

# Hach 1735 TRO Total Residual Oxidant Analyzer

## Application

- Ballast Water

***Provides a wide range of TRO measurement for the most challenging shipboard applications.***

*With a response time of 75 seconds, and a range of 0-10ppm, the Hach 1735 TRO Analyzer is suitable for monitoring TRO in ballast water treatment systems on ships.*



## **Intrinsically Safe (IS) certified**

The Hach 1735 TRO Analyzer is an ATEX Zone 1 Intrinsically Safe certified analyzer for use in hazardous, or potentially hazardous environments. This design allows the user to interact and perform maintenance with ease. In addition, it does not require heavy enclosures or additional resources, such as purge gas.

## **Superior Reagent Life**

Suitable for high temperature environments such as pump room installations on ships where the ambient temperature can rise as high as 50°C. Hach reagents can provide accurate measurements for up to 70 days at these high temperatures. The extended reagent life reduces interaction with the instrument and the operating costs.

## **Accurate Results**

The Hach 1735 TRO Analyzer uses colorimetric DPD chemistry to monitor water continuously for TRO concentration which is the same method as used in the Hach CL17 Chlorine Analyzer, an industry leader for 35 years. This analysis method is not affected by changes in sample pH, temperature, chlorine concentration, salinity (within the measurement ranges), pressure or flow, thus offering more accuracy than other available methods.

## **Minimal Maintenance**

The Hach 1735 TRO Analyzer is designed to be nearly maintenance free. Under typical use, the Hach 1735 TRO Analyzer will operate unattended for 70 days. Less than 5 minutes of routine maintenance including reagent changes, is only required every 2 months. No calibration is needed, and no special tools are required.

## **Marine Application Ready**

To measure total residual oxidant on vessels, the Hach 1735 TRO Analyzer is built to withstand harsh shipboard conditions. It meets all relevant IMO standards, including tilt and vibration, and is protected by an IP64 rated enclosure which prevents corrosion caused by sea water.

## Specifications\*

|                                 |                                                                                                                                                                          |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Range</b>                    | 0-10 mg/L (ppm) as Chlorine <sup>†</sup><br><i><sup>†</sup>The measured TRO concentration can be expressed as Bromine by choosing the option in the instrument menu.</i> |
| <b>Accuracy</b>                 | ± 5% of reading or ±0.035 mg/L (ppm), whichever is greater for range of 0-6 mg/L (ppm)<br>±10% of reading from 6.0-10 mg/L (ppm)                                         |
| <b>Resolution</b>               | 0.01 PPM                                                                                                                                                                 |
| <b>Cycle Time</b>               | 75 seconds per measurement                                                                                                                                               |
| <b>Max Inlet Pressure</b>       | 4 psi ~ 6 psi                                                                                                                                                            |
| <b>Flow Rate</b>                | 125 mL/min                                                                                                                                                               |
| <b>Sample Temperature Range</b> | 5 to 40°C (41 to 104°F)                                                                                                                                                  |
| <b>Operating Temperature</b>    | 5 to 50°C (41 to 122°F)                                                                                                                                                  |
| <b>Storage Temperature</b>      | 5 to 55°C (41 to 131°F)                                                                                                                                                  |
| <b>Environmental Conditions</b> | Humidity Max = 90% at 50°C, non-condensing                                                                                                                               |
| <b>Bottle Size</b>              | 250 mL                                                                                                                                                                   |
| <b>Reagent Usage</b>            | Approximately 1 mL of each reagent per hour of operation                                                                                                                 |
| <b>Display</b>                  | Graphic dot matrix LCD with LED backlighting, transreflective                                                                                                            |
| <b>Alarms</b>                   | On screen display only                                                                                                                                                   |
| <b>Power Input</b>              | 12 Vdc at 500 mA nominal                                                                                                                                                 |

|                                    |                                                                                                                                                                                    |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Outputs</b>                     | 4–20 mA. 4-wire configuration with common-referenced current sink<br><br><i>Remote Interface:</i><br>RS485 Modbus RTU<br><br><i>RS485 Output:</i><br>115 kBaud, 8N1 (configurable) |
| <b>Enclosure</b>                   | IP64, Painted Steel                                                                                                                                                                |
| <b>Sample and Drain Connection</b> | 1/4" FNPT sample line and 3/8" FNPT in CPVC gravity drain                                                                                                                          |
| <b>Instrument Dimensions</b>       | 380mm x 336.2mm x 203mm (HxWxD)                                                                                                                                                    |
| <b>Shipping Weight</b>             | 13kg (28.7 lb)                                                                                                                                                                     |
| <b>Mounting</b>                    | Wall Mount                                                                                                                                                                         |
| <b>Tilt</b>                        | Meets the IMO requirements of 22.5°                                                                                                                                                |
| <b>Vibration</b>                   | Meets the vibration requirements of IEC-60068-2-6                                                                                                                                  |
| <b>Regulatory</b>                  | CE: EN 61326-1:06, EN 60079-0, EN 60079-11                                                                                                                                         |

## Specifications for the ATEX Zone 1 Version\*

|                              |                                                                                 |
|------------------------------|---------------------------------------------------------------------------------|
| <b>Operating Temperature</b> | 5 to 50°C (41 to 122°F) at ATEX T-5                                             |
| <b>Regulatory</b>            | ATEX: ATEX Zone 1, Group IIB, T-5<br>CE: EN 61326-1:06, EN 60079-0, EN 60079-11 |

\*Subject to change without notice.

## Ordering Information

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