# Entris®



## Benefits

- Monolithic weigh cell for long-term high accuracy
- Built-in applications and function keys for convenient operation
- Backlit, high-contrast display for user-friendly guidance

## Product Information

Get the reliability and quality of a Sartorius balance, but only pay for the features you really need.

Entris® has been specially designed to deliver effective and reliable weighing results in your daily work. The easy and clearly structured user interface, the logical key assignment and excellent readability are ideal features for error-free operation.

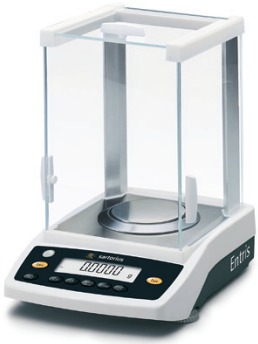
# Technical Specifications

| Specifications | |
|---|---|
| Int. weight circuit calibration | All models with the designation ENTRIS...i-1xx are equipped with an internal weight |
| Mains connection, voltage, frequency | via desktop power supply, 100-240 V AC, ±10%, 50 – 60 Hz |
| Power consumption | maximum 16 VA; average 8 VA (including power supply) |
| Operating time with external battery YRB11Z (display backlighting on) | approx. 35 h |

| Standard Equipment | |
|---|---|
| Levelling | Glass level indicator with air bubble for centering |
| Calibration | External calibration |
| Selectable weight units[1)] | Grams, Kilograms, Carats, Pounds, Ounces, Troy ounces, Hong Kong taels, Singapore taels, Taiwan taels, Grains, Pennyweights, Milligrams, Parts per pound, China taels, Mommes, Austrian carats, Tola, Baht, Mesghal, Tons, Pounds: ounces, Newton |
| Interface | RS232C 25-pin |
| Display | White backlit, high-contrast display with 15 mm digits |
| Standard built-in applications | Weighing, Density, Percentage, Counting, Animal Weighing, Conversion |
| Languages | English, French, German, Italian, Polish, Russian, Spanish |
| Anti-theft lock | Lockdown capability for cable or chain |
| Underfloor weighing | Integrated |

| Ambient Conditions | |
|---|---|
| The specifications apply when the following ambient conditions are in place: | |
| Environment | for indoor use only |
| Ambient temperature* | +10° C ... +30° C (+50° F ... +86° F) |
| Operational capacity | guaranteed between +5° C ... +40° C (+41° F ... +104° F) |
| Storage and shipping | –10 ° C ... +60 ° C (+14° F ... +140° F) |
| Elevation | up to 3000 m above sea level |
| Relative humidity | 15% to 80% for temperatures up to 31 °C; non-condensing, decreasing linearly to 50% relative humidity at 40 °C and 20% at 50 °C |
| Safety of electrical equipment | in accordance with EN 61010-1/IEC 61010-1 Safety requirements for electrical equipment for mea surement, control, and laboratory use – Part 1: General requirements |
| Electromagnetic compatibility | in accordance with EN 61326-1/IEC 61326-1 Electrical equipment for measure-ment, control, and laboratory use – EMC requirements - Part 1: General requirements |
| Defined immunity to interference | Suitable for use in industrial areas |
| Interference emission | Class B (suitable for use in residential areas and areas that are connected to a low voltage network that also supplies residential buildings). The device can therefore be used in both areas. |

[1)] Depending on country-specific model



Design 1



Design 2



Design 3



Design 4

## Analytical Balances Entris®

| Model | | ENTRIS224i-1x [1] | ENTRIS124i-1x [1] | ENTRIS64i-1x [1] |
|---|---|---|---|---|
| Design | | 1 | 1 | 1 |
| Weighing capacity | g | 220 | 120 | 60 |
| Readability | mg | 0.1 | 0.1 | 0.1 |
| Repeatability (standard deviation) | mg | 0.1 | 0.1 | 0.1 |
| Linearity deviation | mg | 0.2 | 0.2 | 0.2 |
| Sensitivity drift between +10 °C and +30 °C | ± ppm/K | 3 | 3 | 3 |
| Typical stabilization time | s | 2.5 | 2.5 | 2.5 |
| Weighing pan size | mm | ∅ 90 | ∅ 90 | ∅ 90 |
| Weighing chamber height* | mm | 230 | 230 | 230 |
| Net weight, approx. | kg | 4.8 | 4.8 | 4.8 |
| Calibration | | Internal | Internal | Internal |

