

Specifications

Measurement Channels		5 x optical channels; 1 x digital electrode channel (pH measurement)
Absorbance	Range	0.000 to 4.000 Abs
	Resolution	0.001 Abs
	Accuracy	±0.003 Abs (at 1.000 Abs)
	Light Source	light-emitting diode
	Bandpass Filter Bandwidth	8 nm
	Bandpass Filter Wavelength Accuracy	± 1.0 nm
	Light Detector	silicon photodiode
	Cuvette Type	round, 24.6 mm diameter and 16 mm diameter
	Number of Methods	128 max
pH	Range	-2.00 to 16.00 pH (±1000 mV)*
	Resolution	0.01 pH (0.1 mV)
	Temperature Compensation	Automatic (-5.0 to 100.0°C; 23.0 to 212.0°F)*
Temperature	Range	-20 to 120°C (-4.0 to 248.0 °F)
	Resolution	0.1 °C (0.1 °F)
Additional Specifications	pH electrode	digital pH electrode (not included)
	Logging	1000 readings (mixed photometer and electrode); log on demand with user name and sample ID optional input
	Display	128 x 64 pixel LCD with backlight
	Connectivity	USB-A host for flash drive; micro-USB-B for power and computer connectivity
	Battery Life	3.7VDC Li-polymer rechargeable battery / >500 photometric measurements or 50 hours of continuous pH measurement
	Power Supply	5 VDC USB 2.0 power adapter with USB-A to micro-USB-B cable (included)
	Environment	0 to 50°C (32 to 122°F); 0 to 95% RH, non-condensing
	Dimensions	206 x 177 x 97 mm (8.1 x 7.0 x 3.8 in.)
Weight	1.0 kg (2.2 lbs.)	

Parameter	Range	Resolution	Accuracy	LED with Narrow Band Interference Filter	Method
Alkalinity	0 to 500 mg/L (as CaCO ₃)	1 mg/L	±5 mg/L ±5% of reading at 25°C	@ 610 nm	Bromocresol green
Alkalinity, Marine	0 to 300 mg/L (as CaCO ₃)	1 mg/L	±5 mg/L ±5% of reading at 25°C	@ 610 nm	Bromocresol green
Aluminum	0.00 to 1.00 mg/L (as Al ₃ ⁺)	0.01 mg/L	±0.04 mg/L ±4% of reading at 25°C	@ 525 nm	aluminon
Ammonia Low Range	0.00 to 3.00 mg/L (as NH ₃ -N)	0.01 mg/L	±0.04 mg/L ±4% of reading at 25°C	@ 420 nm	Nessler
Ammonia Low Range (16 mm vial)	0.00 to 3.00 mg/L (as NH ₃ -N)	0.01 mg/L	± 0.10 mg/L or ± 5% of reading at 25°C, whichever is greater	@ 420 nm	Nessler
Ammonia Medium Range	0.00 to 10.00 mg/L (as NH ₃ -N)	0.01 mg/L	±0.05 mg/L ±5% of reading at 25°C	@ 420 nm	Nessler
Ammonia High Range	0.0 to 100.0 mg/L (as NH ₃ -N)	0.1 mg/L	±0.5 mg/L ±5% of reading at 25°C	@ 420 nm	Nessler
