PM 4Y Precision Balances

'Professional level' measurement of large masses with the highest accuracy in laboratory and industry

PM 4Y, d = 0.1 g

Radwag MonoBLOCK™, an innovative weighing system

PM 4Y, d = 0.01 g

PM 4Y, d = 0.5 g, d = 1 g

Wireless communication between a weighing device and an indicator

Functions

Parts counting	Percent weighing	Statistical quality control
Dosing	Statistics	Autotest
Checkweighing	Animal weighing	Density determination
Formulations	Differential weighing	

Under hook weighing	Ambient conditions measurement
GLP procedures	Replaceable unit
Proximity sensors	Multilingual menu

Features

Reliable Results and High Measurement Precision
Excellent measurement parameters and performance enable applying PM 4Y balances in laboratories and various branches of industry.

Radwag MonoBLOCK™, an Innovative Weighing System
The cutting edge technology of the measuring system guarantees stability of repeatability in time, where sd<1d, and a significant resistance to ambient conditions.

Weighing Heavy Loads With the Maximum Accuracy
It is possible to work with samples of different weight values, from few grams to several kilograms, wherein the highest measurement accuracy and excellent result repeatability are maintained.

Reliability and Safety
4-point protection system prevents balance overloading, this ensures safety in case too heavy load is applied onto the weighing pan. Robust design allows to operate the device even in the most challenging ambient conditions.

Intuitive Operation and Touch Screen
5.7" colour touch screen enables intuitive operation and easy access to numerous applications and functions of the weighing instrument.

Automatic Adjustment
Internal adjustment system guarantees the highest accuracy and reliable measurements results.

Touch-Free Operation
Two programmable proximity sensors can be assigned with any function or application. The given function when assigned is both run and operated touch-free.

Numerous Options of Data Management
The instrument enables saving all completed measurements data as complex reports and graphs.

Technical Specifications

	PM 10.4Y	PM 15.4Y	PM 35.4Y
Maximum capacity [Max]	10 kg	15 kg	35 kg
Preload	1 kg	1.5 kg	3.5 kg
Minimum load	0.5 g	0.5 g	5 g
Readability [d]	0.01 g	0.01 g	0.1 g
Verification scale interval [e]	0.1 g	—	1 g
Tare range	−10 kg	−15 kg	−35 kg
Repeatability (5% Max)*	0.004 g	0.004 g	0.04 g
Repeatability (Max)	0.01 g	0.015 g	0.1 g
Linearity	± 0.03 g	± 0.03 g	± 0.3 g
Sensitivity temperature drift**	$2 \times 10^{-6} / °C \times Rt$	$2 \times 10^{-6} / °C \times Rt$	$2 \times 10^{-6} / °C \times Rt$
Minimum weight (U=1%, k=2)	0.82 g	0.82 g	8.2 g
Minimum weight (USP)	8.2 g	8.2 g	82 g
Stabilization time	3 s	3 s	3 s
Adjustment	internal	internal	internal
Verification	Yes	—	Yes
OIML Class	II	—	II
Indicator fastening	1.5 m cable	1.5 m cable	1.5 m cable
Terminal model	4Y terminal	4Y terminal	4Y terminal
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
RS 232	2	2	2
Ethernet	10 / 100 Mbit	10 / 100 Mbit	10 / 100 Mbit
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	15 W	15 W	15 W
Operating temperature	+10 ÷ +40 ℃	+10 ÷ +40 ℃	+10 ÷ +40 ℃
Atmospheric humidity**	40 ÷ 80 %	40 ÷ 80 %	40 ÷ 80 %
Transport and storage temperature	−10 ÷ +50 ℃	−10 ÷ +50 ℃	−10 ÷ +50 ℃
Weighing pan dimensions	200 × 185 mm	200 × 185 mm	347 × 259 mm
Weighing pan material	aluminum EN AW-7075	aluminum EN AW-7075	stainless steel AISI 304
Weighing device dimensions	508 × 296 × 115 mm	508 × 296 × 115 mm	508 × 296 × 115 mm
Net weight	10 kg	10 kg	11 kg
Gross weight	12.2 kg	12.2 kg	13.2 kg
Packaging dimensions	520 × 520 × 280 mm	520 × 520 × 280 mm	520 × 520 × 280 mm

Rt net weight
* repeatability is expressed as a standard deviation from 10 weighing cycles
** parameter determined in the following temperature range: +15 ÷ +35 ℃
*** non-condensing conditions
In accordance with type approval, the balance parameters are maintained in temperature range: +15 ÷ +35 ℃.

