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J.P. Bowlin is a quality-driven Calibration Company  
that has provided calibration, repair and sales  
of all types of weighing and measurement products since 1931.

# The New Entris®.

Just Weighing.



- 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

## AC Adapter

Sartorius AC adaptor module	6971790 with interchangeable country-specific plug-in AC adaptors
Primary	100 – 240 V~, –10%   +10%, 50 – 60 Hz, 0.2 A
Secondary	15 V DC, ± 5%, 530 mA (max.)   8 Watt (max.): 0 to +40 °C and 15 V DC, ± 5%, 330 mA (max.)   5 Watt (max.): 0 to +50 °C
Other data	protection class II, in accordance with EN   IEC 60950-1 up to 3000 m above sea level; IP40 as per EN   IEC 60529

## Balance

Power supply	only via Sartorius AC adaptor module 6971790
Input voltage	12.0 ... 18.0 V DC
Power consumption	2 W (typically)

## Ambient Conditions

The specifications apply when the following ambient conditions are in place:

Environment	for indoor use only
Ambient temperature	+10 °C to +30 °C
Operational capacity	guaranteed between +5 °C and +45 °C
Storage and shipping	–10 °C to +60 °C
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 measurement, control, and laboratory use – Part 1: General requirements

## Electromagnetic compatibility

in accordance with EN 61326-1/IEC 61326-1  
Electrical equipment for measurement, control, and laboratory use – EMC requirements – Part 1: General requirements

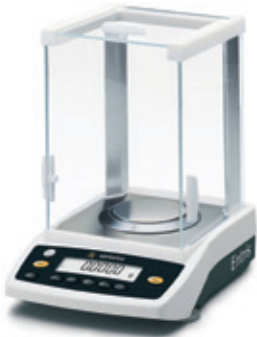
Defined immunity to interference  
Suitable for use in industrial areas

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.

# Technical Specifications

## Standard Equipment

Levelling	Glass level indicator with air bubble for centering
Calibration	External calibration
Selectable weight units	Grams, Kilograms, Carats, Pounds, Ounces, Troy ounces, Hong Kong taels, Singapore taels, Taiwan taels, Grains, Pennyweights, Milligrams, Parts per pound, China taels, Mommies, 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



Design 1



Design 2



Design 3



Design 4

**Analytical Balances Entris®**

<b>Model</b>		<b>ENTRIS224-1S</b>	<b>ENTRIS124-1S</b>	<b>ENTRIS64-1S</b>
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	Ø 90	Ø 90	Ø 90
Weighing chamber height	mm	173 × 176 × 240	173 × 176 × 240	173 × 176 × 240
Net weight, approx.	kg	4.4	4.4	4.4
Calibration		External	External	External
Design		1	1	1
Dimensions, D × W × H	mm	303 × 230 × 330		
	Inch	11.9 × 9.1 × 13		

## Precision Balances Entris®

Model		ENTRIS 623-1S	ENTRIS 423-1S	ENTRIS 323-1S	ENTRIS 153-1S	ENTRIS 6202-1S	ENTRIS 4202-1S	ENTRIS 3202-1S	ENTRIS 2202-1S
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	Ø 115	Ø 115	Ø 115	Ø 115	180 × 180	180 × 180	180 × 180	180 × 180
Weighing chamber height	mm	-	-	-	-	-	-	-	-
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
Design		2	2	2	2	4	4	4	4
Dimensions, D × W × H	mm Inch	303 × 230 × 136 11.9 × 9.1 × 5.4				303 × 230 × 91 11.9 × 9.1 × 3.6			

Model		ENTRIS822-1S	ENTRIS8201-1S	ENTRIS5201-1S	ENTRIS2201-1S
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	Ø 150	180 × 180	180 × 180	180 × 180
Weighing chamber height	mm	-	-	-	-
Net weight, approx.	kg	2.0	2.7	2.7	2.7
Calibration		External	External	External	External
Design		3	4	4	4
Dimensions, D × W × H	mm Inch	303 × 230 × 87 11.9 × 9.1 × 3.4	303 × 230 × 91 11.9 × 9.1 × 3.6	303 × 230 × 91 11.9 × 9.1 × 3.6	303 × 230 × 91 11.9 × 9.1 × 3.6

