



**Explorer<sup>®</sup>**  
Semi-Micro Balances

## ***Semi-Micro Performance***

Dear Valued OHAUS Dealer,

Over the past several years, the introduction of multiple Explorer balance models have helped set a new definition of what modern weighing and measurement means in today's science and research and development landscape.

We are happy to announce the newest addition to the Explorer Series, the semi-micro Explorer balance, which now brings the Explorer Series' trademark ingenuity and intuition to applications requiring extreme precision, down to 0.01mg.

Explorer semi-micro balances have been designed for professional use in which accuracy of results is of the utmost importance. Among Explorer's many features that bolster accuracy are OHAUS' AutoCal™ automatic internal calibration, an ionizer (select models) that neutralizes static charges in the weighing chamber, and a linearity of  $\pm 0.1$ mg.

Explorer semi-micro models also include many of the ingeniously practical features found on other Explorer models, including four touchless sensors, SmarText™ 2.0 software, and automatic draftshield doors (select models).

Sophisticated weighing applications deserve sophisticated weighing technology, and that is what your customers will find in Explorer semi-micro balances.

Sincerely,

***OHAUS Corporation***

***Intelligent Performance.***

***Intuitive Software.***

***Ingenious Construction.***



***Ingeniously Practical***

***ohausexplorer.com***



**Explorer<sup>®</sup>**  
Semi-Micro Balances



Intelligent Performance.  
Intuitive Software.  
Ingenious Construction.

***Ingeniously Practical***

***ohausexplorer.com***



# OHAUS Explorer® Semi-Micro Balances

## Built for Sophisticated, Professional Weighing

There are some people who say, "Don't sweat the small stuff." OHAUS Explorer semi-micro balances are not for those people. They're built for people that sweat the small stuff; people that demand full-range performance from their balances; people that demand 0.01 mg readability up to 220g capacity. OHAUS Explorer is the semi-micro balance that meets their demands.

- **0.01 mg Readability**
- **220g Capacity**
- **Ultra-Fast Stabilization Time**
- **Full-Color Touchscreen**
- **Automatic Draftshield Doors\***
- **Built-In Ionizer\***
- **4 Programmable Touchless Sensors**
- **AutoCal™ Internal Calibration**
- **USB and RS232 Connectivity**
- **Audible Stability Alert**
- **Intuitive Software**
- **Modular Design**



*Superior performance with 0.01 mg readability*



*Calibration is easy with internal AutoCal™ or manually with an external mass*

## Intelligent Performance

In addition to superior craftsmanship and a high quality load cell, many performance enhancing features have been incorporated into the design.

The Explorer series of semi-micro balances offers models with capacities from 52g-220g and readabilities from 0.1mg-0.01mg.

Explorer's ultra-fast stabilization time (0.1mg:  $\leq 3$  seconds, 0.01mg:  $\leq 8$  seconds) increases laboratory efficiency.

OHAUS' signature AutoCal™ internal calibration system helps ensure accuracy by automatically calibrating the balance every time it senses a temperature change of 1.5°C or every three hours, whichever occurs first. To minimize weighing errors and ensure accurate measurements, AutoCal utilizes two internal weights to perform a linear calibration.

\*Available on select models





## Intuitive Software

Explorer semi-micro balances combine OHAUS SmarText™ 2.0 software with modern technology for the best weighing experience possible.

The balance's memory capabilities includes a 99 item library and a 10 recipe library for formulation mode.

A total of six profiles can be created, including one administrator and five additional users. Multiple users can use the same balance with-out compromising past results recorded on the balance.

Other features include a real time clock for GLP/GMP data collection, below minimum sample weight indication, audible stability alert, USB host port, and true type printing for SQC and pipette adjustment.



*Intuitive software*



*Create up to six user profiles*



*USB host port makes it simple to save data from the balance to a flash drive*



### *14 Applications*

- Weighing*
- Parts Counting*
- Percent Weighing*
- Checkweighing*
- Animal/Dynamic Weighing*
- Filling*
- Totalization*
- Formulation*
- Differential Weighing*
- Density Determination*
- Peak Hold*
- Ingredient Costing*
- Pipette Adjustment*
- SQC*

*The OHAUS Explorer's application software simplifies even the most complex laboratory measurements!*



## Ingenious Construction

The Explorer semi-micro balance has been designed with features that enhance the operator experience as well as help improve accuracy.

