rating from a national testing laboratory, requires the approval of a certified technician.

- Insert the right-angle plug into the IEC jack (13) on the scale
- Plug the power supply into an electrical AC power outlet
- $\underline{\wedge}$ Observe the safety instructions and warnings in this manual



Ground the scale.
 Connect the cable to the grounding terminal (14).

Operating the Equipment



Turn on the scale using the [m] key (2).



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 $\boxed{-0.7+}$ key (5).





Place an empty paint can on the weighing pan. Press the 10^{16} key (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.

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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 📰 key (6). The display shows "0.00 g."

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

Press the $\rightarrow 0/1^{+}$ key (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, "q."

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 zero the display by pressing the tare key, and then press the \mathbb{R} key (6) to toggle to the second decimal place with a resolution of 0.05 g, you can continue weighing 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



0.00 g

05 g

÷

÷



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 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 or you can alter the value or → key (4): downwards, - in 0.1 increments, as of factor 1.0 - 0.01 increments, from factor 0.25 to 1.0.

Important Note:

The flashing arrow \checkmark on the display means that the weight value 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 g green paint
- + 250 g red paint
- + 500 g blue paint

Total: 1000 g



1. Place the empty paint can on the weighing pan and tare (zero the display).



 Press the F formulation key (7) several times to select the conversion factor ".25" used in this example.



+	
•	۱ U U U.U g

- 3. ".25" is displayed next to the weight
- 4. Slowly pour in the first component, "250 g" of green paint, until the display shows "250 g."
- 5. Pour in the second component, "**250 g**" of red paint, until the display shows "**500 g**."
- 6. Pour in the last component, "500 g" of blue, until "1000 g" is displayed.

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 \bigcirc key [MEM] (9). Press the \checkmark 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 \uparrow key (3), or downwards using the \checkmark key (4). When you then press the \bigcirc key [MEM] (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 flashing arrow \checkmark in the display means that the weight value shown is not verified for use in legal metrology (not legal for trade).

Example:



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



4. Press the ← key [MEM] (9). STO 01



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.



10. Press the ← key [MEM] (9). COR 01



13. Press the ← key [MEM] (9) COR 02



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



2. Press the →0/T← key (5) 0.0 g



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



8. Press the v key (4) to start the recalculation mode.
A "C" (= correct).



3. Pour in the first component. + 50.0 g

6. Press the ← key [MEM] (9). STO 02



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



11. 1. Add the first component. "C1" is displayed. –1.5 g



14. Add the second component. "C2" is displayed. -2.0 g



17. To check the prospective total weight, press the c key (8) [REC].
"C" = Correction factor; in this example, 1.02. (Total formula unicidate correction factor)

formula weight × correction factor = total weight)



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



15. Pour in paint until the value 0.0 g is obtained. 0.0 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 100% key (5).

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 1×10^{11} key (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:

Menu Item: Adaptation to ambient conditions

- Hold down the ← key [ENTER] 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 ← key [ENTER] to select the second level (Level 2).
- Use the ↑↓ keys to select the desired menu item in the second level.
- Press the ← key [ENTER] 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 \leftarrow key [ENTER] 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 ← key [ENTER]. "o" will appear. The new code is stored.
- 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.

Important Menu Settings

● Hold down the ← key [ENTER] for approx. 2 sec. "SETUP" will appear on the display (Level 1). Level 1

SETUP					
Language Settings					
Level 1	Level 2	Level 3	Level 4		
LANGUAGE	GERMAN ENGLISH FRENCH ITALIAN etc.			 key: select "LANGUAGE " key: press [ENTER] keys: select a language key: [ENTER]: "o" will appear, the desired setting is defined. c key (Clear): press several times to exit the menu. 	

After the toggle key, I, has been activated, you can individually configure it with either 1 or 2 decimal places, as well as with grams or PT./PD.

Level 1	Level 2	Level 3	Level 4	
SETUP	RPPL ICA)	TON PROGRAM	WIEIGH. o TOGGLE	 Press the ∉ key [ENTER] ↑ ↓ keys: select "APPLICATION" ∉ key: press [ENTER] ↑ ↓ keys: select "PROGRAM" ∉ key: [ENTER], ↑ ↓ keys: select "TOGGLE". Press the ∉ key [ENTER]; "o" appears: the desired setting is defined. Press the c key (Clear) several times to exit the menu
Assigning a	Function to	the ≓ Toggle	e Key: 0.0 g /	0.00 g, or g / PT./PD.
Level 1	Level 2	Level 3	Level 4	
SETUP				● Press the ← key: [ENTER]

SETUP			● Press the ← key: [ENTER]
APP <u>L</u>	ICATION		● ↑↓ keys: select "APPLICATION"
	UNIT		• \leftarrow key [ENTER]: select the \checkmark key
			"UNIT," press ൙ key [ENTER].
		PT./P]).	● ↑↓ keys: select "GRAMS"
	0	GRAMS	● Press the ← key [ENTER]; "o" appears:
			the desired setting is defined.
	DECIMALS		● ↑↓ keys, select "DECIMALS"
		STAN]AR]	● Press the ← key, select setting
	0	POL YRANGE	● Press the ← key [ENTER]; "o" appears
			Press the c key (Clear) to exit the menu