## Optional Accessories

### Printers and Communications

Standard Laboratory Printer	YDP20-OCE
– Printer paper	6906937
– Ink ribbon rolls	6906918
Data cable RS232C   USB	YCC01-USBM2

### General

Battery pack for Standard Lab Balances	YRB11Z
Second display, backlit LCD, character height: 15 mm	YRD03Z
Ionizing blower, for electrostatically charge of samples	
– 220-230 V	YIB01-ODR
– 110-115 V	YIB01-OUR
Stat pen, for neutralize static electricity on samples (100 – 230 V, 50   60 Hz)	YSTP01
In-use cover for balances with rectangular weighing pan	6960ED01
In-use cover for balances with round weighing pan	6960ED02

### Density Determination

Density kit for analytical balances	YDK01LP
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### Calibration Weights

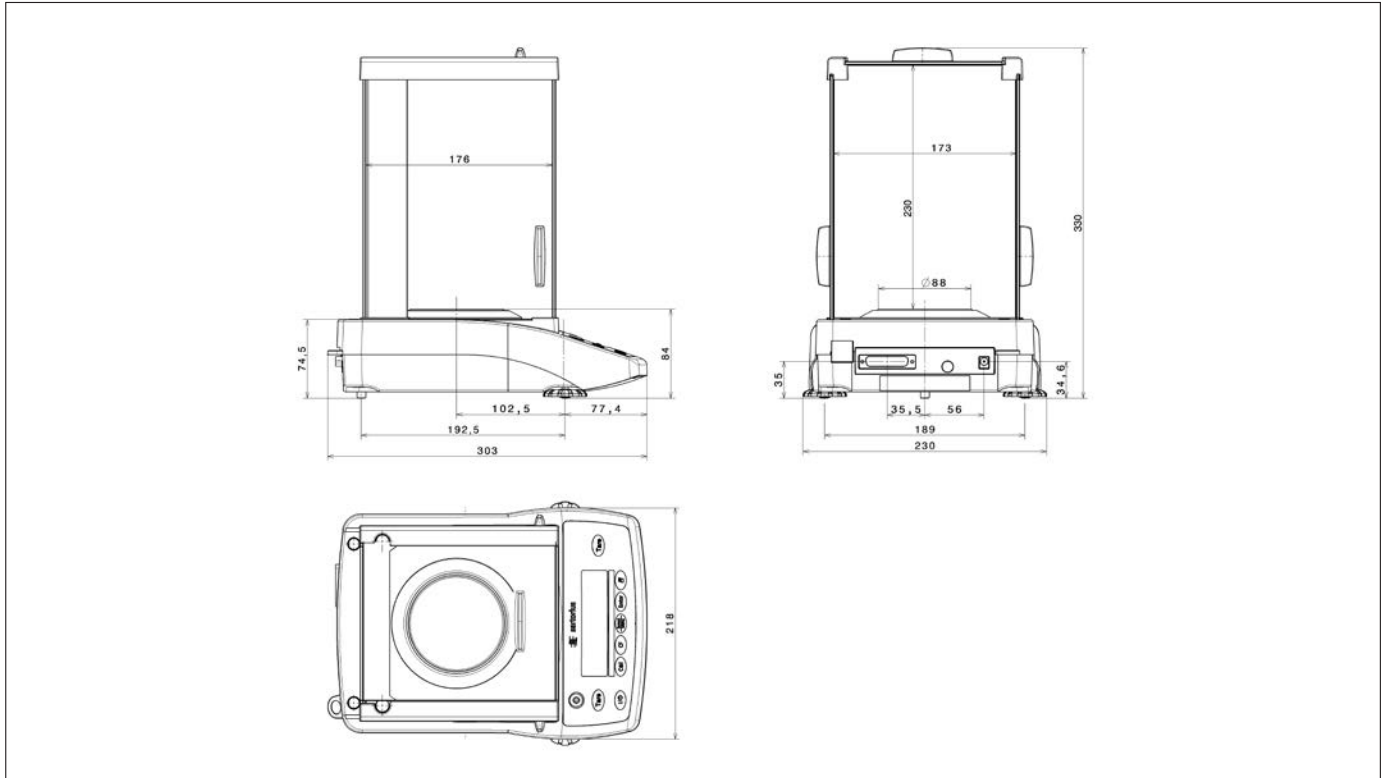
Calibration for lab balance model 224	YCW522-AC-02
– Proof Line knob weight 200 g, OIML class E2, with DAkkS certificate	
Calibration for lab balance model 124	YCW512-AC-02
– Proof Line knob weight 100 g, OIML class E2, with DAkkS certificate	
Calibration for lab balance model 64	YCW452-AC-02
– Proof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