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

Technical Specifications

	PM 50.4Y	PM 60.05.4Y	PM 60.1.4Y
Maximum capacity [Max]	50 kg	60 kg	60 kg
Preload	5 kg	—	—
Minimum load	5 g	—	—
Readability [d]	0.1 g	0,5 g	1 g
Verification scale interval [e]	1 g	—	—
Tare range	−50 kg	−60 kg	−60 kg
Repeatability (5% Max)*	0.04 g	0.2 g	0.4 g
Repeatability (Max)	0.15 g	0.4 g	0. 8 g
Linearity	± 0.3 g	± 1.5 g	± 3 g
Sensitivity temperature drift**	$2 \times 10^{-6} / °C \times Rt$	$2 \times 10^{-6} / °C \times Rt$	$2 \times 10^{-6} / °C \times Rt$
Minimum weight (U=1%, k=2)	8.2 g	41 g	82 g
Minimum weight (USP)	82 g	410 g	820 g
Stabilization time	3 s	3 s	3 s
Adjustment	internal	internal	internal
Verification	Yes	—	—
OIML Class	II	—	—
Indicator fastening	1.5 m cable	1.5 m cable	1.5 m cable
Terminal model	4Y terminal	4Y terminal	4Y terminal
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
RS 232	2	2	2
Ethernet	10 / 100 Mbit	10 / 100 Mbit	10 / 100 Mbit
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	15 W	15 W	15 W
Operating temperature	+10 ÷ +40 ℃	+10 ÷ +40 ℃	+10 ÷ +40 ℃
Atmospheric humidity**	40 ÷ 80 %	40 ÷ 80 %	40 ÷ 80 %
Transport and storage temperature	−10 ÷ +50 ℃	−10 ÷ +50 ℃	−10 ÷ +50 ℃
Weighing pan dimensions	347 × 260 mm	500 × 400 mm	500 × 400 mm
Weighing pan material	stainless steel AISI 304	stainless steel AISI 304	stainless steel AISI 304
Weighing device dimensions	508 × 296 × 115 mm	640 × 400 × 115 mm	640 × 400 × 115 mm
Net weight	11 kg	17 kg	17 kg
Gross weight	13.2 kg	19 kg	19 kg
Packaging dimensions	520 × 520 × 280 mm	700 × 600 × 200 mm	700 × 600 × 200 mm

Rt   net weight
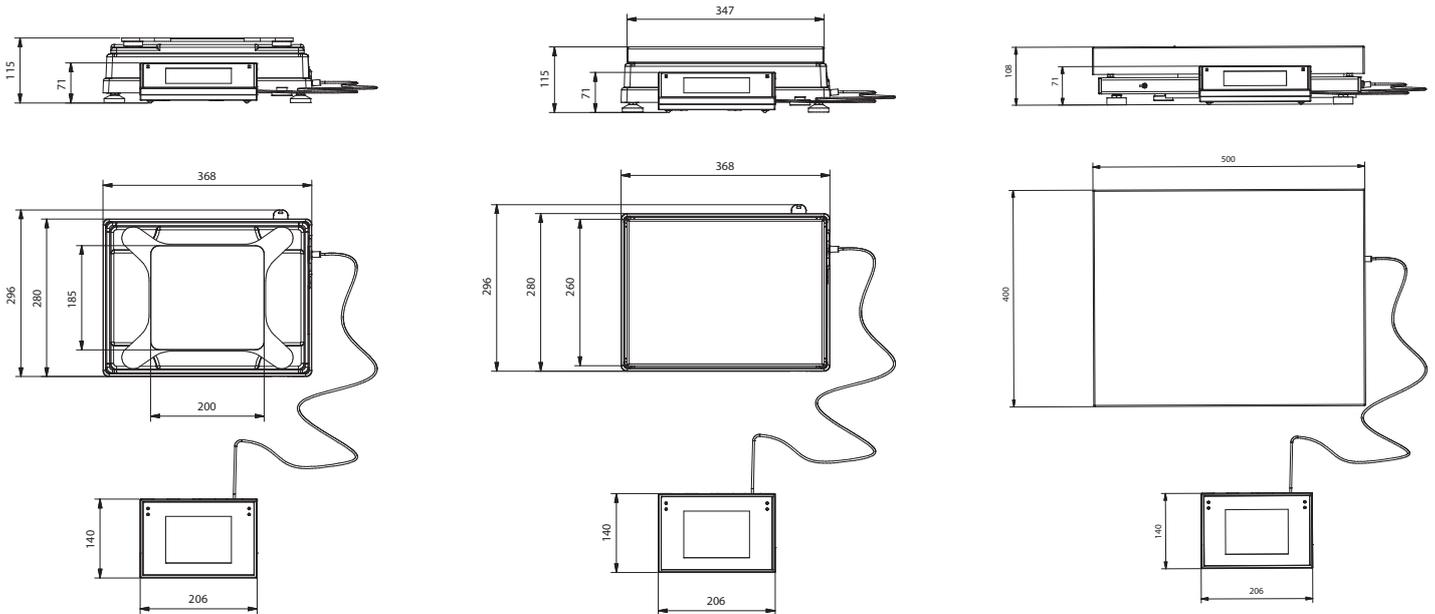*   repeatability is expressed as a standard deviation from 10 weighing cycles
**   parameter determined in the following temperature range: +15 ÷ +35 ℃
***   non-condensing conditions
In accordance with type approval, the balance parameters are maintained in temperature range: +15 ÷ +35 ℃.

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Dimensions

PM 4Y, d = 0.01 mg

PM 4Y, d = 0.1 mg

PM 4Y: d = 0.5 g, d = 1 g

Accessories

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

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)
- AP2-1 power loop output
- IN/OUT cables

Draft shields and anti-draft chambers
- storage case for PM 10 kg, PM 15 kg, PM 35 kg, PM 50kg, PM.KB balances

Electrical Accessories
- ZR-02 power supply with battery

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

E2R PGC
- synchronization of databases, operators, products schedules
- record of measurements and PGC controls carried out on weighing instruments linked in ETHERNET network
- quality assessment of pre- packaged goods based on acquired data

Label Editor R02
- designing label templates
- sending graphics and fonts to label printers
- printing label templates using connected printers

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