

XA 4Y.M.A PLUS microbalance

SYNERGY LAB Line – New quality of small mass weighing



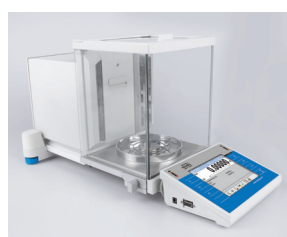
XA 4Y.M.A PLUS with $\varnothing = 30$ mm weighing pan



New design of the anti-draft shield



Intuitive operation and touch screen



Automatic weighing chamber door



Antistatic ionizer built into the weighings chamber

Functions

- | | | | | |
|----------------|-----------------------|-----------------------------|----------------------------|--------------------------------|
| Parts counting | Percent weighing | Pipettes calibration | Automatic sliding door | Ambient conditions measurement |
| Dosing | Statistics | Statistical quality control | Cooperation with titrators | Moveable range |
| Checkweighing | Animal weighing | Autotest | GLP procedures | Compliance with 21 CFR Part 11 |
| Formulations | Differential weighing | Density determination | Proximity sensors | Multilingual menu |

Features

Reliable Results and Excellent Weighing Parameters

The best weighing parameters enable applying XA 4Y.M.A PLUS microbalance in majority of demanding laboratory processes.

21 CFR Part 11 Compliance Module

XA 4Y.M.A PLUS microbalance are compliant with 21 CFR part 11 and EU GMP part 4, annex 11. This means that the XA 4Y series features numerous functions for protecting and monitoring work results of particular operators.

Smart Min Weight

With use of the „Smart Min Weight“ function, the XA 4Y.M.A PLUS microbalance automatically adjusts resolution of the range to the currently weighed mass. This results with improvement of the minimum sample weight parameter by 30%.

Warnings System

When the sensors for constant monitoring of ambient conditions and level status record deviations, the balance displays warnings about potential errors occurrence during weighing.

Antistatic Weighing Chamber

XA 4Y.M.A PLUS microbalance is a device where the influence of electrostatics onto the weighing result has been eliminated due to use of special antistatic coating of the glass panes, and thanks to an in-built ionizer.

Ergonomic Mechanical Design

Latch-type system of weighing chamber components fastening allows fast and easy tool-free assembly/disassembly. Smart system of pressures equalization guarantees stable measurement. It eliminates errors generated by rapid change of pressure inside the weighing chamber.

