



XA 6.5Y.M.A Microbalance, XA 21/52.5Y.M.A Microbalance, XA 6/21.5Y.M.A Microbalance, XA 53.5Y.M.A Microbalance, XA 21.5Y.M.A Microbalance, XA 52.5Y.M.A Microbalance

More information on the website  
radwag.com/en/info,w1,0SG



XA 6.5Y.M.A Microbalance  
XA 21/52.5Y.M.A Microbalance  
XA 6/21.5Y.M.A Microbalance  
XA 53.5Y.M.A Microbalance  
XA 21.5Y.M.A Microbalance  
XA 52.5Y.M.A Microbalance

The drawings, photos and graphics used are for illustrative purposes only.

## Functions



Autotest



Dosing



Percent Weighing



Parts counting



Peak hold



Formulation



Newton unit  
measurement



Statistics



Checkweighing



IR sensors



GLP Procedures



Animal weighing



Pipettes Calibration



Air density correction



Automatic sliding door



Density determination



Differential weighing



Ambient conditions  
monitoring



Statistical Quality Control



Packaged Goods Control



ALIBI Memory



Wi-Fi



Moveable range:  
- XA 6/21.5Y.M.A  
Microbalance

# Datasheet

|                                     | XA 6.5Y.M.A Microbalance<br>WL-109-0013                                                  | XA 6/21.5Y.M.A Microbalance<br>WL-109-1003                                               | XA 21/52.5Y.M.A Microbalance<br>WL-109-1004                                              |
|-------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Metrological parameters             |                                                                                          |                                                                                          |                                                                                          |
| Maximum capacity [Max]              | 6,1 g                                                                                    | 6 / 21 g                                                                                 | 21 / 52 g                                                                                |
| Minimum load                        | 0,1 mg                                                                                   | 0,1 mg                                                                                   | 0,1 mg                                                                                   |
| Readability [d]                     | 1 µg                                                                                     | 1 / 2 µg                                                                                 | 1 / 5 µg                                                                                 |
| Verification unit [e]               | 1 mg                                                                                     | 1 mg                                                                                     | 1 mg                                                                                     |
| Tare range                          | -6,1 g                                                                                   | -21 g                                                                                    | -52 g                                                                                    |
| Standard repeatability [5% Max]     | 0,8 µg                                                                                   | 1,3 µg                                                                                   | 1,5 µg                                                                                   |
| Standard repeatability [Max]        | 2,5 µg                                                                                   | 3,5 µg                                                                                   | 6 µg                                                                                     |
| Standard minimum weight (USP)       | 1,6 mg                                                                                   | 2,6 mg                                                                                   | 3 mg                                                                                     |
| Standard minimum weight (U=1%, k=2) | 0,16 mg                                                                                  | 0,26 mg                                                                                  | 0,3 mg                                                                                   |
| Permissible repeatability [5% Max]  | 1,5 µg                                                                                   | 2 µg                                                                                     | 2,4 µg                                                                                   |
| Permissible repeatability [Max]     | 3 µg                                                                                     | 5 µg                                                                                     | 8 µg                                                                                     |
| Linearity                           | ±7 µg                                                                                    | ±9 µg                                                                                    | ±20 µg                                                                                   |
| Eccentric load deviation            | 7 µg                                                                                     | 15 µg                                                                                    | 20 µg                                                                                    |
| Sensitivity time drift              | 1×10 <sup>-6</sup> /Year×Rt                                                              | 1×10 <sup>-6</sup> /Year×Rt                                                              | 1×10 <sup>-6</sup> /Year×Rt                                                              |
| Stabilization time                  | ~ 3,5 s                                                                                  | ~ 3,5 s                                                                                  | ~ 3,5 s                                                                                  |
| Adjustment                          | internal (automatic)                                                                     | internal (automatic)                                                                     | internal (automatic)                                                                     |
| OIML Class                          | I                                                                                        | I                                                                                        | I                                                                                        |