## Precision Balances Entris®

| Model | | ENTRIS 623i-1x [1] | ENTRIS 423i-1x [1] | ENTRIS 323i-1x [1] | ENTRIS 153i-1x [1] | ENTRIS 6202i-1x [1] | ENTRIS 4202i-1x [1] | ENTRIS 3202i-1x [1] | ENTRIS 2202i-1x [1] |
|---|---|---|---|---|---|---|---|---|---|
| Design | | 2 | 2 | 2 | 2 | 4 | 4 | 4 | 4 |
| Weighing capacity | g | 620 | 420 | 320 | 150 | 6,200 | 4,200 | 3,200 | 2,200 |
| Readability | mg | 1 | 1 | 1 | 1 | 10 | 10 | 10 | 10 |
| Repeatability (standard deviation) | mg | 1 | 1 | 1 | 1 | 10 | 10 | 10 | 10 |
| Linearity deviation | mg | 2 | 2 | 2 | 2 | 30 | 30 | 30 | 30 |
| Sensitivity drift between +10 °C and +30 °C | ± ppm/K | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 |
| Typical stabilization time | s | 1.0 | 1.0 | 1.1 | 1.3 | 1.5 | 1.5 | 1.5 | 1.5 |
| Weighing pan size | mm | ∅ 115 | ∅ 115 | ∅ 115 | ∅ 115 | 180 × 180 | 180 × 180 | 180 × 180 | 180 × 180 |
| Weighing chamber height* | mm | 50 | 50 | 50 | 50 | – | – | – | – |
| Net weight, approx. | kg | 3.6 | 3.6 | 3.6 | 3.0 | 3.5 | 3.5 | 3.5 | 3.5 |
| Calibration | | Internal | Internal | Internal | Internal | Internal | Internal | Internal | Internal |

| Model | | ENTRIS822i-1x [1] | ENTRIS8201i-1x [1] | ENTRIS5201i-1x [1] | ENTRIS2201i-1x [1] |
|---|---|---|---|---|---|
| Design | | 3 | 4 | 4 | 4 |
| Weighing capacity | g | 820 | 8,200 | 5,200 | 2,200 |
| Readability | mg | 10 | 100 | 100 | 100 |
| Repeatability (standard deviation) | mg | 10 | 100 | 100 | 100 |
| Linearity deviation | mg | 30 | 300 | 300 | 300 |
| Sensitivity drift between +10 °C and +30 °C | ± ppm/K | 4 | 8 | 8 | 8 |
| Typical stabilization time | s | 1.5 | 1.5 | 1.5 | 1.5 |
| Weighing pan size | mm | ∅ 150 | 180 × 180 | 180 × 180 | 180 × 180 |
| Net weight, approx. | kg | 2.6 | 3.5 | 3.5 | 3.5 |
| Calibration | | Internal | Internal | Internal | Internal |

* Upper edge of the weighing pan to the lower edge of the upper draft shield panel

[1] Possible terms for country-specific models:
x = S: Standard balances without country-specific additions
x = SUS: Standard balances with country-specific additions for USA

## Analytical Balances Entris®

| Model | | ENTRIS224-1x [1] | ENTRIS124-1x [1] | ENTRIS64-1x [1] |
|---|---|---|---|---|
| Design | | 1 | 1 | 1 |
| Weighing capacity | g | 220 | 120 | 60 |
| Readability | mg | 0.1 | 0.1 | 0.1 |
| Repeatability (standard deviation) | mg | 0.1 | 0.1 | 0.1 |
| Linearity deviation | mg | 0.2 | 0.2 | 0.2 |
| Sensitivity drift between +10 °C and +30 °C | ± ppm/K | 3 | 3 | 3 |
| Typical stabilization time | s | 2.5 | 2.5 | 2.5 |
| Weighing pan size | mm | ∅ 90 | ∅ 90 | ∅ 90 |
| Weighing chamber height* | mm | 230 | 230 | 230 |
| Net weight, approx. | kg | 4.4 | 4.4 | 4.4 |
| Calibration | | External | External | External |

