DO402G/DO70G/DO30G
DISSOLVED OXYGEN ANALYZERS
Responding to the increasing need to measure dissolved oxygen in industrial processes and water and sewage treatment applications due to environment and water quality concerns, we introduced the DOX8C of our DOΣ dissolved oxygen analyzer line in 1983. In the years since, the DOX8C has earned an excellent reputation for reliability. Now, we bring you even higher performance and more advanced functions in our new DO402G Dissolved Oxygen Analyzer.

The DO402G supplements conventional temperature compensation with barometric pressure and salinity compensation functions for higher measurement accuracy. Measurement range is a wide 0 to 50 mg/L for both aerobic and anaerobic water treatment applications.

The DO402G converter makes human interface simple. Yes / No dialogues guide operators through programming menus. Automatically compensated values appear in parts per million, mg / liter or percent saturation. Simply select outputs for alarm, control, wash-timer and fault to program the system to any level of sophistication.

In addition, the DO402G converter features easy operation and self-diagnostic functions which detect stability problems and zero-point errors during calibration, as well as temperature and measurement problems during operation.

The DO30G galvanic cell dissolved oxygen sensor achieves stable measurement over a long period thanks to its robust construction against electrolyte deterioration and diaphragm contamination. The cartridge-type 50-mm thick membrane is easy to replace, resistant to tearing, and hardly influenced by air bubbles.

We have also added the DOX8HS diagonal mounting style immersion type holder for greater bubble noise resistance, and a PB350G/360G float type holder with self-cleaning for longer maintenance intervals.

The PB350G/360G float type probe gives you both quicker response and easier maintenance and provides consistent sensor insertion depth without edges or hollows to collect deposits and cause fouling.

Whether you’re monitoring activated sludge or river water intake, the Yokogawa DO402G system saves time and money, helping ensure water quality for your process ... and our world.

DO402G/DO70G/DO30G DISSOLVED OXYGEN ANALYZER

Because water quality is critical to your process ... and your world
### General

<table>
<thead>
<tr>
<th>Measurement object</th>
<th>Measurement of dissolved oxygen in aeration tanks at sewage treatment plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicable sensors</td>
<td>DO70G (Optical sensor), DO402G (Galvanic cell sensor)</td>
</tr>
<tr>
<td>Measurement range</td>
<td>0 to 25 mg/L (ppm) (DO70G), 0 to 20 mg/L (ppm) (DO402G)</td>
</tr>
<tr>
<td>Sample temperature</td>
<td>0 to 50°C (DO70G), 0 to 40°C (DO402G)</td>
</tr>
<tr>
<td>Sample pressure</td>
<td>0 to 500 kPa (DO70G), 0 to 100 kPa (DO402G)</td>
</tr>
</tbody>
</table>

### Converter

| Measurement range   | 0 to 25 mg/L (ppm) (DO70G), 0 to 20 mg/L (ppm) (DO402G)                      |
| Display             | 8 ½ digits LCD                                                              |
| Output signal       | Two outputs, relay contacts                                                 |
| Output range        | Min. span; 7 mg/L, 1 ppm or 10% saturation Max. span; 50 mg/L, 50 ppm or 30% saturation |
| Temperature         | 0 to 50°C                                                                   |
| Contact output      | Four outputs, relay contacts                                                 |
| Contact input       | One input, remote wash cycle start                                           |
| Ambient temperature | 10 to 55°C                                                                  |
| Humidity            | 10 to 90%RH (Non condensing)                                                |
| Construction        | Polyamide, NEMA X equivalent                                                 |
| Housing             | Case; Cast aluminum with chemically resistance coating Cover; Flexible polycarbonate window Mounting; Pipe, wall or plate |
| Power supply        | 100, 115, 230 V AC ±15%, 50/60 Hz                                           |
| Weight              | Approx. 2.5 kg                                                              |
| Dimension           | 144×144×135 mm                                                             |

### System Configuration

- **DO Converter**: DO402G
- **Power Supply Unit**: DO70G, DO30G
- **DO Sensors**: DO70G, DO30G

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### Dissolved Oxygen Converter

<table>
<thead>
<tr>
<th>Model</th>
<th>Suffix code</th>
<th>Option Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO402G</td>
<td>-1</td>
<td>-1</td>
<td>Dissolved Oxygen Converter</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>115 V ±15% AC 50/60 Hz</td>
</tr>
<tr>
<td>Supply</td>
<td>230 V ±15% AC 50/60 Hz</td>
</tr>
<tr>
<td>Voltage</td>
<td></td>
</tr>
</tbody>
</table>

### Optical Dissolved Oxygen Sensor

<table>
<thead>
<tr>
<th>Model</th>
<th>Suffix code</th>
<th>Option code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO70G</td>
<td>-E</td>
<td>-E</td>
<td>Optical Dissolved Oxygen Sensor</td>
</tr>
</tbody>
</table>

| Insertion Length | 120 mm                                  |
| Type             | Always-E                                |
| Cable Length     | 3 m *                                   |
|                  | 5 m *                                   |
|                  | 10 m *                                  |
|                  | 120 mm                                  |

- **Type**: Always-N
- **Adaptor**: /S3 For submersion holder, stainless steel
- **/PP** For submersion holder, PP
- **/FPP** For Floating ball holder, PP
- **/SCT** Stainless steel tag plate

### Galvanic Cell Dissolved Oxygen Sensor

<table>
<thead>
<tr>
<th>Model</th>
<th>Suffix code</th>
<th>Option code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO30G</td>
<td>-E</td>
<td>-E</td>
<td>Galvanic Cell Dissolved Oxygen Sensor</td>
</tr>
</tbody>
</table>

| Membrane thickness | 50 µm                                  |
| Cable Length       | 3 m                                    |
|                    | 5 m                                    |
|                    | 10 m                                   |
|                    | 15 m                                   |
|                    | 20 m                                   |
| Cable terminal     | Pin terminal *                         |
|                    | Fork terminal                         |

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