Ammonia High Range (16 mm vial)	0.0 to 100.0 mg/L (as NH ₃ -N)	0.1 mg/L	± 1 mg/L or ± 5% of reading at 25°C, whichever is greater	@ 420 nm	Nessler
Bromine	0.00 to 8.00 mg/L (as Br ₂)	0.01 mg/L	±0.08 mg/L ±3% of reading at 25°C	@ 525 nm	DPD
Calcium	0 to 400 mg/L (as Ca ²⁺)	1 mg/L	±10 mg/L ±5% of reading at 25°C	@ 466 nm	oxalate
Calcium, Marine	200 to 600 mg/L (as Ca ²⁺)	1 mg/L	±6% of reading at 25°C	@ 610 nm	zincon
Chloride	0.0 to 20.0 mg/L (as Cl ⁻)	0.1 mg/L	±0.5 mg/L ±6% of reading at 25°C	@ 466 nm	mercury (II) thiocyanate
Chlorine Dioxide	0.00 to 2.00 mg/L (as ClO ₂)	0.01 mg/L	±0.10 mg/L ±5% of reading at 25°C	@ 575 nm	chlorophenol red
Chlorine Dioxide, Rapid Method	0.00 to 2.00 mg/L (as ClO ₂)	0.01 mg/L	±0.10 mg/L ±5% of reading at 25°C	@ 525 nm	DPD
Chlorine, Free	0.00 to 5.00 mg/L (as Cl ₂)	0.01 mg/L	±0.03 mg/L ±3% of reading at 25°C	@ 525 nm	DPD
Chlorine, Free Ultra Low Range	0.000 to 0.500 mg/L (as Cl ₂)	0.001 mg/L	±0.020 mg/L ±3% of reading at 25°C	@ 525 nm	DPD
Chlorine, Total	0.00 to 5.00 mg/L (as Cl ⁻)	0.01 mg/L	±0.03 mg/L ±3% of reading at 25°C	@ 525 nm	DPD
Chlorine, Total Ultra Low Range	0.000 to 0.500 mg/L (as Cl ₂)	0.001 mg/L	±0.020 mg/L ±3% of reading at 25°C	@ 525 nm	DPD
Chlorine, Total Ultra High Range	0 to 500 mg/L (as Cl ₂)	1 mg/L	±3 mg/L ±3% of reading at 25°C	@ 525 nm	iodometric
Chromium(VI) Low Range	0 to 300 µg/L (as Cr ⁶⁺)	1 µg/L	±1 µg/L ±4% of reading at 25°C	@ 525 nm	diphenylcarbohydrazide
Chromium(VI) High Range	0 to 1000 µg/L (as Cr ⁶⁺)	1 µg/L	±5 µg/L ±4% of reading at 25°C	@ 525 nm	diphenylcarbohydrazide
COD Low Range (16 mm vial)*	0 to 150 mg/L (as O ₂)	1 mg/L	±5 mg/L or ±4% of reading @ 25°C, whichever is greater	@ 420 nm	ISO, EPA and mercury-free dichromate
COD Medium Range (16 mm vial)*	0 to 1500 mg/L (as O ₂)	1 mg/L	±15 mg/L or ±4% of reading @ 25°C, whichever is greater	@ 610 nm	ISO, EPA and mercury-free dichromate
COD HR (16 mm vial)*	0 to 15000 mg/L (as O ₂)	1 mg/L	±150 mg/L or ±2% of reading @ 25°C, whichever is greater	@ 610 nm	dichromate
Color of Water	0 to 500 PCU (Platinum Cobalt Units)	1 PCU	±10 PCU ±5% of reading at 25°C	@ 420 nm	colorimetric platinum cobalt
Copper Low Range	0.000 to 1.500 mg/L (as Cu ²⁺)	0.001 mg/L	±0.01 mg/L ±5% of reading at 25°C	@ 575 nm	bicinchoninate