## Precision Balances Entris®

| Model | | ENTRIS 623-1x [1] | ENTRIS 423-1x [1] | ENTRIS 323-1x [1] | ENTRIS 153-1x [1] | ENTRIS 6202-1x [1] | ENTRIS 4202-1x [1] | ENTRIS 3202-1x [1] | ENTRIS 2202-1x [1] |
|---|---|---|---|---|---|---|---|---|---|
| Design | | 2 | 2 | 2 | 2 | 4 | 4 | 4 | 4 |
| Weighing capacity | g | 620 | 420 | 320 | 150 | 6,200 | 4,200 | 3,200 | 2,200 |
| Readability | mg | 1 | 1 | 1 | 1 | 10 | 10 | 10 | 10 |
| Repeatability (standard deviation) | mg | 1 | 1 | 1 | 1 | 10 | 10 | 10 | 10 |
| Linearity deviation | mg | 2 | 2 | 2 | 2 | 30 | 30 | 30 | 30 |
| Sensitivity drift between +10 °C and +30 °C | ± ppm/K | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 |
| Typical stabilization time | s | 1.0 | 1.0 | 1.1 | 1.3 | 1.5 | 1.5 | 1.5 | 1.5 |
| Weighing pan size | mm | ∅ 115 | ∅ 115 | ∅ 115 | ∅ 115 | 180 × 180 | 180 × 180 | 180 × 180 | 180 × 180 |
| Weighing chamber height* | mm | 50 | 50 | 50 | 50 | – | – | – | – |
| Net weight, approx. | kg | 3.2 | 3.2 | 3.2 | 2.6 | 3.1 | 3.1 | 3.1 | 3.1 |
| Calibration | | External | External | External | External | External | External | External | External |

| Model | | ENTRIS822-1x [1] | ENTRIS8201-1x [1] | ENTRIS5201-1x [1] | ENTRIS2201-1x [1] |
|---|---|---|---|---|---|
| Design | | 3 | 4 | 4 | 4 |
| Weighing capacity | g | 820 | 8,200 | 5,200 | 2,200 |
| Readability | mg | 10 | 100 | 100 | 100 |
| Repeatability (standard deviation) | mg | 10 | 100 | 100 | 100 |
| Linearity deviation | mg | 30 | 300 | 300 | 300 |
| Sensitivity drift between +10 °C and +30 °C | ± ppm/K | 4 | 8 | 8 | 8 |
| Typical stabilization time | s | 1.5 | 1.5 | 1.5 | 1.5 |
| Weighing pan size | mm | ∅ 150 | 180 × 180 | 180 × 180 | 180 × 180 |
| Net weight, approx. | kg | 2.0 | 2.7 | 2.7 | 2.7 |
| Calibration | | External | External | External | External |

* Upper edge of the weighing pan to the lower edge of the upper draft shield panel

[1] Possible terms for country-specific models:
x = S: Standard balances without country-specific additions
x = SUS: Standard balances with country-specific additions for USA

## Optional Accessories

| Printer | |
|---|---|
| Data printer | YDP20-0CE |
| Paper rolls, 5 units, each with 40 m | 6906937 |
| Ink ribbon cassette | 6906918 |

| Data Cable | |
|---|---|
| RS232 25pin male \| USB-cable type A, length approx. 1.8 m | YCC01-USBM2 |
| RS232 25pin male \| 25pin female, length approx. 1.5 m | 7357312 |
| RS232 25pin male \| 9pin female, length approx. 2.0 m | 7357314 |
| RS232 25pin male \| 9pin female, length approx. 0.5 m | 6965619 |

| Density Determination | |
|---|---|
| Density determination kit for balances with a readability of 0.1 mg | YDK03 |

| In-use Dust Cover | |
|---|---|
| for models with a rectangular weighing pan | 6960ED01 |
| for models with a round weighing pan (∅ 150 mm) | 6960ED02 |

| Dust Cover | |
|---|---|
| for models with a readability of 0.1 mg | 6960BP08 |

| Weighing Table | |
|---|---|
| made of wood with stone plate | YWT09 |
| made of stone, with vibration dampening | YWT03 |

| Console | |
|---|---|
| Wall mounting console | YWT04 |

| General | |
|---|---|
| Remote display, reflective (for connection to data interface port) | YRD03Z |
| External rechargeable battery pack | YRB11Z |
| Ionizing blower for eliminating static electricity | |
| – 220 – 240 V AC | YIB01-0DR |
| – 110 – 120 V AC | YIB01-0UR |
| Stat-Pen anti-static device for eliminating electrostatic charges on samples and containers (100 – 240 V AC, 50 \| 60 Hz) | YSTP01 |