A large (5.7"/14.5 cm), full-color touchscreen provides easy-to-read results and intuitive navigation.

Four touchless sensors can be programmed to activate functions and commands that are important to your specific workflow. Tare, zero, print, or even activate the ionizer with a simple swipe of the hand.

Automatic doors\*, activated by the touchless sensors, help minimize vibrations that affect weighing results when manually operated.

Modular design allows separation of the base from the display for ideal positioning in the laboratory workspace.

A built-in ionizer\* neutralizes static charges in the weighing chamber that can alter weighing results by as much as several milligrams.

\*Available on select models



Large, full-color touchscreen



True type graphic printing for SQC and pipette adjustment



USB host and device ports, RS232, optional Ethernet, optional 2<sup>nd</sup> RS232



\*Built-in ionizer neutralizes static charges





*Modular Design*



*Automatically open side draftshield doors\* with four programmable touchless sensors*





*Semi-Micro performance is now available in the OHAUS Explorer® series of balances!*

Get the most precise results ever from an OHAUS balance with unmatched weighing performance, intuitive software, and a full-color touchscreen. Eliminate static electricity with the built-in ionizer and automatically open the draftshield doors with any of the four touchless sensors! Ensure the best weighing results with AutoCal™ internal calibration and an audible stability alert. Conveniently fit the balance in the lab with a detachable display. Extreme durability is supported by the glass and steel construction and advanced connectivity is available through the RS232 and USB ports.

*OHAUS Explorer semi-micro balances deliver the performance and features for demanding lab professionals!*

*Learn more about Explorer online @ [ohausexplorer.com](http://ohausexplorer.com)*



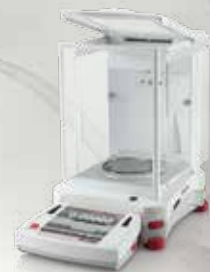
***Ingeniously Practical***

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**\*ISO 9001**  
Registered Quality  
Management System  
30xxxxxx



## Analytical & Precision Balances

### Explorer® Semi-Micro Balances

#### Built for Sophisticated, Professional Weighing

Geared for high-performance with up to 0.01mg readability, 220g capacity, AutoCal™ Internal Calibration system for greater accuracy, and fast stabilization time for increased efficiency.

Powered by SmarText™2.0 software, Explorer Semi-Micro includes icon based navigation, 99 item library, 6 user profiles and below minimum sample weight indication for the best weighing experience.

Enhanced operation with color touchscreen display, 4 touchless sensors, modular design with automatic draftshield doors and built in ionizer (available on select models only).

**Application** Weighing, Percent Weighing, Parts Counting, Check Weighing, Dynamic/Animal Weighing, Filling, Totalization, Formulation, Differential Weighing, Density Determination, Peak Hold, Pipette Adjustment, SQC., Ingredient Costing

**Display** Full-color VGA graphic display (5.7 in. diagonal), 4-wire resistive touch screen. QWERTY keyboard and numeric keypad to quickly input GLP and GMP data and other application data.

**Operation** Easy access communication ports including 2 units of USB port and RS232 and an optional third port of either RS232 or Ethernet. GLP/GMP Data Output with Real Time Clock. Data Transfer Function.

**Communication** Metal base, ABS top housing, stainless steel pan, anti-static glass draftshield with flip-top door, replaceable in-use cover, automatic door as option models.

**Construction** AC Adapter (Included)

**Design Features** AutoCal™ fully-automatic internal calibration system, fast stabilization time, four touchless sensors, the built-in ionizer with automatic door models, up to 14 operating languages, OIML models available, SAVE to USB function, menu lock switch, security bracket, integral weigh below hook for below balance weighing applications, removable stainless steel weighing platform, stability indicator, overload and underload indicators, auto stand-by.