*COD Rapid Method available.

Parameter	Range	Resolution	Accuracy	LED (λ nm) with Narrow Band Interference Filter	Method
Copper High Range	0.00 to 5.00 mg/L (as Cu ²⁺)	0.01 mg/L	±0.02 mg/L ±4% of reading at 25°C	@ 575 nm	bicinchoninate
Cyanuric Acid	0 to 80 mg/L (as CYA)	1 mg/L	±1 mg/L ±15% of reading at 25°C	@ 525 nm	turbidimetric
Fluoride Low Range	0.00 to 2.00 mg/L (as F ⁻)	0.01 mg/L	±0.03 mg/L ±3% of reading at 25°C	@ 575 nm	SPADNS
Fluoride High Range	0.0 to 20.0 mg/L (as F ⁻)	0.1 mg/L	±0.5 mg/L ±3% of reading at 25°C	@ 575 nm	SPADNS
Hardness, Calcium	0.00 to 2.70 mg/L (as CaCO ₃)	0.01 mg/L	±0.11 mg/L ±5% of reading at 25°C	@ 525 nm	calmagite
Hardness, Magnesium	0.00 to 2.00 mg/L (ppm) (as CaCO ₃)	0.01 mg/L	±0.11 mg/L ±5% of reading at 25°C	@ 525 nm	calmagite
Hardness, Total Low Range	0 to 250 mg/L (as CaCO ₃)	1 mg/L	±5 mg/L ±4% of reading at 25°C	@ 466 nm	calmagite
Hardness, Total Medium Range	200 to 500 mg/L (as CaCO ₃)	1 mg/L	±7 mg/L ±3% of reading at 25°C	@ 466 nm	calmagite
Hardness, Total High Range	400 to 750 mg/L (as CaCO ₃)	1 mg/L	±10 mg/L ±2% of reading at 25°C	@ 466 nm	calmagite
Hydrazine	0 to 400 µg/L (as N ₂ H ₄)	1 µg/L	±4% of full scale reading at 25°C	@ 466 nm	p-Dimethylaminobenzaldehyde
Iodine	0.0 to 12.5 mg/L (as I ₂)	0.1 mg/L	±0.1 mg/L ±5% of reading at 25°C	@ 525 nm	DPD
Iron (II) (ferrous)	0.00 to 6.00 mg/L Fe ²⁺	0.01 mg/L	±0.10 mg/L ±2% of reading at 25°C	@ 525 nm	phenanthroline
Iron (II)/(III) (ferrous and ferric)	0.00 to 6.00 mg/L Fe	0.01 mg/L	±0.10 mg/L ±2% of reading at 25°C	@ 525 nm	phenanthroline
Iron Low Range	0.000 to 1.600 mg/L (as Fe)	0.001 mg/L	±0.01 mg/L ±8% of reading at 25°C	@ 575 nm	TPTZ
Iron High Range	0.00 to 5.00 mg/L (as Fe)	0.01 mg/L	±0.04 mg/L ±2% of reading at 25°C	@ 525 nm	phenanthroline
Iron, Total (16 mm vial)	0.00 to 7.00 mg/L (as Fe)	0.01 mg/L	±0.20 mg/L or ±3% of reading, whichever is greater	@ 525 nm	phenanthroline
Magnesium	0 to 150 mg/L (as Mg ²⁺)	1 mg/L	±5 mg/L ±3% of reading at 25°C	@ 466 nm	calmagite
Manganese Low Range	0 to 300 µg/L (as Mn)	1 µg/L	±10 µg/L ±3% of reading at 25°C	@ 575 nm	PAN
Manganese High Range	0.0 to 20.0 mg/L (as Mn)	0.1 mg/L	±0.2 mg/L ±3% of reading at 25°C	@ 525 nm	periodate
Molybdenum	0.0 to 40.0 mg/L (as Mo ⁶⁺)	0.1 mg/L	±0.3 mg/L ±5% of reading at 25°C	@ 420 nm	mercaptoacetic acid
Nickel Low Range	0.000 to 1.000 mg/L (as Ni)	0.001 mg/L	±0.010 mg/L ±7% of reading at 25°C	@ 575 nm	PAN
Nickel High Range	0.00 to 7.00 g/L (as Ni)	0.01 g/L	±0.07g/L ±4% of reading at 25°C	@ 575 nm	EDTA
Nitrate	0.0 to 30.0 mg/L (as NO ₃ ⁻ - N)	0.1 mg/L	±0.5 mg/L ±10% of reading at 25°C	@ 525 nm	cadmium reduction
Nitrate (16 mm vial)	0.0 to 30.0 mg/L Nitrate (as NO ₃ ⁻ - N)	0.1 mg/L	±1.0 mg/L or ±3% of reading at 25°C, whichever is greater	@ 420 nm	chromotropic acid
Nitrite Ultra Low Range, Marine	0 to 200 µg/L (as NO ₂ ⁻ - N)	1 µg/L	±10 µg/L ±4% of reading at 25°C	@ 466 nm	diazotization
Nitrite Low Range	0 to 600 µg/L (as NO ₂ ⁻ - N)	1 µg/L	±20 µg/L ±4% of reading at 25°C	@ 466 nm	diazotization
Nitrite High Range	0 to 150 mg/L (as NO ₂ ⁻ - N)	1 mg/L	±4 mg/L ±4% of reading at 25°C	@ 575 nm	ferrous sulfate
