

# OxyGuard Polaris 2 TGP

*Hand held Total Gas Pressure Meter*



The OxyGuard Handy Polaris TGP is a hand-held gas pressure meter. It can operate in three modes, one where it acts as a standard Polaris dissolved oxygen meter, one where it is a Total Gas Pressure meter that shows pressures as “percent saturation” values of the actual atmospheric pressure and one where it is a Total Gas Pressure meter that shows pressures as volume percentages.

To do this it measures the atmospheric pressure, the total dissolved gas pressure, the oxygen partial pressure and the temperature.

The instrument incorporates a data logger. Messages on the display, and menu functions, make the Handy TGP easy to use

# Technical Information

## Advantages

The TGP is designed for easy use. The measurement tube is wound on a central bobbin that is held in place by the protector. If the tube becomes fouled you simply unscrew the protector, unplug the bobbin and tube and fit a replacement.

Precise measurements are obtained by placing the TGP probe in the air and matching - or calibrating - the TGP against the barometric pressure sensor in the instrument. This means that a very accurate value of the difference between the gas pressure in the water and the gas pressure in the air can be obtained.

## Specifications

Dimensions:	Meter 98 mm diameter x 36 mm
Probe	58 mm x 110 mm + cable gland
Cable Length:	Standard 3 m. Other on request.
Operating Conditions:	Probe: -5 to +45°C, meter -20 to +60°C.
Encapsulation (meter):	Short-term immersion proof to 5m depth.
Display:	Graphical LCD display. Variable backlight.
Parameters measured:	Oxygen partial pressure, atmospheric pressure, total dissolved gas pressure, temperature at probe.
Oxygen Probe Type:	Galvanic cell, self polarizing, self temperature compensating.
Self-check of:	Probe function, meter function, cable, battery.
Accessories included:	Storage pouch, DO probe membranes with O-rings & electrolyte, cathode cleaning pad, storage pouch.

Parameters displayed "Show TGP % Sat" mode: (pressures related to atmospheric)  
100% SAT (O<sub>2</sub>); +/- 1% of value +/- 1 digit (from DO sensor)  
100% TGP (total) (from pressure sensors)  
100% RES (rest; other gases) (from pressure sensors)

"Show TGP % Vol" mode:  
21% O<sub>2</sub> +/- 1% of value +/- 1 digit  
100% TGP (total)  
79% RES (rest; other gases)

"Show Oxygen" mode:  
DO in mg%l, DO in % sat, temperature.  
Measuring Range 0-60.0 ppm (mg/l) and 0-600% saturation.  
Automatically compensated for temperature and barometric pressure. Manual salinity compensation between 0-59 ppt salinity.  
Temperature: -5 to +45°C.  
Accuracy depends on calibration accuracy. Typically better than +/- 1% of measured value +/- 1 digit within the standard measuring range.  
Accuracy, Temperature: +/- 0.2°C.  
Repeatability: Typically better than +/- 0.5% of measured value.  
Response Time (DO): 90% of end value in less than 20 seconds in water.