| Physical parameters                 |                                                                                          |                                                                                          |                                                                                          |
| Leveling system                     | automatic – Reflex Level System                                                          | automatic – Reflex Level System                                                          | automatic – Reflex Level System                                                          |
| Display                             | 10" graphic colour touchscreen                                                           | 10" graphic colour touchscreen                                                           | 10" graphic colour touchscreen                                                           |
| Weighing chamber doors              | automatic                                                                                | automatic                                                                                | automatic                                                                                |
| Delivery components                 | Microbalance, weighing pan, weighing pan shield, power supply, brush, fabric dust cover. | Microbalance, weighing pan, weighing pan shield, power supply, brush, fabric dust cover. | Microbalance, weighing pan, weighing pan shield, power supply, brush, fabric dust cover. |
| Weighing chamber dimensions         | 199×170×217 mm                                                                           | 199×170×217 mm                                                                           | 199×170×217 mm                                                                           |
| Weighing pan dimensions             | ø30 mm                                                                                   | ø30 mm                                                                                   | ø30 mm                                                                                   |
| Packaging dimensions                | 750×492×595 mm                                                                           | 750×492×595 mm                                                                           | 750×492×595 mm                                                                           |
| Net weight                          | 14,5 kg                                                                                  | 14,5 kg                                                                                  | 14,5 kg                                                                                  |
| Gross weight                        | 20 kg                                                                                    | 18,9 kg                                                                                  | 18,9 kg                                                                                  |
| Construction                        |                                                                                          |                                                                                          |                                                                                          |
| Protection class                    | IP 43                                                                                    | IP 43                                                                                    | IP 43                                                                                    |
| Communication interface             |                                                                                          |                                                                                          |                                                                                          |
| Communication interface             | 2×USB-A, USB-C, RS 232 (COM3), HDMI, Ethernet, Wi-Fi, Hotspot                            | 2×USB-A, USB-C, RS 232 (COM3), HDMI, Ethernet, Wi-Fi, Hotspot                            | 2×USB-A, USB-C, RS 232 (COM3), HDMI, Ethernet, Wi-Fi, Hotspot                            |
| Electrical parameters               |                                                                                          |                                                                                          |                                                                                          |
| Power supply                        | Adapter: 100 – 240V AC 50/60Hz 1A; 15V DC 2,4A<br>Balance: 12 – 15V DC 1,4A max*         | Adapter: 100 – 240V AC 50/60Hz 1A; 15V DC 2,4A<br>Balance: 12 – 15V DC 1,4A max*         | Adapter: 100 – 240V AC 50/60Hz 1A; 15V DC 2,4A<br>Balance: 12 – 15V DC 1,4A max*         |
| Environmental conditions            |                                                                                          |                                                                                          |                                                                                          |
| Operating temperature               | +10 – +40 °C                                                                             | +10 – +40 °C                                                                             | +10 – +40 °C                                                                             |
| Operating temperature change rate   | ±0,3 °C / 1 h (±1 °C / 8 h)                                                              | ±0,3 °C / 1 h (±1 °C / 8 h)                                                              | ±0,3 °C / 1 h (±1 °C / 8 h)                                                              |
| Relative humidity                   | 40% – 80%                                                                                | 40% – 80%                                                                                | 40% – 80%                                                                                |
| Relative humidity change rate       | ±1% / h (±4% / 8 h)                                                                      | ±1% / h (±4% / 8 h)                                                                      | ±1% / h (±4% / 8 h)                                                                      |

Repeatability is expressed as a standard deviation from 10 cycles of mass standard weighing. Stabilization time dependson the ambient conditions and the dynamics of weighing pan loading; specified for FAST profile. \* The power supply can be connected to the socket on the

back of the balance housing or to the terminal.