Model	Capacity	Maximum Capacity	Readability	Readability (Certified)	Pan Size	Item No.	USD Price
EX125D	51 g / 120 g	51 g / 120 g	0.01 mg / 0.1 mg	0.01 mg / 0.1 mg	Ø 3.14 in / Ø 80 mm	30139510	\$5,100
EX125	120 g	120 g	0.01 mg	0.01 mg	Ø 3.14 in / Ø 80 mm	30139511	\$6,400
EX225D	120 g / 220 g	120 g / 220 g	0.01 mg / 0.1 mg	0.01 mg / 0.1 mg	Ø 3.14 in / Ø 80 mm	30139512	\$6,200
EX225D/AD	120 g / 220 g	120 g / 220 g	0.01 mg / 0.1 mg	0.01 mg / 0.1 mg	Ø 3.14 in / Ø 80 mm	30139513	\$9,000
EX225/AD	220 g	220 g	0.01 mg	0.01 mg	Ø 3.14 in / Ø 80 mm	30139514	\$9,800

Material Description	Item No.	USD Price
Static Ionizer, ION-100A, AM	30130302	\$1,200
Printer, Impact, SF40A, AM	30064203	\$682
Auxiliary Display, PAD7, PA AX EX	80251396	\$45
Paper Roll, CBM910	80251932	\$12
Ink Ribbon, CBM910	80251933	\$37
Cable, RS232, CBM910-AV DV EX MB PA TxxP	80252571	\$132
Density Kit, Solids	80253384	\$533
Cable, 25 Pin-9 Pin, PC-TxxP	80500524	\$132
Cable, RS232, IBM 9P, AV DV MB Ranger	80500525	\$132
Anti-Theft Device, MB AX EX	80850043	\$158

Material Description	Item No.	USD Price
RS232 Kit, 2nd, EX EX-HiCap	83021081	\$132
Ethernet Kit, EX EX-HiCap	83021082	\$132
Cable, RS422, Extension, EX EX-HiCap	83021083	\$73
Cable, USB, Type A-B	83021085	\$132



## Competitive Comparisons

Products	OHAUS EX Series	Sartorius Quintex	Sartorius Secura	A&D HR	A&D GH	A&D GR	A&D BM-252
Loadcells	MFR	MFR & SG	MFR (monolithic)	Super Hybrid Sensor (SHS)	Super Hybrid Sensor (SHS)	Super Hybrid Sensor (SHS)	Super Hybrid Sensor (SHS)
Display	5.7" Graphic Display	4.5" Backlit LCD	4.5" Backlit LCD	Reverse-backlit LCD	LCD	LCD	LED
Data Input Type	Touchscreen	Touchscreen	Touchscreen	Keys	Keys	Keys	Keys
Languages	14 languages	English, Spanish, French	English, Spanish, French	English	English	English	English
Warranty	2 year	2 year	2 year	5 year	5 year	5 year	5 year
Interface	RS232 USB	USB	USB	RS232C/ Bluetooth (Optional)	RS-232C	RS-232C	RS232 USB
Leveling System	Manual 4 feet	Electronic Alert w/ Assist 2 feet	Electronic Alert w/ Assist 2 feet	Manual 2 feet (rear)	Manual 2 feet (rear)	Manual 2 Feet (Front)	Manual 2 Feet (Rear)
Below Weighing Hook	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Calibration Type	AutoCal Internal	Internal IsoCal/ External	Internal IsoCal	External	Internal	Internal	Motor-driven Internal
Counting	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Density	Yes	Yes	Yes		Yes	Yes	
Peak Hold	Yes	Yes	Yes				
Checkweighing	Yes	Yes	Yes				
Dynamic Weighing	Yes	Yes	Yes				
Percentage	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mixing	Yes	Yes	Yes				
Components/ Formulation	Yes	Yes	Yes				
Statistics	Yes	Yes	Yes				
Conversion/Custom Unit	Yes	Yes	Yes				
USP / SQ min	Yes		Yes				
Differential Weighing	Yes						
Ingredient Costing	Yes						
Pipette Adjustment	Yes						



**Ingeniously Practical**

[ohausexplorer.com](http://ohausexplorer.com)



### ***Built for Sophisticated, Professional Weighing.***

When laboratory work and research requires accuracy to the hundred-thousandth, there is simply no room for error. The Explorer series of semi-micro balances has been designed with the technology to ensure that your very specific weighing results are accurate. Sophisticated laboratories requiring accuracy and looking for innovative technology to obtain measurement results can find both in Explorer semi-micro balances.