Technical Specifications

	XA 6.4Y.M.A PLUS	XA 6/21.4Y.M.A PLUS	XA 21.4Y.M.A PLUS
Maximum capacity [Max]	6,1 g	6/21 g	21 g
Minimum load	100 µg	200 µg	200 µg
Readability [d]	1 µg	1 µg / 2 µg	1 µg
Verification scale interval [e]	—	—	—
Tare range	-6,1 g	-21 g	-21 g
Repeatability (5% Max)*	1 µg	1,2 µg	1,2 µg
Repeatability (Max)	2,5 µg	4 µg	4 µg
Linearity	±7 µg	±9 µg	±9 µg
Eccentric load deviation	7 µg	15 µg	15 µg
Sensitivity temperature drift**	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$
Sensitivity time drift	$1 \times 10^{-6} / \text{Rok} \times \text{Rt}$	$1 \times 10^{-6} / \text{Rok} \times \text{Rt}$	$1 \times 10^{-6} / \text{Rok} \times \text{Rt}$
Minimum weight (U=1%, k=2)	0,2 mg *****	0,24 mg *****	0,24 mg *****
Minimum weight (USP)	2 mg *****	2,4 mg *****	2,4 mg *****
Stabilization time	~ 3,5 s	~ 3,5s	~ 3,5s
Adjustment	internal	internal	internal
Moveable range	—	Yes	—
Verification	—	—	—
OIML Class	—	—	—
Indicator fastening	35 cm cable, wireless connection (option)***	35 cm cable, wireless connection (option)***	35 cm cable, wireless connection (option)***
Display	5.7" colour, resistive touch screen	5.7" colour, resistive touch screen	5.7" colour, resistive touch screen
Keypad	8 keys	8 keys	8 keys
Protection class	IP 43	IP 43	IP 43
Databases	19	19	19
Touch-free operation	2 programmable proximity sensors	2 programmable proximity sensors	2 programmable proximity sensors
USB-A	2	2	2
Ethernet	10 / 100 Mbit	10 / 100 Mbit	10 / 100 Mbit
RS 232	2	2	2
Wi-Fi®	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n
IN/OUT	4 × IN, 4 × OUT	4 × IN, 4 × OUT	4 × IN, 4 × OUT
Power supply	13,5 ÷ 16 V DC	13,5 ÷ 16 V DC	13,5 ÷ 16 V DC
Power consumption	10 W	10 W	10 W
Operating temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
Atmospheric humidity*****	40 ÷ 80%	40 ÷ 80%	40 ÷ 80%
Transport and storage temperature	-20 ÷ +50 °C	-20 ÷ +50 °C	-20 ÷ +50 °C
Weighing pan dimensions	ø 30 mm	ø 30 mm	ø 30 mm
Weighing chamber dimensions	199 × 170 × 218 mm	199 × 170 × 218 mm	199 × 170 × 218 mm
Weighing device dimensions	571 × 286 × 302 mm	571 × 286 × 302 mm	571 × 286 × 302 mm
Net weight	14,5 kg	14,5 kg	14,5 kg
Gross weight	18,9 kg	18,9 kg	18,9 kg
Packaging dimensions	720 × 385 × 485 mm	720 × 385 × 485 mm	720 × 385 × 485 mm

Rt net weight

* repeatability is expressed as a standard deviation from 10 weighing cycles

** parameter determined in the following temperature range: +15 ÷ +35 °C

*** optional solution on purchase order

**** non-condensing conditions

***** Achieved thanks to the Smart Min Weight function

Values of parameters provided in Technical Specifications table have been determined under stable laboratory conditions. Due to ambient conditions impact or/and balance setup, the above parameters may vary for environments other than laboratory.

Wi-Fi® is a registered trademark of Wi-Fi® Alliance.

Technical Specifications

	XA 21/52.4Y.M.A PLUS	XA 52.4Y.M.A PLUS
Maximum capacity [Max]	21 g / 52 g	52 g
Minimum load	200 µg	500 µg
Readability [d]	1 µg / 5 µg	5 µg
Verification scale interval [e]	—	—
Tare range	-52 g	-52 g
Repeatability (5% Max)*	1,8 µg	2,5µg
Repeatability (Max)	6 µg	6 µg
Linearity	±20 µg	±20 µg
Eccentric load deviation	20 µg	20 µg
Sensitivity temperature drift**	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$	$1 \times 10^{-6} / ^\circ\text{C} \times \text{Rt}$
Sensitivity time drift	$1 \times 10^{-6} / \text{Rok} \times \text{Rt}$	$1 \times 10^{-6} / \text{Rok} \times \text{Rt}$
Minimum weight (U=1%, k=2)	0,36 mg *****	0,5 mg *****
Minimum weight (USP)	3,6 mg *****	5 mg *****
Stabilization time	~ 3,5 s	~ 3,5s
Adjustment	Yes	Yes
Moveable range	I	I
Verification	—	—
OIML Class	—	—
Indicator fastening	35 cm cable, wireless connection (option)***	35 cm cable, wireless connection (option)***
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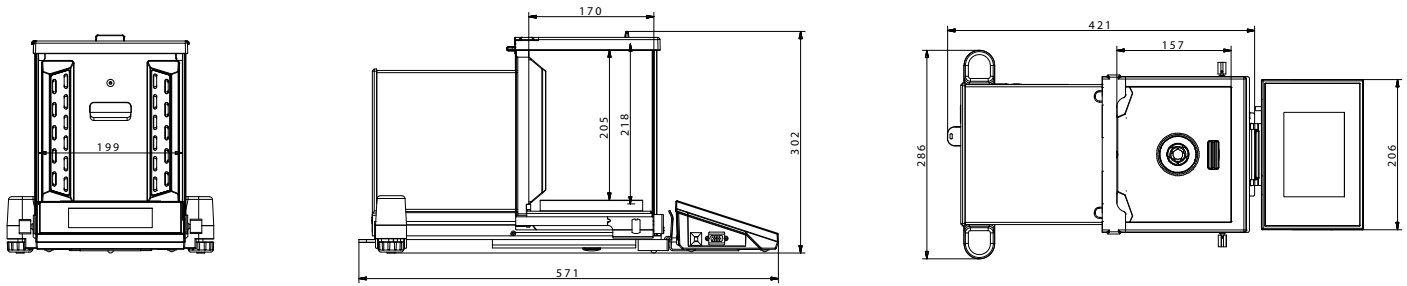
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Dimensions