Toggling Decimal Places Toggling Units		(Standard = 1 decimal place PolyRange = 2 decimal places) (Grams or PT./PD.)			
These setting	is are active wi	nen the scale	is switched on		
Level 1	Level 2	Level 3	Level 4		
SETUP				● Press the ← key [ENTER]	
	SCALE			● Press the 🔄 key [ENTER]	
		DECIMALS		● ↑↓ keys: select "DECIMALS"	
				● Press the ← key [ENTER]	
		C	STANJARJ	● ↑↓ keys: select "STANDARD"	
			POL YRANGE	● Press the ← key [ENTER]; "o" appears:	
		UNIT		the new code has been set.	
		C	GRAMS	 Press the c key (Clear) several times 	
			PT./PD.	to exit the menu	

Activating the "LOCK" Function " 🔒 "

By activating the "LOCK" function, you can protect the scale from inappropriate use. When the "LOCK" function is activated, the scale shows weight values on the readout only when communication with the PC is active. If data transmission is interrupted, the lock symbol will be displayed. The scale will automatically be locked, preventing further weighing operations. The "LOCK" function is configured in the "EXTRAS" menu.

Level 1	Level 2	Level 3	Level 4	
SETUP	EXTRAS	LOEK	OF F o DN	 Press the ← key [ENTER] ↑↓ keys: select "EXTRAS" Press the ← key [ENTER] ↑↓ keys: select "LOCK" Press the ← key [ENTER] Select "ON" using the ↑↓ keys Confirm with the ← key Press the C key (Clear) several times
				to exit the menu

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 A 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. Note: Keep the numeric code in a safe place.

The scale can only be accessed by entering the correct code.

Level 1	Level 2	Level 3	Level 4	
INPUT				● ↑↓ keys: select "INPUT"
	PASSWORD			● Press the ← key [ENTER]
				● Press the ← key [ENTER]
		PHNEH		● ↑↓ keys: select "PW.NEW"
				● Enter the numeric code: press the ← key
				[ENTER].
				 Press the c key (Clear) several times
				to exit the menu

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 exercised exercised block of the second secon

Level 1	Level 2	Level 3	Level 4	
INPUT				● ↑↓ keys: select "INPUT"
	PASSWORI			● Press the ← key [ENTER]
		PW.OL D		● Press the ← key [ENTER]
				 Enter the old password "PW.OLD"
		PW.NEW		 "PW.NEW" will appear when the old
				password is correctly entered
				● Enter the numeric code: press the ← key
				[ENTER]
				• Press the c key (Clear): reset the menu
You can no	ow deactivate	the "LOCK" fu	inction.	
SETUP				● Press the ← key [ENTER]
	EXTRAS			● ↑↓ keys: select "EXTRAS"
				● Press the ← key [ENTER]
		LOEK		● ↑↓ keys: select "LOCK"
				● Press the ← key [ENTER]
			o Off	• \checkmark keys: select "OFF", confirm with the
			ΟN	∠ key [ENTER]
				 Press the c key (Clear) several times
				to exit the menu

Setting "TEXTS" in the Display, "LONG" or "SHORT"

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

Level 1	Level 2	Level 3	Level 4	
SETUP				● Press the ← key [ENTER]
	EXTRAS			● ↑↓ keys: select "EXTRAS"
				● Press the ← key [ENTER]
		TEXTS		● ↑↓ keys: select "TEXTS"
				● Press the ← key [ENTER]
			LONG	● ↑↓ keys: select "SHORT",
			o SHORT	confirm by pressing the ビ 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.

Level 1	Level 2	Level 3	Level 4	
SETUP	RESET	MENU	YES o NO	 Press the key [ENTER] ↑ ↓ keys: select "RESET" Press the key [ENTER] ↑ ↓ keys: select "MENU". Press the key [ENTER] Use the ↓ keys to select "YES" Press the key [ENTER]; "o" will appear: the new code is set Press the key (Clear) several times to exit the menu
Setting Co Under the Level 1	odes setting "CODE Level 2	ES," the menu Level 3	items are disp	layed in code 1.1.1.1.