#### ***Standard Features Include:***

- **Intelligent Performance for Applications Requiring Extreme Accuracy**—The semi-micro Explorer series, which includes models with capacities up to 220 g and resolutions up to 0.01 mg, has been designed to use a High Speed Single Module weighing cell to ensure the accuracy of results. To minimize weighing errors and ensure accurate measurements, AutoCal™ utilizes two internal weights to perform a linear calibration.
- **Intuitive Software Provides an Extremely Modern User Experience**—Powered by SmarText™ 2.0 software, Explorer operates in the same manner as common electronics, with an icon-based touchscreen display, advanced applications, memory library, a USB host port, and more.
- **Ingenious Construction Designed to Enhance Usability**—Among Explorer's features designed to improve user experience and ensure the integrity of results include touchless sensors, automatic draftshield doors, an ionizer, and more.



# Explorer<sup>®</sup> Semi-Micro Balances

## Intelligent Performance for Applications Requiring Extreme Accuracy

Balances with capacities ranging from 52 g – 220 g and readabilities from 0.01 mg – 0.1 mg make up the Explorer series of semi-micro balances. In addition to superior craftsmanship and a High Speed Single Module weighing cell, various features are incorporated in to the product's design to enhance performance.

### Internal Calibration

OHAUS' signature AutoCal™ internal calibration system provides routine maintenance by automatically calibrating the balance every time it senses a temperature change of 1.5°C or every 3 hours, whichever occurs first. This helps ensure the accuracy of the balance when the operator has not performed a manual calibration or when the proper calibration masses are unavailable. In addition, to minimize weighing errors and ensure accurate measurements, AutoCal™ utilizes two internal weights to perform a linear calibration.

### Efficiency

Explorer's ultra-fast stabilization time (0.1 mg: ≤3 second, 0.01 mg: ≤8 second) and audible stability alert increases laboratory efficiency.

## Intuitive Software Provides an Extremely Modern User Experience

Explorer semi-micro balances include many facets of modern technology to provide the best weighing experience possible. The icon-based navigation provides tactile feedback and operates in the same manner as a smart phone or tablet computer.

### Save to USB

A USB host port provides the capability of using a USB extension cable to directly transfer the data to a flash drive.

### Memory

The balance's memory capabilities includes a library with space for up to 99 items, and a 10 recipe library for formulation mode.

### Multi-User

The user manager function provides profiles for one administrator and five additional users, allowing multiple users to utilize the same balance without compromising past results recorded on the balance.

### Technology

- Other technologically-advanced features include:
- Below minimum sample weight indicator
- Real time clock for GLP/GMP data collection
- Audible stability alert
- True type printing for SQC and pipette adjustment.





## Ingenious Construction Designed to Enhance Usability

The sleek Explorer semi-micro balance has been designed and constructed to provide a modern weighing experience as well as to bolster accuracy.

### Operator Experience

Among the features that enhance the operator experience are:

- Color touchscreen display
- Four programmable touchless sensors allow the operator to perform common functions and commands with a swipe of the hand
- Modular design in which the base and display can be separated to allow the balance to fit ideally on the lab bench.

### Auto-Doors

The automatic door feature, available on certain models, allows access to the weighing chamber without the need to touch the draftshield door. Placement of samples is achieved in one swift motion, eliminating the repetition of picking up and putting down samples due to a lack of free hands.

