

MYA 4Y SERIES MICROBALANCES



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APPLICATION

4Y series is a modern weighing device, especially useful when the measurement requires perfect accuracy and high speed.

FEATURES OF 4Y SERIES MICROBALANCE

REPEATABILITY (SD) **<1d** MEASUREMENT DURATION **<5 s.** **ETHERNET**



MYA 2.4Y
(standard solutions
for any operating conditions)



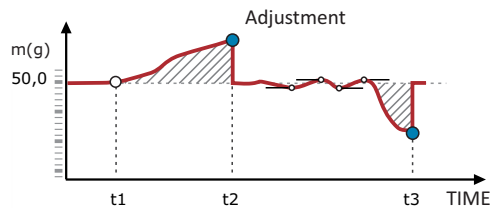
MYA 5.4Y.F
(filters weighing)



MYA 21.4Y.P
(control of piston pipettes volume)

ACCURACY

Measurement accuracy is guaranteed with an adjustment procedure carried out using an internal adjustment weight. This fully automatic process is controlled by a module intended to diagnose ambient conditions change (on-line). Adjustment processes (internal and external) can be performed in accordance with a specially designed schedule.



FUNCTIONALITY

4Y series microbalance is an optimized modern device which features an option of automatic level control (Level SENSING) as one of numerous functions.

The practical effect of balance customization are individual user profiles and gradable permission levels for access to balance menu.

Programmable proximity sensors offer wide range of possibilities: weighing chamber control, zeroing, tarring, printout.

Several functions such as differential weighing facilitate multi-stage mass control of one and the same sample subjected to various processes. Pipettes calibration function is an ergonomic tool designed to calibrate and control piston pipettes with the use of gravimetric method. MEDIA module, as one of the greatest 4Y series assets, provides the user with an on-screen help and support.

COMPLIANCE WITH REGULATIONS

Owing to security system and possibility to document the process by means of printouts (standard/editable), the 4Y balance meets requirements imposed by GLP/GMP systems for various industries (pharmacy, petrochemistry, environmental protection).

- PARTS COUNTING
- DOSING
- CHECKWEIGHING
- FORMULATION
- PERCENT WEIGHING [%]
- STATISTICS
- ANIMAL WEIGHING
- DIFFERENTIAL WEIGHING
- PIPETTES CALIBRATION
- SQC
- AUTOTEST
- AUTOMATIC DOOR
- AIR DENSITY CORRECTION
- GLP / GMP PROCEDURES
- INFRARED SENSORS
- AMBIENT COND. MONITORING
- UNITS
- MOVABLE RANGE

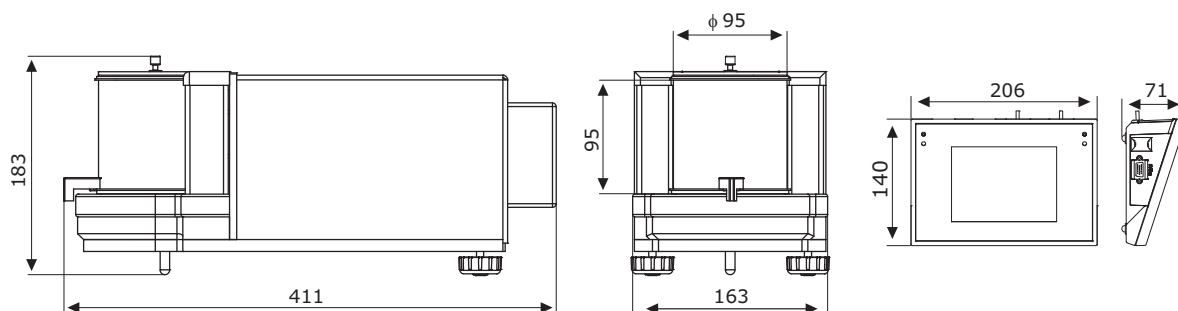
MEDIA module support within a reach of your hand

A sheer novelty of 4Y microbalance is the MEDIA module. With it you can learn using videos providing information on any relevant matter.