Nitrogen, Total Low Range (16 mm vial)	0.0 to 25.0 mg/L (as NO ₃ ⁻ - N)	0.1 mg/L	±1.0 mg/L or ±5% of reading at 25°C, whichever is greater	@ 420 nm	chromotropic acid
Nitrogen, Total High Range (16 mm vial)	0 to 150 mg/L (as N)	1 mg/L	±3 mg/L or ±4% of reading at 25°C, whichever is greater	@ 420 nm	chromotropic acid
Oxygen, Dissolved	0.0 to 10.0 mg/L (as O ₂)	0.1 mg/L	±0.4 mg/L ±3% of reading at 25°C	@ 420 nm	Winkler
Oxygen Scavengers	0.00 to 1.50 mg/L (as Carbohydrazide)	0.01 mg/L	±5 µg/L ±5% of reading at 25°C	@ 575 nm	iron reduction
Oxygen Scavengers	0 to 1000 µg/L (as DEHA)	1 µg/L	±5 µg/L ±5% of reading at 25°C	@ 575 nm	iron reduction
Oxygen Scavengers	0.00 to 2.50 mg/L (as Hydroquinone)	0.01 mg/L	±5 µg/L ±5% of reading at 25°C	@ 575 nm	iron reduction
Oxygen Scavengers	0.00 to 4.50 mg/L (as Iso-ascorbic acid)	0.01 mg/L	±5 µg/L ±5% of reading at 25°C	@ 575 nm	iron reduction
Ozone	0.00 to 2.00 mg/L (as O ₃)	0.01 mg/L	±0.02 mg/L ±3% of reading at 25°C	@ 525 nm	DPD
pH	6.5 to 8.5 pH	0.1 pH	±0.1 pH at 25°C	@ 525 nm	phenol red
Phosphate Ultra Low Range, Marine	0 to 200 µg/L (as P)	1 µg/L	±5 µg/L ±5% of reading at 25°C	@ 610 nm	ascorbic acid
Phosphate Low Range	0.00 to 2.50 mg/L (ppm)	0.01 mg/L	±0.04 mg/L ±4% of reading at 25°C	@ 610 nm	ascorbic acid
Phosphate High Range	0.0 to 30.0 mg/L (as PO ₄ ³⁻)	0.1 mg/L	±1 mg/L ±4% of reading at 25°C	@ 525 nm	amino acid
Phosphorus Reactive Low Range (16 mm vial)	0.00 to 1.60 mg/L (as P)	0.01 mg/L	±0.05 mg/L or ±4% of reading at 25°C, whichever is greater	@ 610 nm	ascorbic acid
Phosphorus Reactive High Range (16 mm vial)	0.0 to 32.6 mg/L (as P)	0.1 mg/L	±0.5 mg/L or ±4% of reading at 25°C, whichever is greater	@ 420 nm	vanadomolybdophosphoric acid
Phosphorus Acid Hydrolyzable (16 mm vial)	0 to 1.6 mg/L (ppm) (as P)	0.1 mg/L	±0.05 mg/L or ±5% of reading at 25°C, whichever is greater	@ 610 nm	ascorbic acid
Phosphorus, Total Low Range (16 mm vial)	0.00 to 1.15 mg/L (as P)	0.01 mg/L	±0.05 mg/L or ±6% of reading at 25°C, whichever is greater	@ 610 nm	ascorbic acid
Phosphorus, Total High Range (16 mm vial)	0.0 to 32.6 mg/L (as P)	0.1 mg/L	±0.5 mg/L or ±5% of reading at 25°C, whichever is greater	@ 420 nm	vanadomolybdophosphoric acid
Potassium	0.0 to 20.0 mg/L (as K)	0.1 mg/L	±3.0 mg/L ±7% of reading at 25°C	@ 466 nm	turbidimetric tetraphenylborate
Silica Low Range	0.00 to 2.00 mg/L (as SiO ₂)	0.01 mg/L	±0.03 mg/L ±3% of reading at 25°C	@ 610 nm	heteropoly blue
Silica High range	0 to 200 mg/L (as SiO ₂)	1 mg/L	±1 mg/L ±5% of reading at 25°C	@ 466 nm	molybdosilicate
Silver	0.000 to 1.000 mg/L (as Ag)	0.001 mg/L	±0.020 mg/L ±5% of reading at 25°C	@ 575 nm	PAN
Sulfate	0 to 150 mg/L (as SO ₄ ²⁻)	1 mg/L	±5 mg/L ±3% of reading at 25°C	@ 466 nm	turbidimetric
Surfactants, Anionic	0.00 to 3.50 mg/L (as SDBS)	0.01 mg/L	±0.04 mg/L ±3% of reading at 25°C	@ 610 nm	methylene blue
Zinc	0.00 to 3.00 mg/L (as Zn)	0.01 mg/L	±0.03 mg/L ±3% of reading at 25°C	@ 575 nm	zincon

Ordering Information

H183399-01 (115V) and **H183399-02** (230V) is supplied with sample cuvettes and caps (4 ea.), digestion vials (6), vial adapter, cloth for wiping cuvettes, USB to micro USB cable connector, power adapter, instrument quality certificate, and instruction manual.

Standards

H183399-11 CAL Check Cuvette Kit for H183399