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Accessories

Weighing Tables

- granite antivibration table
- antivibration tables for laboratory balances
- professional weighing table

Professional Weighing

- Adapter for calibration of XA17 series pipettes

Peripheral Devices

- Epson dot matrix printer
- barcode scanners
- WD-5/3Y LCD display

Cables, Converters

- P0108: RS 232 cable (balance-computer)
- P0167: RS 232 cable (balance-computer)
- P0151: RS 232 cable (balance - Epson printer)

Electrical Accessories

- ZR-02 power supply with battery

Ambient Conditions

- THB-S or THB-P sensor

Dedicated Software

R-LAB

- collecting measurements
- carrying out statistical analysis of measurements
- customized graphs and reports

E2R Weighing Records

- complete, automated databases synchronization
- fully supported processes of labelling and parts counting
- record of weighings, weighings archiving
- basic and advanced (with graphs) reports

Label Editor R02

- designing label templates
- sending graphics and fonts to label printers
- printing label templates using connected printers

Pipettes

- determining measurement errors of pipettes volume
- accordance with ISO 8655
- calibration of single-channel and multi-channel pipettes
- calibration of fixed-volume and variable-volume pipettes

Audit Trail Reader

- support of Audit Trail function available for 3Y, 4Y, HY10, WLY, WPY series weighing instruments
- record of operator's activity from the moment of logging in

Parameters Editor

- remote change of parameters
- remote on-line preview of the display
- displaying current mass indication
- software update
- file loading, editing and saving parameters to a file
- import and export of parameters
- interfaces: RS232, Ethernet and Wireless Connection.
- quick and easy edition of balance parameters using computer.

RAD KEY

- Establishing cooperation between a weighing instrument and a computer

R. Barcode

- The basic function software is presentation of the data sent by barcode scanners connected to PC via USB or RS232

Radwag Development Studio

- presentation of functions (and subfunctions) of communication protocol (Common Communication Protocol)
- possibility of connection with weighing equipment on which each function is carried out,
- library with mass control, contained within the development environment
- complete documentation of the communication protocol
- set of user manuals for different solutions addressed for programmers employed in companies using RADWAG-manufactured weighing equipment

LabView Driver

- operation of RADWAG balances in LabView environment

RADWAG Connect

- establishing communication with all balances, scales and weighing modules using Common Communication Protocol
- communication via local network,
- support of basic functions
- auto searching for devices
- connecting with few devices simultaneously, swapping between them
- clear list of connected platforms
- record of measurements in the program,
- export of carried out measurements to CSV file,
- work performed using freely selected device with Windows 10 operating system

RADWAG Remote Desktop

- remote operation via computer, mobile phone or tablet
- sending text messages
- version for Windows 10 and Android systems