MEDIA module is a convenient way allowing you to broaden your knowledge on mass measurement but not exclusively (recommendations, SOP, reminders, self-designed testing procedures).

Dimensions:



Owing to fastidious selection of mechanical design components our balance allows to obtain great stability and repeatability of indications regardless of measured sample size and conditions of use. Multi-shield mechanical design of the weighing module provides excellent thermal stability. Even with challenging ambient temperature your weighing is precise and accurate. 4Y microbalances offer modern hardware and software. In-built programs, Windows Embedded Compact 7 operating system, Flash memory, Double Hardware system guarantee fast measurement and reliability when it comes to data acquiring and processing. The 4Y series comprises 5,7" colour touchscreen providing ever more increased balance operation functionality and even more practical results presentation. Complex databases allow measurement record along with printout and export option.

Technical specification:

	MYA 2.4Y	MYA 0,8/3.4Y	MYA 5.4Y	MYA 11.4Y	MYA 21.4Y
Verification	●	●	●	●	●
Maximum capacity	2,1 g	0,8 g / 3 g	5,1 g	11 g	21 g
Readability	1 µg	1 µg / 10 µg	1 µg	1 µg	1 µg
Repeatability *	0,7 µg (Rt ≤ 0,2g) 1 µg (0,2g < Rt ≤ 2g)	1 µg (Rt ≤ 0,8g) 4,1 µg (0,8g < Rt ≤ 3g)	1 µg (Rt ≤ 2g) 1,6 µg (2g < Rt ≤ 5,1g)	1,5 µg (Rt ≤ 2g) 2,0 µg (2g < Rt ≤ 5g) 2,5 µg (5g < Rt ≤ 11g)	1,5 µg (Rt ≤ 2g) 2,0 µg (2g < Rt ≤ 5g) 2,5 µg (5g < Rt ≤ 11g) 3,0 µg (11g < Rt ≤ 21g)
Linearity	±3 µg	±3 µg / ±10 µg	±5 µg	±6 µg	±7 µg
Eccentricity	3 µg	3 µg / 10 µg	5 µg	6 µg	7 µg
Sensitivity offset	$1,5 \times 10^{-6} \times Rt$	$1,5 \times 10^{-6} \times Rt$	$1,5 \times 10^{-6} \times Rt$	$3 \times 10^{-6} \times Rt$	$4 \times 10^{-6} \times Rt$
Sensitivity temperature drift	$1 \times 10^{-6} / ^\circ C \times Rt$	$1 \times 10^{-6} / ^\circ C \times Rt$	$1 \times 10^{-6} / ^\circ C \times Rt$	$1 \times 10^{-6} / ^\circ C \times Rt$	$1 \times 10^{-6} / ^\circ C \times Rt$
Sensitivity time drift	$1 \times 10^{-6} / \text{Year} \times Rt$	$1 \times 10^{-6} / \text{Year} \times Rt$	$1 \times 10^{-6} / \text{Year} \times Rt$	$1 \times 10^{-6} / \text{Year} \times Rt$	$1 \times 10^{-6} / \text{Year} \times Rt$
Minimum sample weight (USP)	1,4 mg	2 mg	2 mg	2,4 mg	2,4 mg
Minimum weight (U = 1%, k = 2)	0,14 mg	0,2 mg	0,2 mg	0,24 mg	0,24 mg
Weighing pan	Ø 16 mm	Ø 16 mm, Ø 60 mm (weighing pan for filters)	Ø 26 mm	Ø 26 mm	Ø 26 mm
Weighing chamber	Ø 90 × 90 mm				
Stabilization time	max 8 s			max 10 s	
Adjustment	automatic (internal)				
Power supply - balance	13,5 ÷ 16 V DC / 700 mA				
Power supply - terminal **	13,5 ÷ 16 V DC / 1 A				
Terminal housing	ABS plastic				
Terminal display	5,7"(640x480) colour with resistive touchscreen				
Processor	2 × 1 GHz				
Memory	RAM: 256 MB DDR2, memory card: 8 GB microSD				
Interfaces	2×USB host, 2×RS 232, Ethernet 10/100 Mbit, Wireless Module				
Audio module	YES (voice messages support)				
Video support	YES (videos and user manuals in multimedia form)				
Manual on screen	YES				
IN / OUT	4 IN / 4 OUT (digital)				
Packaging size	565×565×355 mm				
Net weight/Gross weight	10,2 kg / 14,7 kg				
Ambient conditions:					
Operating temperature	+10 ° ÷ +40 °C				
Operating temperature change rate	±0,3 °C/h (±1 °C/8h)				
Relative humidity	40% ÷ 80%				
Relative humidity change rate	±1%/h (±4%/8h)				