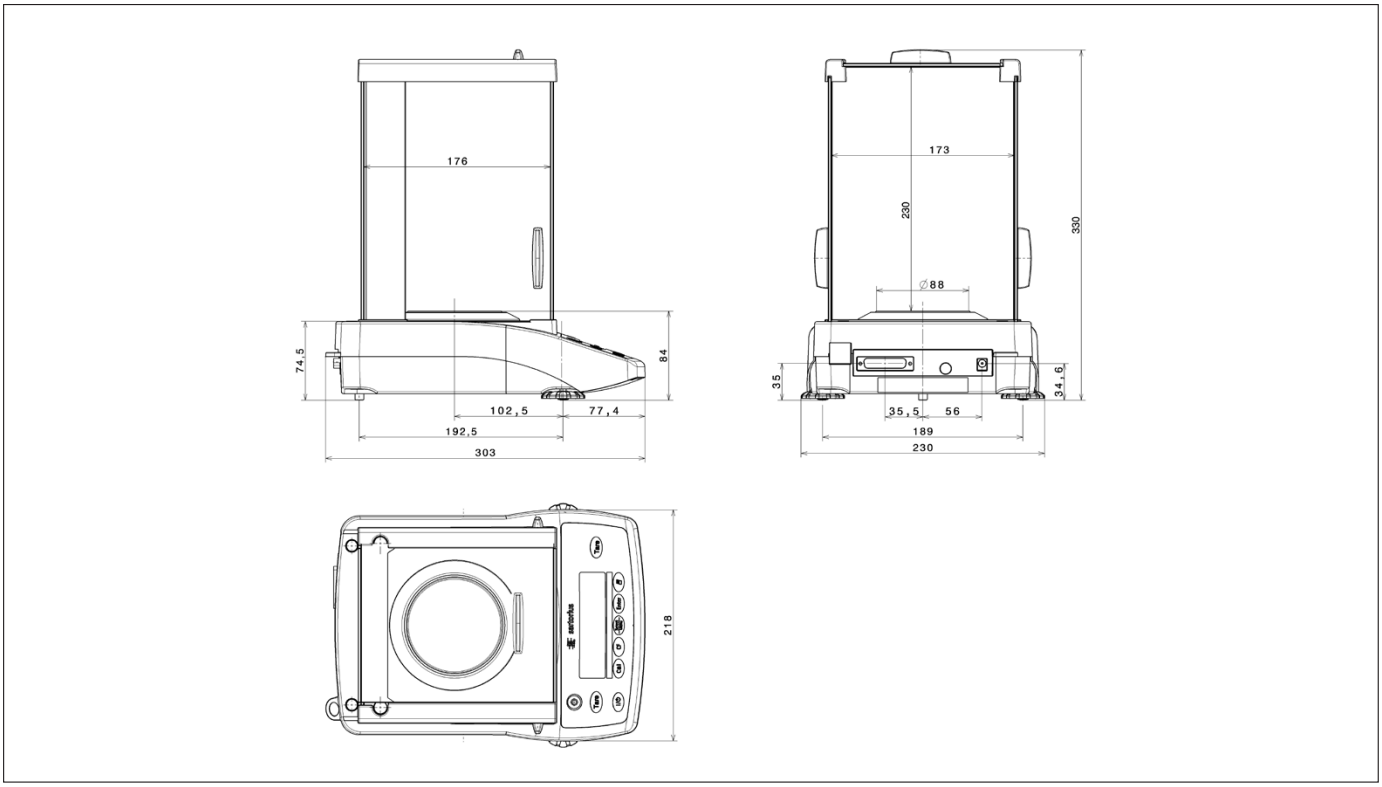
| Calibration Weights | |
|---|---|
| Calibration for lab balance model 224<br>– Proof Line knob weight 200 g, OIML class E2, with DAkkS certificate | YCW522-AC-02 |
| Calibration for lab balance model 124<br>– Proof Line knob weight 100 g, OIML class E2, with DAkkS certificate | YCW512-AC-02 |
| Calibration for lab balance model 64<br>– Proof Line knob weight 50 g, OIML class E2, with DAkkS certificate | YCW452-AC-02 |
| Calibration for lab balance model 623<br>– Proof Line knob weight 500 g, OIML class F1, with DAkkS certificate | YCW553-AC-02 |
| Calibration for lab balance model 423; 323<br>– Proof Line knob weight 200 g, OIML class F1, with DAkkS certificate | YCW523-AC-02 |
| Calibration for lab balance model 153<br>– Proof Line knob weight 100 g, OIML class F1, with DAkkS certificate | YCW513-AC-02 |
| Calibration for lab balance model 6202<br>– Proof Line knob weight 5 kg, OIML class F1, with DAkkS certificate | YCW653-AC-02 |
| Calibration for lab balance model 4202; 3202; 2202<br>– Proof Line knob weight 2 kg, OIML class F1, with DAkkS certificate | YCW623-AC-02 |
| Calibration for lab balance model 822<br>– Proof Line knob weight 500 g, OIML class F2, with DAkkS certificate | YCW554-AC-02 |
| Calibration for lab balance model 8201; 5201<br>– Proof Line knob weight 5 kg, OIML class F2, with DAkkS certificate | YCW654-AC-02 |
| Calibration for lab balance model 2201<br>– Proof Line knob weight 2 kg, OIML class F2, with DAkkS certificate | YCW624-AC-02 |