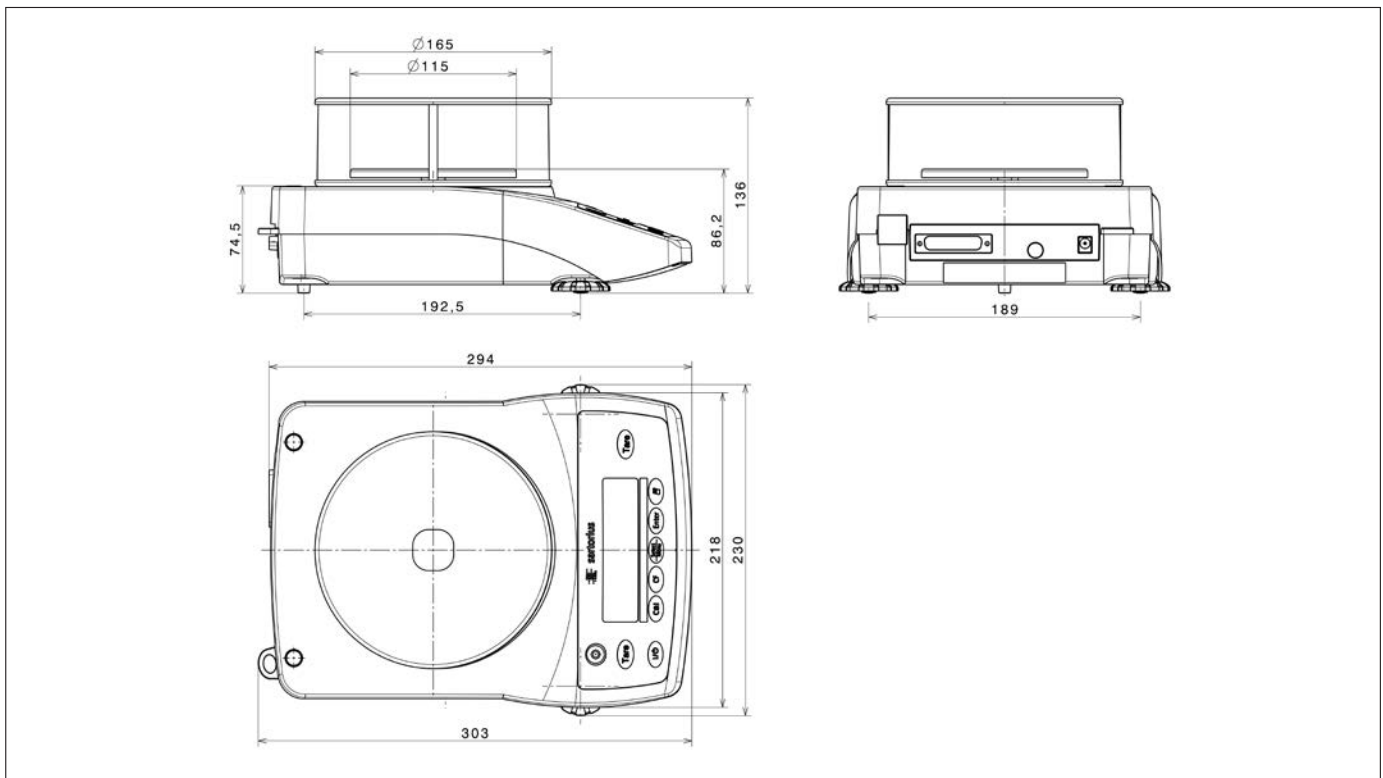
YDP20-OCE, Standard Laboratory Printer