Rt - net weight

* Repeatability is expressed as a standard deviation from 10 weighing cycles.

** Power supply of terminal for wireless transmission version of MYA.4Y.B

The above parameters values have been determined for standard laboratory conditions. Owing to ambient conditions influence or/and balance setup the above parameters may vary for environment other than laboratory.

Technical specification:

MYA 11/52.4Y

Verification	●
Maximum capacity	11 g / 52 g
Readability	1 µg / 10 µg
Repeatability	1,5 µg (Rt ≤ 2g)
	3,0 µg (2g < Rt ≤ 11g)
	10 µg (11g < Rt ≤ 52g)
Linearity	±10µg / ±30 µg
Eccentricity	6 µg / 10 µg
Sensitivity offset	$3 \times 10^{-6} \times Rt$
Sensitivity temperature drift	$1 \times 10^{-6} / ^\circ C \times Rt$
Sensitivity time drift	$1 \times 10^{-6} / \text{Year} \times Rt$
Minimum sample weight (USP)	2,4 mg
Minimum weight (U = 1%, k = 2)	0,24 mg
Weighing pan	Ø 26 mm / Ø 40 mm
Weighing chamber	Ø 90 × 90 mm
Stabilization time	max 10 s
Adjustment	automatic (internal)
Power supply - balance	13,5 ÷ 16 V DC / 700 mA
Power supply - terminal **	13,5 ÷ 16 V DC / 1 A
Terminal housing	ABS plastic
Terminal display	5,7"(640x480) colour with resistive touchscreen
Processor	2 × 1 GHz
Memory	RAM: 256 MB DDR2, memory card: 8 GB microSD
Interfaces	2×USB host, 2×RS 232, Ethernet 10/100 Mbit, Wireless Module
Audio module	YES (voice messages support)
Video support	YES (videos and user manuals in multimedia form)
Manual on screen	YES
IN / OUT	4 IN / 4 OUT (digital)
Packaging size	565×565×355 mm
Net weight/Gross weight	10,2 kg / 14,7 kg
Ambient conditions:	
Operating temperature	+10 ° ÷ +40 °C
Operating temperature change rate	±0,3 °C/h (±1 °C/8h)
Relative humidity	40% ÷ 80%
Relative humidity change rate	±1%/h (±4%/8h)

Rt - net weight

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Accessories:

Anti-vibration table for microbalances	DJ-03 Anti-static ioniser
Professional weighing table	THB 2 ambient conditions module
Impact printer - Epson	LCD "WD-5"
Label printer - Citizen	PC USB keyboard
Draft shield for microbalances	ZR-02 power supplier
"Tare" or "Print" footswitch	Mass standard
"PW-WIN" PC software	Anti-static cable PA 1
"RAD-KEY" PC software	Barcode scanner
"REC-FS" PC software	Cable RS 232 (balance - printer: Epson, Citizen) "P0151"