LAN	GU	AGE

NGUAGE		ullet	↑ key: select "LANGUAGE"
		ullet	Press the 🛩 key [ENTER]
	GERMAN	ullet	↑ ↓ keys: select "CODES"
	etc.	\bullet	Press the ← key [ENTER]; "o" will appear:
			the new code is set
0	CODES	ullet	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

Problem	Cause	Solution
No segments appear on the weight display	 No AC power available 	– Check the AC power supply
Weight display shows "Low"	 The weighing pan is is not in place 	 Position the weighing pan
Weight display shows "High"	 The load on the pan exceeds the scale's capacity 	- Unload the scale
The weight readout changes constantly	 Unstable ambient conditions Too much vibration or the scale is exposed to draft 	 Set up the scale in another area Access the menu to select the appropriate code to adapt the scale to the particular weighing environment (refer to "Menu Settings")
The weight readout is obviously wrong	 The paint component does not have a stable weight The scale was not tared before weighing 	 Tare prior to weighing
No weight value is shown and the lock symbol is active	 Data communication between scale and PC has been interrupted and the "Lock" function is active in the scale 	Access the menu settings to deactive the "Lock" functionCheck the connection

Care and Maintenance

Cleaning

- ▲ Do not use any aggressive cleaning agents (solvents or similar agents), concentrated acids or pure alcohol.
- Make sure that no liquid penetrates the scale housing
- Clean the scale using either a paint brush or a dry, soft and lint-free cloth.

Storage and Shipping Conditions

- O 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 is no longer ensured when:

- There is visible damage to the power supply
- The equipment no longer functions properly
- The equipment 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 and 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 AG 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 AG 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 AG, 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

Model		PMA7501-X
Weighing range	g	999.95/7500
Readability	g	0.05/0.1
Tare range (subtractive)	g	-999.95/-7500
Max. linearity	g	$\leq \pm 0.2$
Stabilization time (average)	digit	0.25 to 4
Moisture-proof rating	F	Non-condensing
Allowable ambient operating temperature range	°C	0 to +40
Weighing pan	\varnothing mm	233
Scale housing ($W \times D \times H$)	mm	233 × 329 × 391
Net weight, approx.	kg	3.3
Calibration weight	kg	5, class F2 or better
Power consumption	VA	Average: 8; maximum: 16
Interface Format Parity Transmission rates Handshake mode		RS-232C 7-bit ASCII, 1 start bit, 1 or 2 stop bits Even, odd or no parity 1200 to 38,400 bit/s Software, bardware or none

Interface Port



Pin Assignment

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

Note:

Only for connection to a certified intrinsically safe circuit (see Verification of Intrinsic Safety).

Accessories

YDC01PMA
609308-011
609308-211
609308-61

Declaration of Conformity to Council Directives 89/336/EEC and 73/23/EEC (amended by Directive 93/68/EEC) and 94/9/EG

The electronic precision weighing instrument/weighing platform of the series PMA7501.-X....

meets the applicable requirements of the test standards listed below, in conjunction with the associated power supplies, auxiliary peripheral devices and installation equipment listed in Annex A2 (see Annex A1 for a technical description and a list of the individual versions).

1. Electromagnetic Compatibility

1.1 Source for 89/336/EEC: Official Journal of the European Communities, No. 2005/C246/01

EN 61326 Electrical equipment for measurement, control and laboratory use EMC requirements

Limitation of emissions: Residential areas, Class B Defined immunity to interference: Industrial areas, continuous unmonitored operation

2. Safety of Electrical Equipment

2.1 Source for 73/23/EEC: Official Journal of the European Communities, No. 2005/C284/01

EN 61010 Safety requirements for electrical equipment for measurement, control and laboratory use Part 1: General requirements

3. Equipment or protective systems or components intended for use in potentially explosive atmospheres

3.1 Source for 94/9/ EEC: EC Official Journal, No. 2005/C300/06

EN50014 General requirements EN50020 Intrinsic safety "i"

3.2 Type Examination: KEMA/Arnheim (NL) (Notified Body, Reg. No. 0344)

PMA7501.-X ...: KEMA 05ATEX1247 X

3.3 Production Quality Assessment Notification: Certified by PTB/Braunschweig (Notified Body, Reg. No. 0102)

Notification No.: PTB 97ATEX Q021-1

Sartorius AG 37070 Goettingen, Germany 2006

C. Oldendorf Vice President, R&D Technological Operations & Innovations Mechatronics Division

Dr. D. Klausgrete Head of International Certification Management Mechatronics Division

(1)	EC-TYPE EXAMINATION CERTIFICATE
(2)	Equipment and protective systems intended for use In potentially explosive atmospheres - Directive 94/9/EC
(3)	EC-Type Examination Certificate Number: KEMA 05ATEX1247 X
(4)	Equipment: PMA7501X series Weighing Unit and type YCO11-Z., Ex-Link-Box
(5)	Manufacturer: Sartorius AG
(6)	Address: Weender Landstraße 94-108, 37075 Göttingen, Germany
(7)	This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
(8)	KEMA Quality B.V., notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the directive.
	The examination and test results are recorded in confidential test report no. 2085189.
(9)	Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
	EN 50014 : 1997 + A1, A2 EN 50020 : 2002
(10)	If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.
(11)	This EC-Type Examination Cartificate relates only to the design, examination and tests of the specified equipment according to the Directive 94/9/EC. Further requirements of the directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.
(12)	The marking of the equipment shall include the following:
	(Fy) II 2 G EEX ID IIB T4 (for PMA7501X series Weighing Unit)
	II (2) G [EEx ib] IIB (for type YCO11-Z Ex-Link-Box)
	Amharf) 6 July 2006
	KEMA GUBITY B.V.
1	C.G. van Es



SCHEDULE (13)

to EC-Type Examination Certificate KEMA 05ATEX1247 X (14)

(15) Description

The PMA7501.-X..... series Weighing Units, with or without a display, provide digital data output and are intended to be connected to the associated Power Supply or type YCO11-Z.. Ex-Link-Box.