## Datasheet

|                                            | XA 21.5Y.M.A Microbalance<br>WL-109-0015                                                 | XA 52.5Y.M.A Microbalance<br>WL-109-0017                                                 | XA 53.5Y.M.A Microbalance<br>WL-109-0018                                                 |
|--------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| <b>Metrological parameters</b>             |                                                                                          |                                                                                          |                                                                                          |
| <b>Maximum capacity [Max]</b>              | 21 g                                                                                     | 52 g                                                                                     | 53 g                                                                                     |
| <b>Minimum load</b>                        | 0,1 mg                                                                                   | 0,5 mg                                                                                   | 0,1 mg                                                                                   |
| <b>Readability [d]</b>                     | 1 µg                                                                                     | 5 µg                                                                                     | 1 µg                                                                                     |
| <b>Verification unit [e]</b>               | 1 mg                                                                                     | 1 mg                                                                                     | 1 mg                                                                                     |
| <b>Tare range</b>                          | -21 g                                                                                    | -52 g                                                                                    | -53 g                                                                                    |
| <b>Standard repeatability [5% Max]</b>     | 1,3 µg                                                                                   | 2,2 µg                                                                                   | 1,5 µg                                                                                   |
| <b>Standard repeatability [Max]</b>        | 3,5 µg                                                                                   | 6 µg                                                                                     | 6 µg                                                                                     |
| <b>Standard minimum weight (USP)</b>       | 2,6 mg                                                                                   | 4,4 mg                                                                                   | 3 mg                                                                                     |
| <b>Standard minimum weight (U=1%, k=2)</b> | 0,26 mg                                                                                  | 0,44 mg                                                                                  | 0,3 mg                                                                                   |
| <b>Permissible repeatability [5% Max]</b>  | 2 µg                                                                                     | 3,4 µg                                                                                   | 2,4 µg                                                                                   |
| <b>Permissible repeatability [Max]</b>     | 5 µg                                                                                     | 8 µg                                                                                     | 8 µg                                                                                     |
| <b>Linearity</b>                           | ±9 µg                                                                                    | ±20 µg                                                                                   | ±20 µg                                                                                   |
| <b>Eccentric load deviation</b>            | 15 µg                                                                                    | 20 µg                                                                                    | 20 µg                                                                                    |
| <b>Sensitivity time drift</b>              | $1 \times 10^{-6} / \text{Year} \times R_t$                                              | $1 \times 10^{-6} / \text{Year} \times R_t$                                              | $1 \times 10^{-6} / \text{Year} \times R_t$                                              |
| <b>Stabilization time</b>                  | ~ 3,5 s                                                                                  | ~ 3,5 s                                                                                  | ~ 3,5 s                                                                                  |
| <b>Adjustment</b>                          | internal (automatic)                                                                     | internal (automatic)                                                                     | internal (automatic)                                                                     |
| <b>OIML Class</b>                          | I                                                                                        | I                                                                                        | I                                                                                        |
| <b>Physical parameters</b>                 |                                                                                          |                                                                                          |                                                                                          |
| <b>Leveling system</b>                     | automatic – Reflex Level System                                                          | automatic – Reflex Level System                                                          | automatic – Reflex Level System                                                          |
| <b>Display</b>                             | 10" graphic colour touchscreen                                                           | 10" graphic colour touchscreen                                                           | 10" graphic colour touchscreen                                                           |
| <b>Weighing chamber doors</b>              | automatic                                                                                | automatic                                                                                | automatic                                                                                |
| <b>Delivery components</b>                 | Microbalance, weighing pan, weighing pan shield, power supply, brush, fabric dust cover. | Microbalance, weighing pan, weighing pan shield, power supply, brush, fabric dust cover. | Microbalance, weighing pan, weighing pan shield, power supply, brush, fabric dust cover. |
| <b>Weighing chamber dimensions</b>         | 199×170×217 mm                                                                           | 199×170×217 mm                                                                           | 199×170×217 mm                                                                           |
| <b>Weighing pan dimensions</b>             | ø30 mm                                                                                   | ø30 mm                                                                                   | ø30 mm                                                                                   |
| <b>Packaging dimensions</b>                | 750×492×595 mm                                                                           | 750×492×595 mm                                                                           | 750×492×595 mm                                                                           |
| <b>Net weight</b>                          | 14,5 kg                                                                                  | 14,5 kg                                                                                  | 14,5 kg                                                                                  |
| <b>Gross weight</b>                        | 20 kg                                                                                    | 20 kg                                                                                    | 20 kg                                                                                    |
| <b>Construction</b>                        |                                                                                          |                                                                                          |                                                                                          |
| <b>Protection class</b>                    | IP 43                                                                                    | IP 43                                                                                    | IP 43                                                                                    |
| <b>Communication interface</b>             |                                                                                          |                                                                                          |                                                                                          |
| <b>Communication interface</b>             | 2×USB-A, USB-C, RS 232 (COM3), HDMI, Ethernet, Wi-Fi, Hotspot                            | 2×USB-A, USB-C, RS 232 (COM3), HDMI, Ethernet, Wi-Fi, Hotspot                            | 2×USB-A, USB-C, RS 232 (COM3), HDMI, Ethernet, Wi-Fi, Hotspot                            |
| <b>Electrical parameters</b>               |                                                                                          |                                                                                          |                                                                                          |
| <b>Power supply</b>                        | Adapter: 100 – 240V AC 50/60Hz 1A; 15V DC 2,4A<br>Balance: 12 – 15V DC 1,4A max*         | Adapter: 100 – 240V AC 50/60Hz 1A; 15V DC 2,4A<br>Balance: 12 – 15V DC 1,4A max*         | Adapter: 100 – 240V AC 50/60Hz 1A; 15V DC 2,4A<br>Balance: 12 – 15V DC 1,4A max*         |
| <b>Environmental conditions</b>            |                                                                                          |                                                                                          |                                                                                          |
| <b>Operating temperature</b>               | +10 – +40 °C                                                                             | +10 – +40 °C                                                                             | +10 – +40 °C                                                                             |
| <b>Operating temperature change rate</b>   | ±0,3 °C / 1 h (±1 °C / 8 h)                                                              | ±0,3 °C / 1 h (±1 °C / 8 h)                                                              | ±0,3 °C / 1 h (±1 °C / 8 h)                                                              |
| <b>Relative humidity</b>                   | 40% – 80%                                                                                | 40% – 80%                                                                                | 40% – 80%                                                                                |
| <b>Relative humidity change rate</b>       | ±1% / h (±4% / 8 h)                                                                      | ±1% / h (±4% / 8 h)                                                                      | ±1% / h (±4% / 8 h)                                                                      |