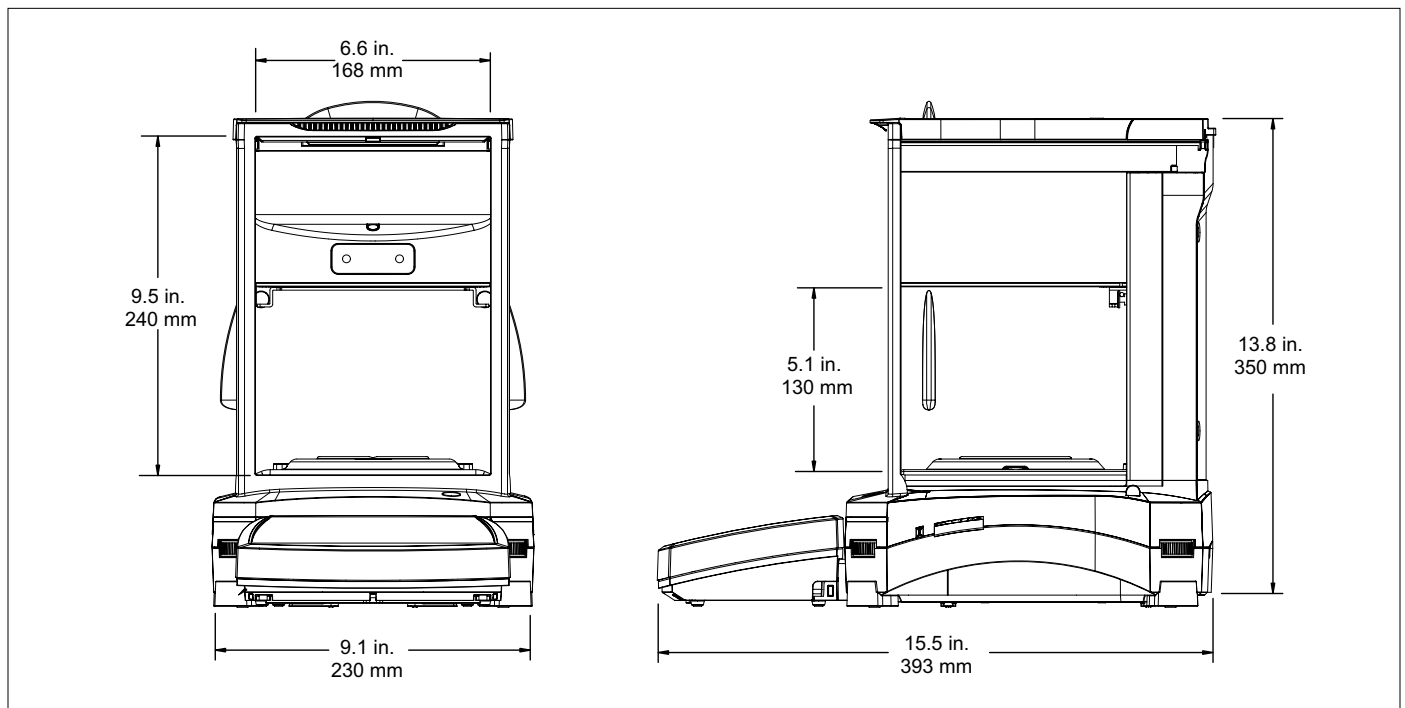
The automatic doors are also more than a user-friendly feature; they minimize vibrations caused by manual operation that can affect weighing results.

### Ionizer

The built-in ionizer, included in Explorer automatic door models, generates bipolar ions continuously from positive and negative discharge electrodes and directs the ionized air onto the charged body to eliminate static electricity. These charges can build up in the weighing chamber and alter weighing results by as much as several milligrams.



## Outline Dimensions



# Explorer<sup>®</sup> Semi-Micro Balances

MODEL	EX125D	EX125	EX225D	EX225D/AD	EX225/AD
Capacity	52 g / 120 g	120 g	120 g / 220 g	120 g / 220 g	220 g
Readability (d)	0.01 mg / 0.1 mg	0.01 mg	0.01 mg / 0.1 mg	0.01 mg / 0.1 mg	0.01 mg
Repeatability (20 g) (std. dev.)	0.015 mg				
Repeatability (100 g) std. dev.)	0.1 mg	0.02 mg	0.02 mg / 0.1 mg	0.03 mg	
Linearity	±0.1 mg				
Span Calibration Points	50 g 100g	50 g 100g	100 g 150g 200g	100 g 150g 200g	100 g 150g 200g
Calibration	Standard AutoCal™, AutoCal on Δ1.5° temperature change, 3 hours				
Automatic Door	n/a			Standard*	
Weighing Units	g, mg, kg, ct, gn, oz, ozt, lb, dwt, N, mom, tical, msg, tola, baht, Hong Kong Tael, Singapore Tael, Taiwan Tael, Custom Units 1, Custom Unit 2, Custom Unit 3				
Applications	Weighing, Parts Counting, Percent Weighing, Checkweighing, Dynamic Weighing, Filling, Totalization, Formulation, Differential Weighing, Peak Hold, Density Determination, Pipette Adjustment, Statistical Quality Control				
Stabilization Time	0.1 mg: ≤3 second, 0.01 mg: ≤8 second				
Sensitivity Temp. Drift	0.50 ppm / °C				
Min-Weight (typical)	20.0 mg, fine range (USP, u=0.10%, k=2)				
Min-Weight (optimal)	9.0 mg, fine range (USP, u=0.10%, k=2) SRP≤0.41d**				
Display	5.7 in / 14.5 cm (diagonal) Full-Color touch screen				
Interface	Standard connectivity: 1 USB host, 1 USB device, 1 RS232 Optional connectivity: 2 <sup>nd</sup> RS232, Ethernet				
Working Environment	10°C – 30°C / 50°F – 86°F, 85% RH, non-condensing				
Storage Conditions	-14°F (10°C) to 140°F (60°C) at 10% to 90% relative humidity, non-condensing				
Power Supply	AC Adapter Input: 100 – 240 VAC 0.6 A 50/60 Hz, AC Adapter Output: 12 VDC 1.5 A				
Pan Size (diameter)	3.1 in / 80 mm				
Dimensions (W × H × D)	9 × 15.5 × 13.8 in / 230 × 393 × 350 mm				
Shipping Dimensions (W × H × D)	24.9 × 25.2 × 18.4 in / 632 × 640 × 467 mm				
Net Weight	15.4 lb / 7 kg			16.5 lb / 7.5 kg	
Shipping Weight	26.5 lb / 12 kg			27.8 lb / 12.6 kg	

