Datasheet

Polaris C CO_2
Product no. G02-25



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Intended use

Polaris C meters are portable instruments designed for fast and accurate spot measurements of environmental parameters in aquaculture, research and industrial use.
Polaris C CO_2 measures free dissolved carbon dioxide (CO_2) directly in water, which is the form that affects fish and other aquatic organisms. The probe detects the partial pressure of CO_2 gas in equilibrium with the carbonate system, providing a direct and accurate reading without pH-based estimation.

Technical specifications

Units of measure	CO_2: %vol and mg/l or ppm. Temperature: Celsius (°C), Fahrenheit (°F)
Display	Graphical LCD display with variable backlight
Types of probes	Optical
Cable length	Standard 3 meters / 10 ft. By request, available at any length up to 100 m / 328 ft
Probe immersion depth	For use beyond 10 m (33 ft), a specially designed probe is required. Specify when ordering
Operating temperature	• Probe: -5°C to +40°C / + 23°F to + 104°F • Meter: -20°C to +60°C / -4°F to +140°F
Meter water resistance	IP67-rated, allowing short-term immersion up to 1 m / 3 ft
Response time	Typically 5-15 minutes at 20°C, depending on flow velocity. With low-flow conditions, up to 20 min.
Flow requirements	A continuous water flow around the probe is necessary to maintain measurement accuracy.
Measuring range	• Standard: CO_2: 0-5% volume CO_2: 0-50 mg/L / 0-50 ppm Temperature: -5°C to +40°C / + 23°F to + 104°F
Measuring accuracy	• Standard: Depends on calibration. Typically, ± 1% of measured value. Temperature: ± 0.2° C / F
Data logging capacity	Min. 3000+ sets of data with a maximum of 140 tag references
Compensation ranges (manually set)	0-59 ppt, manually set
Automatic check of	Probe function, meter function, cable and battery
Automatic compensation	Temperature and barometric pressure (300-1200 mBar)
Dimensions meter	Length = 98 mm / 3.86". Diameter = 36 mm / 1.42"
Dimensions probe	Length = 140 mm / 5.51". Diameter = 40 mm / 1.57"
Power	Single-cell Li-Ion battery pack with integrated battery protection circuitry. Nom. 3.7V, max. capacity 9Wh. UN38.3 certified
Battery life	Up to 6,5 days of typical usage of 2 hr/day
Water pressure	1 bar

Order information / part numbers

Replacement probe for Polaris C CO_2	Item no: G02YRP-25
Replacement probe for Polaris C CO_2 High Range	Item no: G02HYRP-25
Membrane protector for CO_2 probe	Item no: G10MP
Membrane protector (antifouling) for CO_2 probe	Item no: G10MPAF
75 g pH conditioner for calibration	Item no: G10CC
100 ml calibration solution	Item no: G10CS
Calibration Kit for CO_2 probe	Item no: G10CALPMH

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