



HI8410

## Dissolved Oxygen Controller

with Extended Range and Analog Output

- 0.5 to 5.0 mg/L (ppm) O<sub>2</sub> alarm range
- Automatic temperature compensation

The HI8410 is a panel mounted dissolved oxygen controller that is used to maintain and monitor the concentration of DO in a wide range of industrial process applications. The HI8410 uses a Galvanic probe that typically requires less maintenance than a Polarographic style making it ideal for long term monitoring.

The set point for controlling the activation of a relay is adjusted manually by the user. An alarm relay is also manually adjustable and is based upon a tolerance from the programmed setpoint. This controller features single set point calibration in zero oxygen solution.

The D.O. probe is provided with a membrane covering the galvanic sensor and a built-in thermistor for temperature measurement and compensation.

### Specifications

### HI8410

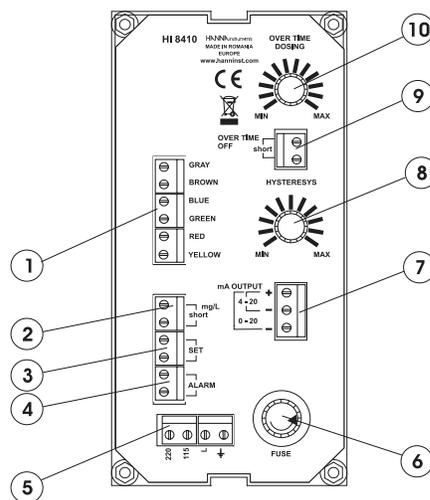
Range	0.0 to 50.0 mg/L (ppm) O <sub>2</sub> ; 0 to 600 % O <sub>2</sub> ; -5.0 to 50.0°C
Resolution	0.1 mg/L (ppm) or 1% (O <sub>2</sub> ) / 0.1°C
Accuracy (@25°C/77°F)	±1% of reading (O <sub>2</sub> ) / ±0.2°C
Calibration	manual, one point, in saturated air
Temp. Compensation	automatic, from -5 to 50°C (23 to 122 °F)
Salinity Compensation	0 to 51 g/L (resolution 1 g/L)
Probe (not included)	HI76410/4 with 4 m (13.1') cable or HI76410/10 with 10 m (32.8') cable
Recorder Output	0 to 20 mA or 4 to 20 mA (isolated)
Set point and Alarm Relay	1, isolated, 2A, max. 240V, resistive load, 1,000,000 strokes
Set point Range	5 to 600 % O <sub>2</sub> ; 0.5 to 50.0 mg/L (ppm) O <sub>2</sub>
Alarm Range	0.5 to 5.0 mg/L (ppm) O <sub>2</sub>
Hysteresis Range	0.5 to 2.4 mg/L (ppm) O <sub>2</sub>
Dosing Control	OFF/AUTO/ON with selection switch
Over Dosing Control	adjustable, from 5 min to 60 min with knob or disable by wire strap - on rear panel
Backlight	continuous on
Power Supply	115 VAC ±10% or 230 VAC ±10%; 50/60 Hz
Enclosure	flame retardant ABS body and front panel; transparent splash-proof front cover
Environment	-10 to 50°C (14 to 122°F); RH max 95% non-condensing
Panel Cutout	141 x 69 mm (5.6 x 2.7")
Weight	1 kg (2.2 lb.)

### Ordering Information

The **HI8410** is supplied complete with mounting brackets and instructions.

### Probes and Accessories

<b>HI76410/4</b>	Galvanic DO probe (fixed) with internal temperature sensor, DIN connector and 4 m (13.1') cable
<b>HI76410/10</b>	Galvanic DO probe (fixed) with internal temperature sensor, DINconnector and 10 m (32.8') cable
<b>HI76410A</b>	Spare membranes for HI76410



1. DO probe connection terminals
2. Range selection: mg/L or % DO
3. SET terminals for connection to a dosing pump
4. ALARM terminals for connection to an external alarm device
5. Power supply terminals
6. Fuse holder
7. mA OUTPUT terminals for connection to a recorder
8. Hysteresis set knob (0.5 to 2.4 mg/L)
9. Disable overtime dosing connection
10. Overtime dosing set knob (about 5 to 60 min)



## BL mini controllers are the perfect solution for water analysis and control

### pH Mini Controllers

Monitoring and controlling pH in water conditioning and industrial applications is essential for water quality and maintaining infrastructure (piping and equipment). In the case of industrial effluent, neutralization of acidic waste is vital for environmental safety and public health. In boiler feed water conditioning, a pH of 8.5 is necessary to prevent scaling and corrosion of critical components. Maintaining a pH of 7.4 is fundamental for proper and efficient sanitization in swimming pools and spas. The efficacy of sanitizers, such as chlorine, is dependent on a controlled pH value.

### ORP Mini Controllers

ORP (oxidation reduction potential) is the most dependable and consistent indicator of the sanitizing effectiveness of your pool, spa, or water treatment. As oxidizers, chlorine, peroxide, and ozone are added, the ORP value increases, providing a clear indication of the cleansing power of the water. Typically, an ORP value of 650 to 700 mV at a pH of 7.2 indicates that your water is properly treated and all harmful bacteria are killed in less than 1 second. ORP is also essential in chemical processing where reducing agents are used and a negative ORP value indicates proper neutralization.