\*\* Two motorized doors operated by 4 sensors or onscreen button

\*The value for SRP is the standard deviation for n replicate weighing's (n ≥ 10)

## Approvals

- **Product Safety:** CAN/CSA C22.2 61010-1, UL 61010-1, IEC 61010-1
- **Electromagnetic Compatibility:** FCC Part 15 (Class A), Industry Canada ICES-001 (Class A), IEC 61326-1, (Class B emissions, Industrial immunity)

## Accessories

ION-100A - Ionizer .....	30130302
Density Determination Kit .....	80253384
Sinker glass for Density Determination kit. ....	83034024
Full-featured Impact Printer SF40A .....	30064202
SF40A Paper roll (57,5mm 2pcs) .....	12120799
SF40A Ink ribbon cassette .....	12120798
RS232 cable, PC 9 Pin .....	00410024
USB cable (type A to B) .....	83021085
Second RS232 interface .....	83021081
Ethernet interface .....	83021082
Terminal extension cable (3m) .....	83021083
Secondary display PAD7 .....	80251396
Security device (Cable & lock) .....	80850000
Security device (Laptop lock) .....	80850043
Terminal in-use cover .....	83033633
Dust cover .....	30093334

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With offices throughout  
Europe, Asia, and  
Latin America

\*ISO 9001:2008  
Registered Quality  
Management System





# ION-100A

Ionizer



## *Increasing Weighing Accuracy by Reducing Static Electricity*

ION-100A ionizer optimizes the accuracy of results when weighing extremely finite samples by mitigating static charges that can lead to inaccuracies. ION-100A eliminates static electricity on plastic and glass weighing vessels which are particularly prone to attracting static charges. The ION-100A ionizer used with an OHAUS balance adds an extra level of assurance that outside factors will not impact the accuracy of weighing data.

### *Standard Features Include:*

- **Fan-Free Technology Neutralizes Static with No Sample Disruption**—ION-100A's electrodes continuously generate bipolar ions through DC corona (fan-free technology). The positive and negative ions are created by two electrodes that direct the ionized air onto the sample. Through this fan-free technology, the ION-100A neutralizes static charges without the production of air streams.
- **An Easily Replaceable Long-Running Motor**—The ionizer's durable electrodes, which have an estimated operating life of 15,000 hours, can be easily replaced as necessary.
- **A Compact and Versatile Design**—The ionizer's height and angle can be adjusted for optimal alignment with the balance, while its small footprint takes up minimal space on the lab bench.

# ION-100A Ionizer

Model	ION-100A
Item Number	30130302
Power	12V $\equiv$ 0.5A
Ambient Conditions	Indoor use only
Altitude	Up to 2000 meters
Specified Temperature Range	0°C to 40°C
Humidity	Maximum relative humidity 80% for temperatures up to 31°C (87.8°F), decreasing linearly to 50% relative humidity at 40°C (104°F)
Power Supply Voltage Fluctuations	Up to $\pm$ 10% of the nominal voltage
Installation Category	II
Pollution Degree	2
Operating Temperature Range	5°C to 40°C / 41°F to 104°F
Net Weight	0.5 kg / 1.1 lb
Shipping Dimensions (W x H x L)	28 x 21 x 15 cm / 11 x 8.27 x 5.9 in
Shipping Weight	1.2 kg / 2.6 lb