# Technical Drawings

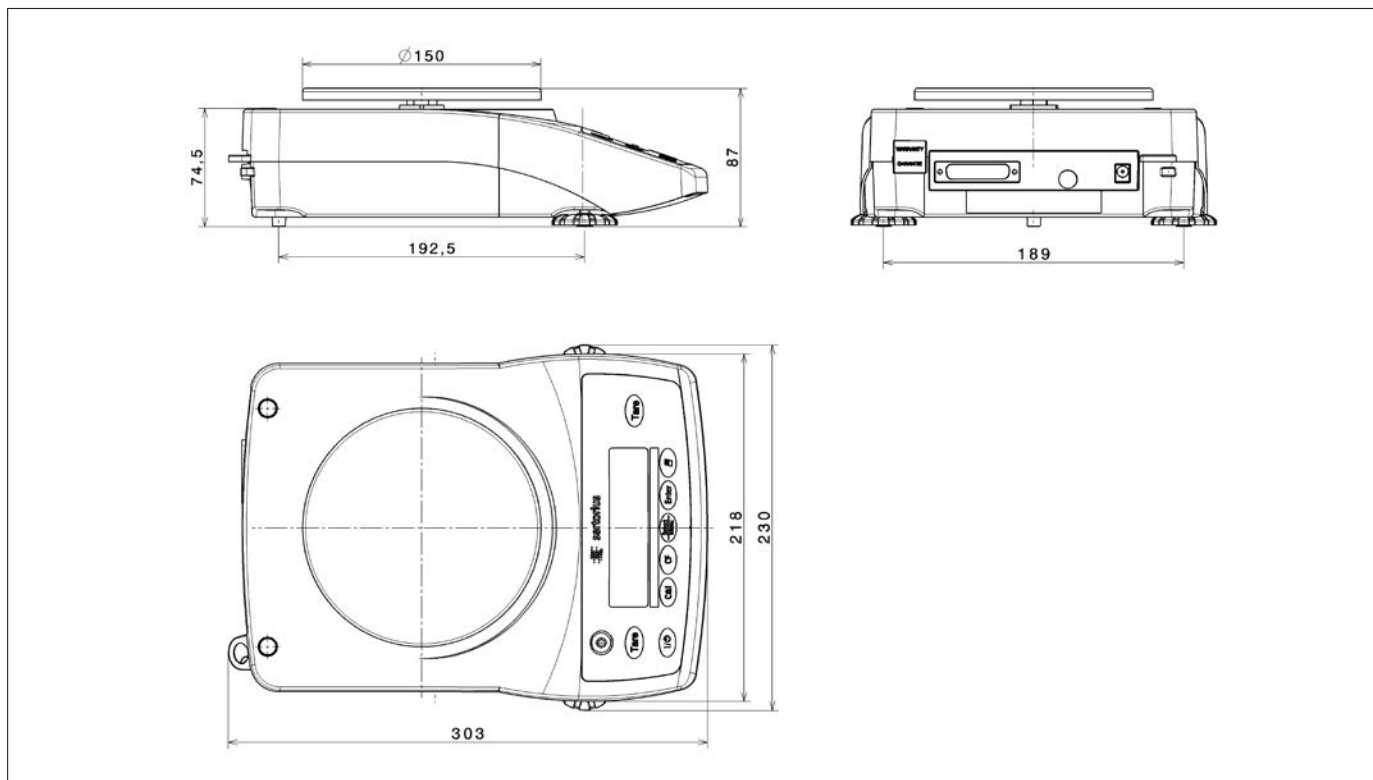
Models with a readability of 0.1 mg, in mm