- The range of Weighing Units includes the following models PMA.Quality, Type PMA7501-.X.... (with display) PMA.Quality, Type PMA7501.-X...(with display) PMA.World, Type PMA7501.-X...G... (with display)
- PMA.Net, Type PMA7501.-X..GL.. (with display)

Electrical data

Weighing Unit model PMA.Quality, Type PMA7501.-X and Type PMA7501.-X

S (5	upply circuit ST6)	in t onl circ Ma	ype y for cuits xim	of prote r conne of the um leng	ection intrin ction to the certified Po gth of interce	sic safet applical wer Sup onnectic	y El ble i ply in ca	Ex ib IIE ntrinsica Type 60 able is 1	8, ally safe 99308 100 m.	: 1.
Fi (E	oot switch circuit 3U1/6,9)	in t onl Ma	ype y foi xim	of prote r conne um leng	ection intrin ction to a pa gth of interce	sic safet assive s onnectio	y E8 witc	Ex ib IIE h. able is 2), 25 m.	
R (E	S232 circuits 3U1/1,2,3,4,5,7,8)	in t onl circ Ma Or: in t wit	ype y for uits ximi	of prote of the um leng of prote	ection intrine ction to the certified Eco pth of interco action intrine	sic safet applical oMix Co onnectio sic safet m value	y Et ble in ntroi in ca y Et	Ex ib IIE ntrinsica I Panel able is 1 Ex ib IIE	8, ally safe Type El 100 m.	н М01-Х.
		U° J° C° C° C° L°		12 24 125 373 9 0,93 8	V (*) V (**) mA mW μF (*) μF (**) mH		= = = = = = = = b	12,6 25,2 330 any 1 0 earth etween	V (*) V (**) mA nF mH lines	
A051E1.0 MEAN-P-Ex30 v2.	0									Page 2/4

(13)	SCHEDULE	
(14)	to EC-Type Examination Ce	rtificate KEMA 05ATEX1247 X
	Weighing Unit model PMA.Work Type PMA7501XGL	d, Type PMA7501XG and model PMA.Net.
	Supply and Data circuits (ST2)	 in type of protection intrinsic safety EEx ib IIB, only for connection to the applicable intrinsically safe circuits of the certified Type YC011-Z., Ex-Link-Box.
	Or:	maximum length of interconnection cable is 100 m.
	Supply circuit (ST2)	in type of protection intrinsic safety EEx ib IIB, only for connection to the applicable intrinsically safe circuits of the certified Power Supply Type YPS05-Z.P. Maximum length of interconnection cable is 100 m.
	Foot switch circuit (BU1/6,9)	in type of protection intrinsic safety EEx ib IIB, only for connection to a passive switch. Maximum length of interconnection cable is 25 m.
	RS232 circuits (BU1/1,2,3,4,5,7,8)	in type of protection intrinsic safety EEx ib IIB, only for connection to the applicable intrinsically safe circuits of the certified EcoMix Control Panel Type EM01-X. Maximum length of interconnection cable is 100 m. Or:
		in type of protection intrinsic safety EEx ib IIB, with the following maximum values:
		$\begin{array}{rclrcl} U_{0} &=& 12 & V\left(^{*}\right) & U_{i} &=& 12.6 & V\left(^{*}\right) \\ U_{0} &=& 24 & V\left(^{**}\right) & U_{i} &=& 25.2 & V\left(^{**}\right) \\ I_{0} &=& 125 & mA & I_{i} &=& 330 & mA \\ P_{0} &=& 373 & mW & P_{i} &=& any \\ C_{0} &=& 9 & \mu F\left(^{*}\right) & C_{i} &=& 1 & nF \\ C_{0} &=& 0.93 & \mu F\left(^{**}\right) & L_{i} &=& 0 & mH \\ L_{0} &=& 8 & mH & (^{**}) = to earth \\ (^{**}) = between lines \end{array}$
	Type YCO11-Z., Ex-Link-Box	
	Supply (ST1) Data circuits (BU2)	100 240 Vac, 15 VA, U _m = 250 Vac
	Supply and Data circuits (ST2)	in type of protection intrinsic safety EEx ib IIB, only for connection to the applicable circuits of Weighing Unit Type PMA7501XG or Type PMA7501XGL Maximum length of interconnection cable is 100 m.
	From the safety point of view the shall be considered to be connect	intrinsically safe circuits of all the above mentioned equipment ted to earth



(13) SCHEDULE

(14) to EC-Type Examination Certificate KEMA 05ATEX1247 X

Installation instructions

For the interconnecting cable between the Supply and Data circuits of Type YCO11-Z.. Ex-Link-Box and the PMA7501.-X..... series Weighing Units, the cable delivered with the equipment shall be used or when of a different type the cable shall be installed in such a way that it is avoided that the supply and data output circuits can become connected with each other.