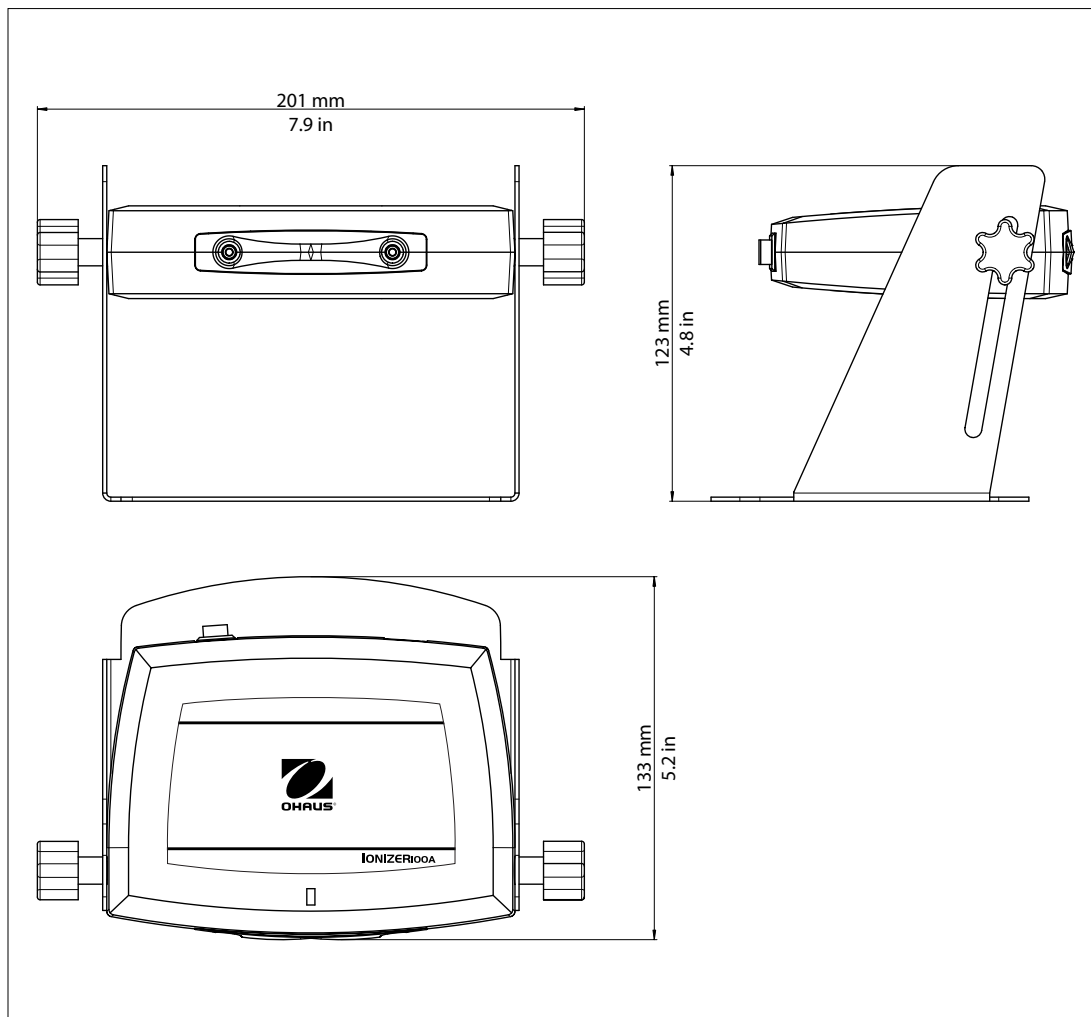
## Compliance

- **Product Safety:** IEC 61010-1:2010, EN 61010-1:2010, CSA C22.2 61010-1-12, UL 61010-1 (3rd edition)
- **Electromagnetic Compatibility:** IEC 61326-1:2012 (Class A emissions, General immunity), EN 61326-1:2013 (Class A emissions, General immunity), FCC Part 15 (Class A), Industry Canada ICES-001 (Class A)
- **Environment:** WEEE, RoHS

## Accessory

SP, Replacement Electrode ION-100A..... 30133391

## Dimensions



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