

HI7640-18

Galvanic Dissolved Oxygen Industrial Smart Probe

HI510 and HI520 Universal Process Controller compatible

The HI7640-18 is a galvanic-style oxygen probe designed for use with the Hanna Instruments® HI510 or HI520 process controller. The system is suited for continuous measurement of oxygen dissolved in water.

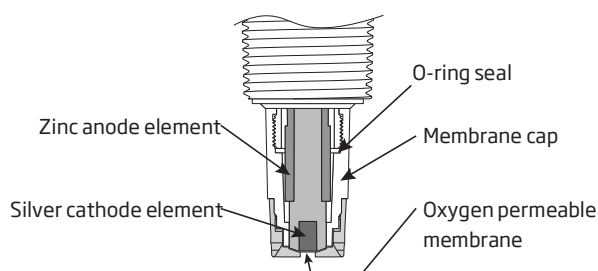
An integral temperature sensor measures water temperature and adjusts the probe signal over the specified temperature range. The result is reliable dissolved oxygen (DO) concentration or percent saturated measurements.

Suitable for control applications in municipal and industrial wastewater treatment, the probe can be submersed/immersed using the 3/4" NPT threads, or installed directly in-line or in a flow cell installation, using the lower sensor threads.

The probe is available with an integral connector that permits connections after installation.

Patch cables may be purchased separately to connect between the probe and controller up to 50 meters (164 ft).

- Galvanic probe with digital processing
- Simple membrane-cap replacement
- Large electrolyte reservoir provides longer service life
- Rugged, chemically-resistant PVDF body
- Built-in temperature sensor for measurement and DO compensation
- Digital probe stores model, firmware, serial number, and calibration information
- 3/4" NPT external thread for mounting
- 3 bar (43.5 psi) maximum pressure



The galvanic probe functions in the same manner as a battery.

The sensing elements consist of silver cathode and zinc anode, with a pretensioned membrane isolating the cell from the liquid being measured.

The refillable electrolyte reservoir holds ample electrolyte to support the reaction.

Oxygen diffuses through the membrane and is reduced on the surface of the cathode. This reaction generates a signal proportional to the oxygen concentration.



Specifications

example HI7640-18zz

Dissolved Oxygen	Range	0.00 to 50.00 mg/L (ppm) concentration 0.0 to 500.0 % saturation
	Resolution	0.01 mg/L (ppm) 0.1% saturation
	Accuracy	from 0.00 to 20.00 mg/L (ppm): $\pm 2\%$ of reading or ± 0.2 mg/L (ppm), whichever is greater; from 20.00 to 50.00 mg/L (ppm): $\pm 6\%$ of reading from 0.0 to 200.0 % saturation: 2% of reading or $\pm 2.0\%$, whichever is greater; from 200.0 to 500.0 % saturation: $\pm 6\%$ of reading
	Calibration	One or two points: at 100% and/or 0% or 8.26 mg/L and/or 0 mg/L in water-saturated air or zero-oxygen solution Single point process calibration: using value entered by the user in % saturation or mg/L
Temperature	Range	-5.0 to 50.0°C (23.0 to 122.0 °F)
	Resolution	0.1 °C; 0.1 °F
	Accuracy	± 0.5 °C; ± 1.0 °F
	Calibration	Single point offset (controller setting)
Temperature Compensation	Automatic	
Temperature Source	Automatic (from probe) Manual	
Pressure Compensation	Automatic	420 to 850 mmHg
Salinity Compensation	Automatic	0 to 70 g/L (set manually)
Body	PVDF	
Sensor	Type	Galvanic cell
	Cathode	Silver (Ag)
	Anode	Zinc (Zn)
	Diameter	Ø 17 mm (0.7")
	Insertion length	30 mm (1.2")
Maximum Pressure	3 bar (43.5 psi) at 25 °C (77 °F)	
Threaded Connection	3/4" NPT external thread for insertion mounting	
Wetted Parts	Sensor body	PVDF
	Membrane cap	PEI and PTFE
	O-ring	NBR
Protection Rating	IP68	
Cable Length	zz, see Ordering Information	

Ordering Information

Each probe is supplied with HI7042B Galvanic DO electrolyte solution, 30 mL (2 pcs.), HI7640-18A Replacement membrane cap and O-ring (5 pcs. of each), syringe and cone shaped plastic tip, electrolyte screw and fill hole O-ring (2 pcs. of each), protective probe cap, quick reference guide with probe quality certificate.

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Choose your configuration:

1	Galvanic sensor
8	Smart probe, with RS485 connection
zz	00 supplied with DIN connector (without cable). See Accessories section for patch cable ordering codes. 05, 10, 15, 25, 50 fixed cable length (in meters)

Accessories

HI7640-18A/P	Replacement membrane cap (5 pcs.)
HI7040L	Zero oxygen solution set, 500 mL + 12 g
HI7042B	Galvanic DO electrolyte solution, 30 mL
HI740226	5 mL graduated syringe
HI731350	Plastic tip (25 pcs.)
HI76510-05	Patch cable, 5 m (16'5")
HI76510-10	Patch cable, 10 m (32'9")
HI76510-15	Patch cable, 15 m (49'2")
HI76510-25	Patch cable, 25 m (82')
HI76510-50	Patch cable, 50 m (164')

Dimensions