Unused connections shall be protected as appropriate for the environment. Without additional protection the degree of protection is IP20.

The PMA7501.-X..... series Weighing Unit and Type YCO11-Z. Ex-Link-Box shall be connected to the potential equalization network, using the earthing terminals.

(16) Test Report

KEMA No. 2085189.

(17) Special conditions for safe use

Ambient temperature range 0 °C ... +40 °C.

(18) Essential Health and Safety Requirements

Assured by compliance with the standards listed at (9).

(19) Test documentation

As listed in Test Report No. 2085189.

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Page 4/4



	609308-61	1	llo	lo	Po	Co	10					
	003300-01	-	00	105 1		00 51						
			8.7 V	185 MA	1.61 W	10 µ⊢ ^	5 μH ^					
	YPS05-ZK	<u>(P</u>	Uo	lo	Po	Co	Lo					
			12.6 V	230 mA	2.9 W	575 nF *	420 <i>u</i> H *					
			12.0 1	200 110 1	2.0 11	0.011	120 μ.1					
					-							
	<u>YC011-Z</u>		Uo	10	Po	Co	LO					
	DC Supply	y :	12.6 V	230 mA	2.9 W	575 nF *	420 µH *					
	RS-422 (c	ombined)	6.8 V	100 mA #	127 mW	200 µF	5 mH					
	PMA7501.	X/ PMA750)1XW:									
					D :	0						
			01	п	Ы	CI	LI					
	DC Supply	у	8.7 V	185 mA	1.61 W	5.6 <i>µ</i> F	0					
	RS-232 (c	ombined)	12.6 V	330 mA #	any	0	0					
			llo	lo	Po	Co	10					
	RS-232 (c	ombined)	12.0 V	125 mA	373 mW	9μF	8 mH					
	,	,										
	PMA7501.	-XG.:										
			Ui	II	Pi	Ci	LI					
	DC Supply	y	12.6 V	230 mA	2.9 W	200 nF	0					
	RS-232 (co	ombined)	12.6 V	330 mA #	any	0	0					
	RS-422 (co	ombined)	6.8 V	100 mA #	127 mW	0	0					
			Uo	lo	Po	Co	Lo					
	RS-232 (co	ombined)	12.0 V	125 mA	373 mW	9 <i>µ</i> F	8 mH					
	* : includin	g 50 m (164 f	t) output ca	ble to the so	cale							
	#: linear											
_											_	
	MC	Date	Name		Title	Control	Drawing		sar	tor	ĪUS	
P	written by	2006-01-10	Klausgrete	(5~)	Drawipo pumb	er		Povisier				
R	eleased by	2006-01-10	Klausgrete	5	s.awing numb	35958-00	00-07-A4		Sheet	2	of	2
• •	sicasca by	2000-01-10		1	1				1			









Member of the FM Global Genup

FM Approvals 1151 Boston-Providence Turnpike PO. Box 9102 Norwood, MA 02062 USA T. 781 762 4300 F: 781 762 9375 www.finglobal.com

CERTIFICATE OF COMPLIANCE

HAZARDOUS LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

 PMA7501.-X.... Scales and Weighing Platforms

 IS/I/1/C,D/T4
 - 35958-003-07-A4; Entity

 I/1/ AEx ib IIB/T4
 - 35958-000-07-A4; Entity

YCO11-Z Ex-Link-Box AIS/I/1/CD - 35958-000-07-A4; Entity AIS/I/1/ [AEx ib] IIB - 35958-000-07-A4; Entity

Equipment Ratings:

Intrinsically safe circuits or connections for Class I, Division 1, Groups C, D T4, Class I, Zone 1, AEx ib IIB T4 per control drawing 35958-000-07-A4; hazardous (classified) locations and will appear in the Approval Guide, a publication of FM Approvals, as listed above.

FM Approved for:

SARTORIUS AG WEENDER LANDSTRASSE 94-108 D-37070 GÖTTINGEN GERMANY

FM Approvals HLC 1/06

3027168 Page 1 of 2

FM Approvals" Member of the FM Global Group This certifies that the equipment described has been found to comply with the following Approval Standards and other documents: 1998 Class 3600 Class 3810 Class 3610 2005 1999 Approval Granted: SENTEMBER 14, 2006 Original Project ID: 3027168 Subsequent Revision Reports / Date Approval Amended Report Number Date Report Number Date FM Approvals LLC allard SEATEMBER 14, 2006 Date Roger, Allard Assistant Vice President FM Approvals HLC 1/06 3027168 Page 2 of 2



FM Approvals Member of the F. 1151 Boston-Providence Turnpike PO. Box 9102 Norwood, MA 02062 USA T: **781 762 4300** F: 781 762 9375 www.fmglobal.com