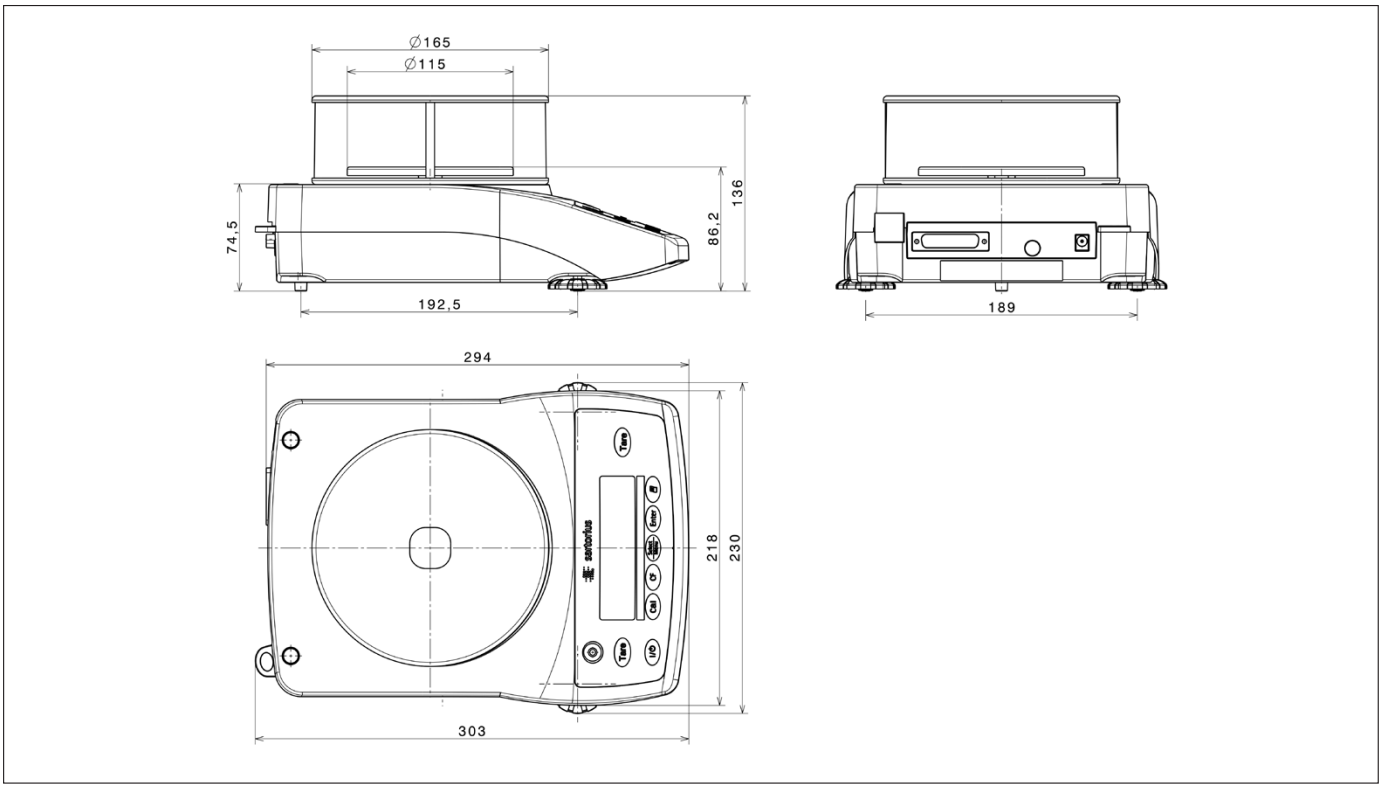
YDP20-0CE, Data printer

# Technical Drawings