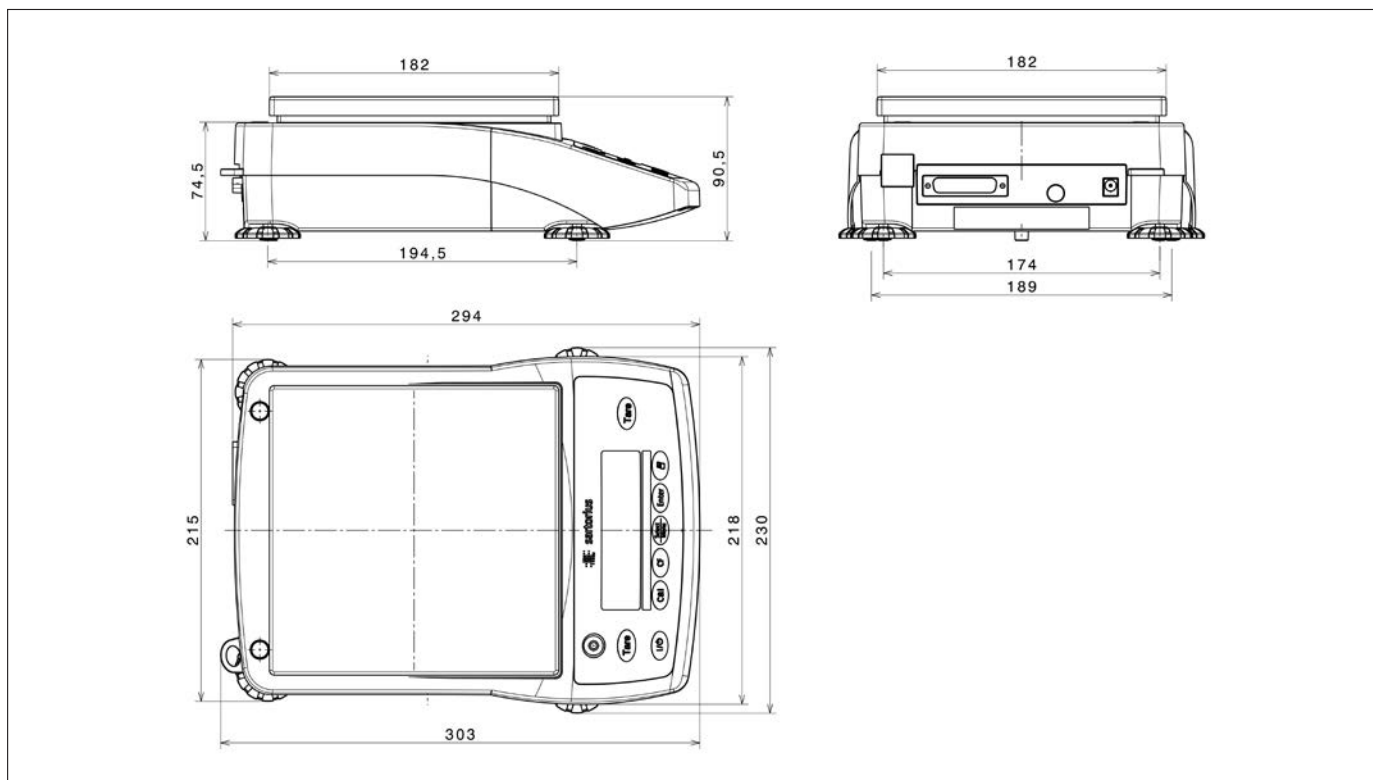
Models with a readability of 1 mg, in mm



Models with a readability of  $\geq 10$  mg (in mm) and round weighing pan



Models with a readability of  $\geq 10$  mg (in mm) and rectangular weighing pan





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