CERTIFICATE OF COMPLIANCE

HAZARDOUS LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

 YPS05-ZKP Power Supply

 AIS/I/1/CD
 - 35958-000-07-A4; Entity

 AIS/I/1/ [AEx ib] IIB - 35958-000-07-A4; Entity

609308-61 Power Supply AIS/I/1/ABCD – 65530-001-07-A4; Entity AIS/I/1/ [AEx ib] IIB / IIC – 65530-001-07-A4; Entity

Equipment Ratings:

YPS05-ZKP: Intrinsically safe connections for Class I, Division 1, Groups C,D, Class I, Zone 1, [AEx ib] IIB per control drawing 35958-000-07-A4; hazardous (classified) locations and will appear in the Approval Guide, a publication of FM Approvals, as listed above.

609308-61: Intrinsically safe connections for Class I, Division 1, Groups A,B,C,D, Class I, Zone 1, [AEx ib] IIB/IIC per control drawing 65530-001-07-A4; hazardous (classified) locations and will appear in the Approval Guide, a publication of FM Approvals, as listed above.

FM Approved for:

SARTORIUS AG WEENDER LANDSTRASSE 94-108 D-37070 GÖTTINGEN GERMANY

FM Approvals HLC 1/06

3027166 Page 1 of 2

FM Approvals Member of the FM Global Group This certifies that the equipment described has been found to comply with the following Approval Standards and other documents: Class 3600 1998 2005 Class 3810 Class 3610 1999 ANSI/ISA-12.16.01 2002 ANSI/ISA -12.23.01 2002 Approval Granted: Accest 22, 2006 Original Project ID: 3027166 Subsequent Revision Reports / Date Approval Amended Report Number Date Report Number Date FM Approvals LLC Arauct 22, 2006 mar f 4 Martell, Jr. Robert L. Assistant Vice President FM Approvals HLC 1/06 3027166 Page 2 of 2

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		CSA INTERNATIONAL		
Certificate:	1821536 (LR 56628-36)		Master Contract:	167555
Project:	1821541		Date Issued:	2006/10/12
Part A:				
Intrinsic Safet	y Associated Equipment, provi	ides I.S. connections for:		
Class I, Div. 1	, Group A, B, C, and D			
Class I, Zone	1: [Ex ib] IIC / II B			
Model 609308 I.S. connection Sartorius Bala 65530-001-07	6-61 Power Supply; rated 100- ns for CL 1, Div 1, Grp A,B,C,J inces as per control drawing 35 -A4).	120Vac, 50/60Hz, 8VA; 1 D and Class I, Zone 1, Gi 5075-000-07-A4, 35233-0	ntrinsic Safety Associate rp IIC / IIB when connec 00-07-A4 or 35958-000-	ed Equipment, provides ted to CSA Certified -07-A4 (as per
Part B:				
Class I, Div 1,	, Group B, C and D; T4			
Associated Eq	juipment [Exia], provides I.S. c	connections for Class I, E	viv.1, Group A, B, C, and	1 D
Model YPSO connections fo 65528-000-07	3-XKR, Power Supply; rated 10 or CL I, Div 1, Grp A,B,C,D w 2-A4.	00-120Vac, 50/60Hz, 8V then connected to CSA C	A; Associated Equipmen ertified Sartorius Balance	it [Exia], provides I.S. es as per control drawing
Part C:				
Intrinsic Safet	y Associated Equipment, provi	ides I.S. connections for:		
Class I, Div. I	, Group C and D			
Class I, Zone	1: [Ex ib] IIB			
Model YPS05 I.S. connection Balances as pe	-ZKP Power Supply; rated 115 ns for CL I, Div I, Grp C,D an er control drawing 35958-000-	5Vac, 50/60Hz, 10VA; In d Class I, Zone 1, Grp III 07-4A.	trinsic Safety Associated 3 when connected to CS/	l Equipment, provides A Certified Sartorius
2258 04 - PR	OCESS CONTROL EQUIPM	MENT - Intrinsically Sa	fe, Entity - For Hazard	ous Locations
PRODUCTS				
Part A:				
Intrinsic Safet	y Associated Equipment provi-	des I.S. connections for:		
Class I, Divisi	ion 1, Group A, B, C, and D			
Class I, Zone	1: [Ex ib] IIC / IIB			