Repeatability is expressed as a standard deviation from 10 cycles of mass standard weighing. Stabilization time depends on the ambient conditions and the dynamics of weighing pan loading; specified for FAST profile. \* The power supply can be connected to the socket on the back of the balance housing or to the terminal.

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



Additional fee for verification



## Accessories (Additional Fee)

MediaBox  
RFID Tags  
Antivibration Tables  
Power Adapters  
Protective cover for balances  
RS 232, RS 485 cables  
Additional modules  
Anti-Draft Chamber for Microbalances  
Professional Weighing Tables  
Protective cover for balances  
Barcode scanners  
Automatic feeders

MICRO-KIT - Set of Holders for Microscale Glassware  
Label Printers  
THBR 2.0 System - Ambient Conditions Monitoring  
RS 232, RS 485 cables  
Adapters for Pipettes Calibration  
Anti-Draft Chamber for XA 4Y and XA 5Y Balances  
Weighing dishes  
Antistatic ionizer  
Receipt Printer  
Fingerprint Reader  
RS 232 – USB Converter  
Under-pan weighing

## Software (Additional Fee)

E2R System  
Label Editor R02  
R-LAB  
RADWAG Development Studio

RAD-KEY  
RADWAG Remote Desktop  
Scales Editor 2.1

## Device dimensions

XA 6.5Y.M.A Microbalance, XA 21/52.5Y.M.A Microbalance, XA 6/21.5Y.M.A Microbalance, XA 53.5Y.M.A Microbalance, XA 21.5Y.M.A Microbalance, XA 52.5Y.M.A Microbalance

