



## HI8410 Dissolved Oxygen Controller

with Extended Range and  
Analog Output

- Alarm
  - Fail Safe Alarm System
- ATC
  - 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 dosage mode: automatic, continuous ON or OFF and over dosage control by setting the overtime dosage trimmer. If the dosing relay remains continuously activated for more than the selected dosing time, the alarm relay is activated, the alarm LED will start blinking and the dosing relay will be deactivated. A jumper located on the controller's rear panel can disable the "over time dosage" function.

"Automatic/Off/manual" dosing selection switch and LED on the front panel. In Automatic mode all the relays are controlled based on the measurement set point and alarm values. In OFF mode the dosing and alarm relays are always deactivated. The dosing LED is OFF (as relay status) and the ALARM LED is in accordance with the instrument set point, input reading, and ALARM. In ON (Manual) mode the dosing relay is always on. The alarm relay is still enabled. If an alarm occurs the dosing relay remains activated. If the over dose time exceeds the setting during manual mode, the alarm relay remains activated.

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           | 1 to 600 % O <sub>2</sub> ; 0.1 to 50.0 mg/L (mg/L (ppm) O <sub>2</sub> )  |
| Alarm Range               | 1.0 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 <b>HI8410</b> is supplied complete with mounting brackets and instructions.                                    |
| Probes                    | <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, DIN connector and 10 m (32.8') cable |

For complete list of DO solutions, see section 7