		CSA INTERNATIONAL	-	
Certificate:	1821536 (LR 56628-36)		Master Contract:	167555
Project:	1821541		Date Issued:	2006/10/12
Model 60930 provides I.S. 35958-000-07 • Uo = 8.7 V • Group A., • Group C, I • Group C, I Part C:	8-61 Power Supply; rated 100-1 connections for CL I, Div I, Gr 7-A4 (as per 65530-001-07-A4) 'dc; Io = 185 mA; Po = 1.61 W; B and IIC: $Lo = 5$ uH and Co) and IIB: $Lo = 5$ uH and Co) and IIB: $Lo = 200$ uH and C	20Vac, 50/60Hz, 8VA; Int p A,B,C,D and Class I, Zoi ; and with Entity Paramete = 4.1 uF = 10 uF to = 8.5 uF	trinsically Safe Associa ne 1, Groups IIC / IIB a rrs (non Linear):	tted Equipment , is per control drawing
Class I. Divis	ion 1. Group C and D	les 1.5. connections for:		
Class I, Divis				
Model YPS0 I.S. connection and with Enti • Uo = 12.6 • Group C, I	5-ZKP Power Supply; rated 115 ons for CL I, Div I, Grp C,D and ty Parameters (non Linear): Vdc; Io = 230 mA; Po = 2.9 W; D and IIB: $Lo = 420$ uH and C	Vac, 50/60Hz, 10VA; Intri I Class I, Zone 1, Groups I Co = 575 nF	insically Safe Associat IB as per control draw	ed Equipment , provides ing 35958-000-07-A4 ;
Part D:				
Intrinsic Safe	ty Associated Equipment provid	les I.S. connections for:		
Class I, Divis	sion 1, Group C and D			
Class I, Zone	1: [Ex ib] IIB			
Model YCO provides I.S. 35958-000-0	1-Z Ex-Link-Box; rated 100 – 2 connections for CL I, Div 1, Gr 7-A4; and with:	240 Vac, 50 -60Hz, 15VA; p C & D and Class I, Zone	Intrinsically Safe Asso I, Group IIB as per co	ociated Equipment, ontrol drawing
DC Supply E • Uo = 12.6	ntity Parameters (non Linear): Vdc; Io = 230 mA; Po = 2.9 W;	Lo = 420 uH and Co = 57	5 nF	
	bined) Entity Parameters (Linea /dc; Io = 100 mA; Po = 127 mW	r): v; Lo = 5 mH and Co = 200	0 uF	
 RS422 (Com Uo = 6.8 V 				
RS422 (Com • Uo = 6.8 V Part E:				
RS422 (Com • Uo = 6.8 V Part E: Intrinsic Safe	ty Equipment for:			

	CSA	INTERNATIONAL	
Certificate:	1821536 (LR 56628-36)	Master Contract:	167555
Project:	1821541	Date Issued:	2006/10/12
Class I, Zone	1: Ex ib IIB		
Weighing Uni Class I, Zone	t PMA.Quality Model PMA7501a-Xbcd 1, Group IIB as per control drawing 359	t; Intrinsically Safe Equipment for CL I, 58-000-07-A4 ; and with:	Div 1, Grp C & D and
DC Supply:			
• Ui = 8.7 Vo	eters (non Linear): dc; li = 185 mA; Pi = 1.61 W; Li = 0.0 m	iH and $Ci = 5.6 uF$	
or			
I.S. System Co Sartorius P	onnection to: ower Supply: Model 609308-61		
RS232 (comb	oined):		
 Entity Parame Ui = 12 Vd 	eters (Linear): lc; li = 330 mA; Pi = any; Li = 0.0 mH a	nd Ci = 0.0 uF	
• Uo = 12.0	eters (non Linear): Vdc; Io = 125 mA; Po = 373 mW; Lo =	8.0 mH and Co = 9.0 uF	
or			
I.S. System C • Sartorius Ir • Sartorius E • Sartorius E	onnections to: sterface Converter: YD105-Z Display Unit: Model TM01-X Display Unit: Model EM01-X (for CL I, !	Div 1, Grp C&D only)	
Model PMA	7501a-Xbcd		
Where: • a = Blank of • bc = 00 or • d = Blank	or D, H, P or S CE or W		
Part E: Con	.t		
Intrinsic Safe	ty Equipment for:		
Class I, Divis	ion 1, Group C and D		
Class I, Zone	1: Ex ib IIB		
Weighing Un	it PMA.World Model PMA7501a-XbcG	and PMA.Net Model PMA7501a-XbcG	L; Intrinsically Safe

DQD 507 Rev. 2004-06-30

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CSA INTERNATIONAL
  Certificate:
                 1821536 (LR 56628-36)
                                                                        Master Contract:
                                                                                              167555
  Project:
                 1821541
                                                                        Date Issued:
                                                                                              2006/10/12
  Equipment for CL I, Div I, Grp C & D and Class I, Zone 1, Group IIB as per control drawing 35958-000-07-A4 ; and
  with:
  DC Supply:
  Entity Parameters (non Linear):
  • Ui = 12.6 Vdc; Ii = 230 mA; Pi = 2.9 W; Li = 0.0 mH and Ci = 200 nF
  or
  I.S. System Connection to:

Sartorius Power Supply: Model YPS05-ZKP
Sartorius Ex-Link-Box: Model YCO11-Z

  RS232 (combined):
  Entity Parameters (Linear):
  • Ui = 12 Vdc; Ii = 330 mA; Pi = any; Li = 0.0 mH and Ci = 0.0 uF
  Entity Parameters (non Linear):
  • Uo = 12.0 Vdc; Io = 125 mA; Po = 373 mW; Lo = 8.0 mH and Co = 9.0 uF
  or
  1.S. System Connections to:
  · Sartorius Interface Converter: YDI05-Z
  · Sartorius Display Unit: Model TM01-X
  · Sartorius Display Unit: Model EM01-X (for CL I, Div I, Grp C&D only)
  RS422 (combined):
  Entity Parameters (Linear):
  • Ui = 6.8 Vdc; Ii = 100 mA; Pi = 127 mW; Li = 0.0 mH and Ci = 0.0 uF
  or
  I.S. System Connections to:
  · Sartorius Ex-Link-Box: Model YCO11-Z
  Model PMA7501a-XbcGd
  Where:
  • a = Blank or D, H, P or S
  • bc = 00 or CE
  • d = Blank or L
DQD 507 Rev. 2004-06-30
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	CSA IN	STERNATIONAL	
Certificate:	1821536 (LR 56628-36)	Master Contract:	167555
Project:	1821541	Date Issued:	2006/10/12
APPLICABI CSA C22. CSA Monc 2006.1821 Company 1 Model nun Serial num The symbo Hazardous WARNING Drawing) Model YP: Model YP: Model YP: Model YP: Model YP: Model YP:	E REQUIREMENTS No 0 M1998 - General Requirements Ca No 0.4-M1982 - Bonding and Grounding No 30-M1986 - Explosion-Proof Encloss No 142-M1987 - Process Control Equipn No 157-M1992 - Intrinsically Safe and N -E60079-0:02 - Electrical apparatus for ex -E60079-0:102 - Electrical apparatus for ex -E60079-0:11:02 - Electrical apparatus for ex -E60079-0:11:02 - Electrical apparatus for ex -E60079-0:02 - Electrical apparatus for ex -E60079-0:00-07-NI (Safe) - Electrical rating (amps, hertz, and volts). - ambient I [Exia]; Associated Equipment Location Designations - SUBSTITUTION OF COMPONENTS - S03-XKR: Reference to the L.S. Control D - 305-ZKP: Reference to the L.S. Control D - A7501X: Reference to the L.S. Control D - A7501X: Reference to the L.S. Control D - A7501Z.: Reference to the L.S. Control Drav	nadian Electrical Code Part II. of Electrical Equipment (Protective G res for Use in Class I Hazardous Loca nent. on-Incendive Equipment for Use in Hi plosive gas atmospheres – Part 0: Gen xplosive gas atmospheres – Part 11: Ir 36X if not near mark. 36X if not near mark. MAY IMPAIR INTRINSIC SAFETY Drawing: 65528-000-07-A4 5530-001-07-A4; Which calls out the 5958-000-07-A4. awing: 35958-000-07-4A Drawing: 35958-000-07-4A	rounding). ions azardous Locations. eral Requirements trinsic safety
QD 507 Rev. 2004-06-3			



	609308-61		Uo	lo	Po	Co	Lo					
			8.7 V	185 mA	1.61 W	10 µF *	5 uH *					
							,					
	YPS05-ZKP		Uo	lo	Po	Co	Lo					
			12.6 V	230 mA	2.9 W	575 nF *	420 uH *					
			12.0 1	200 110 (2.0 11	010111	120 μ11					
	YC011-Z		Uo	lo	Po	Co	Lo					
	DC Supply		12.6 V	230 mA	2.9 W	575 nF *	420 uH *					
	R\$422 (com	bined)	6.8 V	100 mA #	127 mW	200 µF	5 mH					
	<u>PMA7501X./ PMA7501XW:</u>											
			Ui	li	Pi	Ci	Li					
	DC Supply		8.7 V	185 mA	1.61 W	5.6 µF	0					
	RS232 (com	nbined)	12.6 V	330 mA #	any	0	0					
			Uo	lo	Po	Co	Lo					
	RS232 (com	nbined)	12.0 V	125 mA	373 mW	9 µF	8 mH					
	PMA7501>	(G.:										
			Ui	li	Pi	Ci	ы					
	DC Supply RS232 (con	mbined)	12.6 V 12.6 V	230 mA 330 mA #	2.9 W any	200 nF 0	0					
	R\$422 (combined)		6.8 V	100 mA #	127 mW	0	0					
			Uo	lo	Po	Co	Lo					
	RS232 (cor	nbined)	12.0 V	125 mA	373 mW	9 µF	8 mH					
	* : including	50m (164 fl) output ca	ble to the s	cale							
	#: linear											
		Date	Name		Title	Control	Drawing		car	tor	inc	
	Written by 0	8.09.2006	Klausgrete	465	Denvice at 1	Sontrol	Liawing		201	U	103	
Reviewed by 08.09.20 Released by 08.09.20		8.09.2006	Klausgrete		Urawing numb	[ື] ່ 35958-00	00-07-A4	01	Sheet	2	of 2	2

Sartorius AG Weender Landstrasse 94–108 37075 Goettingen, Germany

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