### Conductivity Mini Controllers

In water, an increase in conductivity indicates an increase in water hardness and a decrease in purity. Conductivity monitoring and control is essential in reducing water hardness and maintaining water quality. Water with a conductivity value of 0 to 140  $\mu\text{S}/\text{cm}$  is considered "very

soft," while 640 to 840  $\mu\text{S}/\text{cm}$  is considered "hard" water. An increase in conductivity indicates an increase in the amount of damaging dissolved solids (salts) present in water. Conductivity monitoring and control is essential in industrial applications such as feed water control, blow down activation in cooling towers and water management. In these applications, high conductivity will cause scaling and corrosion of piping and damage to critical components.

### TDS Mini Controllers

A TDS (total dissolved solids) measurement is an important indicator of water quality. An increase in TDS indicates an increase in the amount of dissolved solids (salts) present in the water. TDS monitoring and control is imperative in industrial applications such as feed water control, blow down activation in cooling towers and water management. In these applications, high TDS will cause scaling and corrosion of piping and damage to critical components.

A TDS measurement is also an important indicator of the effectiveness of water conditioning, an increase in TDS indicates an increase in water hardness and a decrease in purity. This will affect the quality of drinking water, feed water and rinse water. TDS monitoring and control is crucial in reducing water hardness and maintaining water quality and usability.

### Resistivity Mini Controller

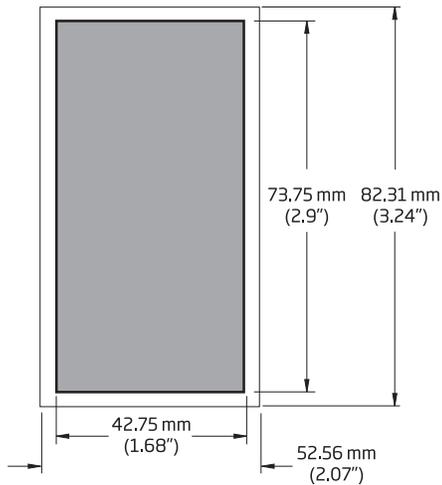
Resistivity, measured in  $\Omega \cdot \text{M}$ , is the optimal way to measure the quality of water produced by high purity systems, such as reverse osmosis (RO) systems and water conditioning equipment. As resistivity is the inverse of conductivity, it provides a more accurate characterization of water with very low conductive ability. As filter systems become less effective, the resistivity value will decrease, indicating a need for maintenance and/or replacement of filters and critical components. Properly functioning RO and water conditioning systems will consistently produce water with resistivity readings in the range of 16 to 18  $\text{M}\Omega \cdot \text{cm}$ .

**Any system can be cost effectively monitored 24/7**



# Hanna Mini Controllers

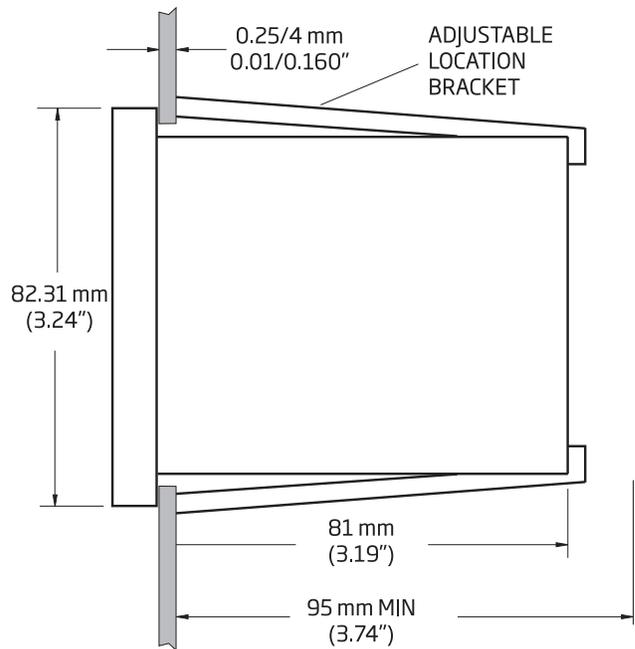
## BL Series Mechanical Dimensions



### Front View

Front view of the panel-mounted units.

Dimensions show the cutout size for installation and also the outside dimensions of the panel.



### Side View

Side view of panel-mounted controllers.

Adjustable location brackets allow the controller to slide into the cutout and will hold the unit securely in place.

130 or 87 mm (depending on model) is the minimum amount of room required to install the meter with all wiring.



## High Range Probe for EC/TDS Mini Controllers

The HI7632-00 is a two-pole amperometric EC/TDS probe for panel mounted mini controllers that measure in the **high range (mS/cm and ppt)**. This probe has a built-in temperature sensor for Automatic Temperature Compensation and a 1/2" male NPT threaded connection for insertion mounting. The HI7632-00 probe provides a rapid response and high accuracy EC or TDS measurement.

- Two-pole amperometric probe
- Internal temperature sensor
- High range measurement (mS/cm and ppt)

HI7632-00 with 2 m (6.6') of cable attached  
HI7632-00/6 with 6 m (19.7') of cable attached



## Low Range Probe for EC/TDS Mini Controllers

The HI7634-00 is a two-pole amperometric EC/TDS probe for panel mounted mini controllers that measure in the **low range (µS/cm and ppm)**. This probe has a built-in temperature sensor for Automatic Temperature Compensation and a 1/2" male NPT threaded connection for insertion mounting. The HI7634-00 probe provides a rapid response and high accuracy EC or TDS measurement.

- Two-pole amperometric probe
- Internal temperature sensor
- Low range measurement (µS/cm and ppm)

HI7634-00 with 2 m (6.6') of cable attached  
HI7634-00/4 with 4 m (13.1') of cable attached  
HI7634-00/5 with 5 m (16.4') of cable attached