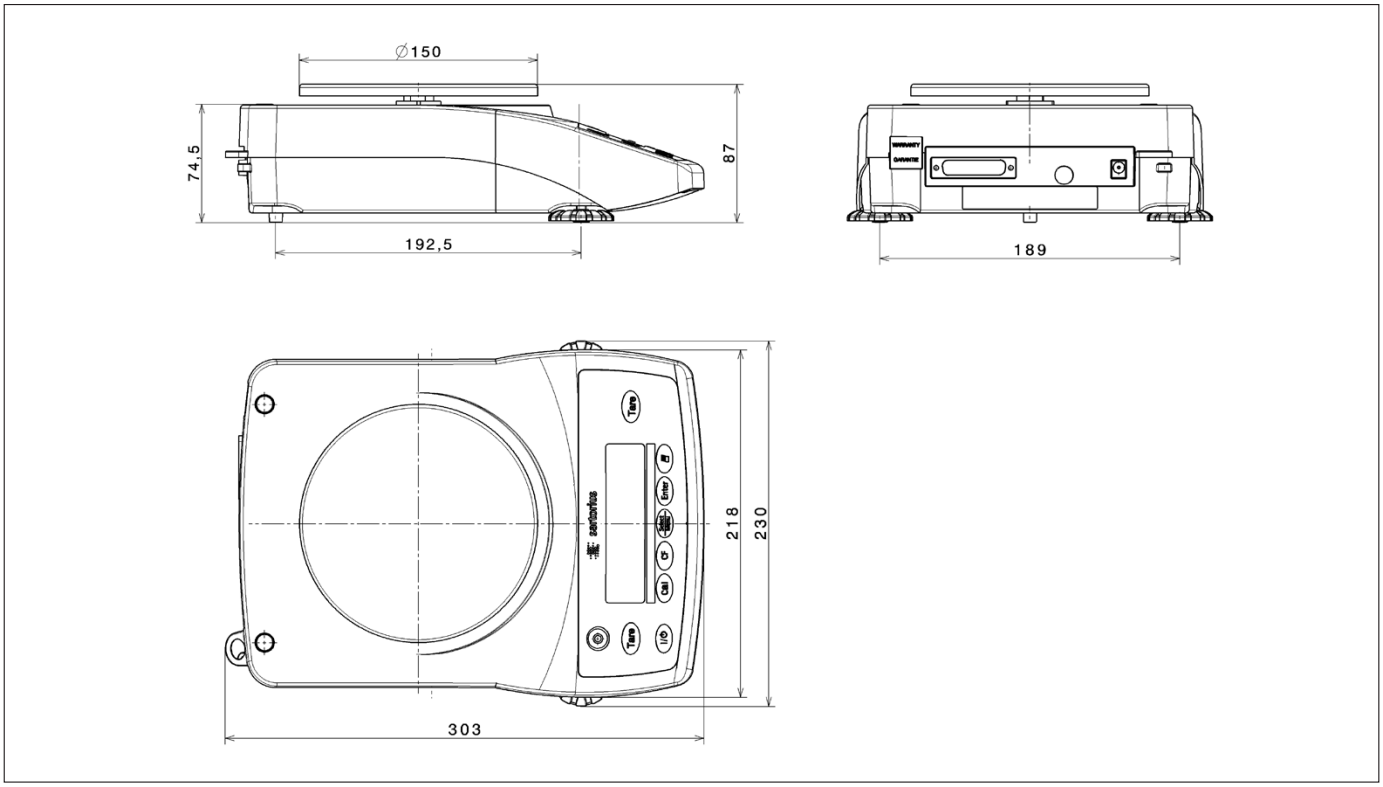
Models with a readability of 0.1 mg, in mm



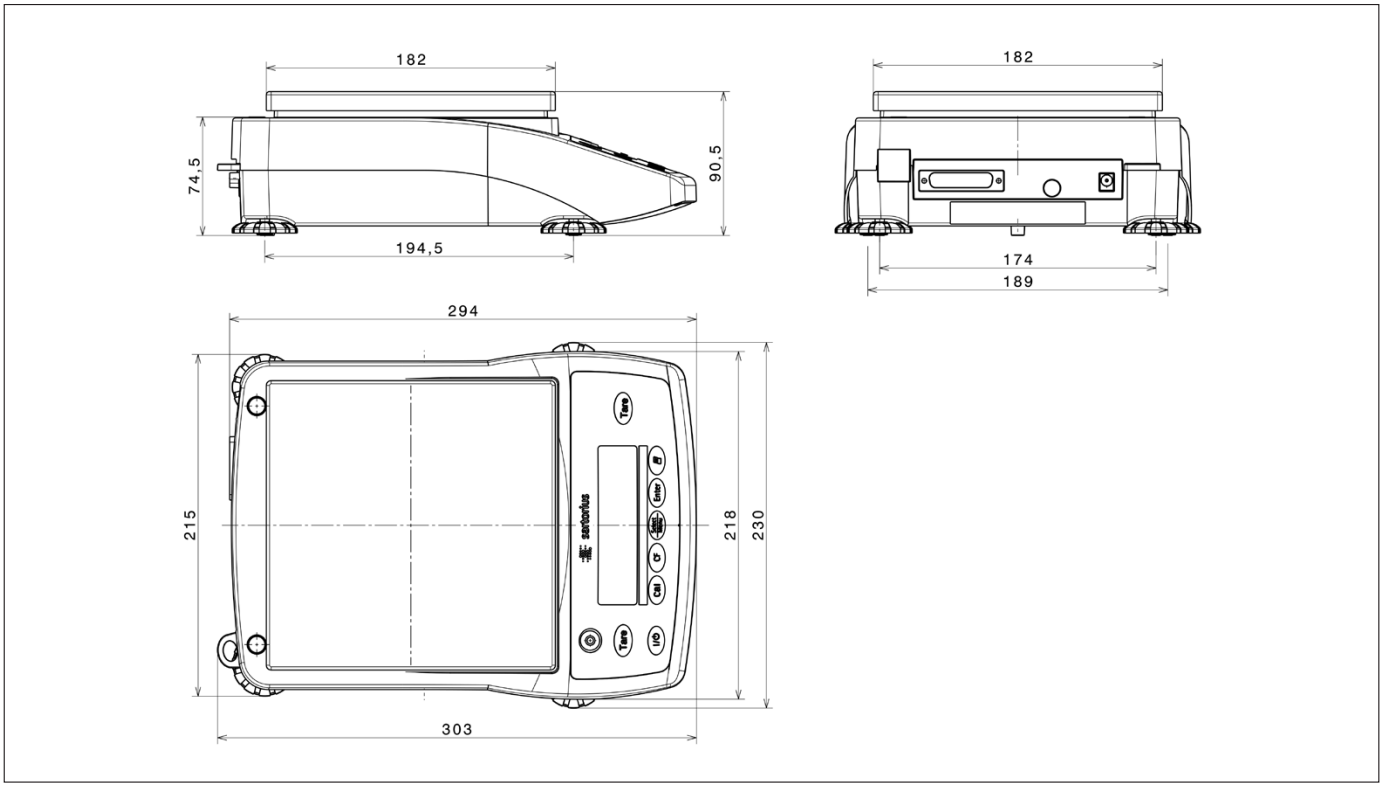

Models with a readability of 1 mg, in mm



Models with a readability of ≥ 10 mg (in mm) and round weighing pan




Models with a readability of ≥ 10 mg (in mm) and rectangular weighing pan



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