



## Monitors

# EcoLine/QuadroLine® – Analog monitors for D.O., pH and Conductivity

Easy of use and maximum operating safety at an attractive price were the basic design criteria for the development of the EcoLine monitors. As a result of the logical further development of the successful EMC concept, WTW has also been able to make these advantages available to customers at an attractive price.

### Analog monitors

- Outstanding price/performance ratio
- Built-in lightning protection
- Galvanically isolated inputs and outputs

#### Oxi 170, pH 170, LF 170

With the EcoLine series WTW offers an economical and technically flexible and reliable system solution which is suitable for a wide range of applications water and wastewater applications.

#### Oxi 296, pH 296, LF 296

The QuadroLine® series is an extremely powerful monitor in a compact form and at an attractive price-performance ratio. These monitors are intended to be built into control panels and fulfill all the requirements which industrial practice demands from such systems today. Based on the proven technology of the WTW monitors of the EcoLine family, the QuadroLine® instruments have the same impressive performance features. EcoLine and QuadroLine® monitors are the right choice when single point measurements require a dedicated monitor.



EcoLine 170



QuadroLine® 296

**Technical Data EcoLine Oxi 170/QuadroLine® Oxi 296**

	<b>D.O. Measurement</b>	
<b>Measuring Ranges</b>	0.0 ... 60.0 mg/l or 0 ... 600% saturation, user-selectable, depending on sensor type	
<b>Resolution</b>	0.1 mg/l or 0.01 mg/l; 1% or 0.1% (depending upon the sensor)	
<b>Accuracy</b>	±1% of value, ±1 Digit	
<b>Signal Input</b>	Low-impedance, isolated from output	
<b>Temperature Measurement</b>	NTC resistor (integrated in the sensor), 23 ... 122 °F (-5 °C ... +50 °C); 0.1 K resolution	
<b>Temperature Compensation</b>	Range: 23 ... 212 °F (-5 °C ... +100 °C)	
<b>Atmospheric Pressure Correction</b>	Range: 500 ... 1100 mbar; manual parameter input	
<b>Salinity Correction</b>	2.0 ... 70.0	
<b>Relay Outputs</b>	1 Sensor alarm relay (SensReg/SensLeck function) 2 programmable relays (setpoints, delay, hysteresis), ⓐ + ⓑ Relays are from C rated 5 A at 250 VAC, max. 5 A @ 30 VDC resistive	
<b>Analog Outputs</b>	0/4 - 20 mA output for D.O. and in versions ⓐ + ⓑ additionally for temperature, max. load 600 Ω; output span and recorder damping adjustable by software	
<b>Digital Interface</b>	RS 485 Interface; bus operation possible with up to 31 units ⓑ	
<b>Ambient Conditions</b>	Operating temperature: -13 °F ... 131 °F (-25 °C ... +55 °C); Storage temperature: -13 °F ... 149 °F (-25 °C ... +65 °C); Clima class 4 (VDI/VDE 3540)	
<b>Electrical Connections</b>	<b>Oxi 170</b>	Sensor input: quick disconnect 7-pole receptacle Outputs, mains supply: via plug-in terminal strips
	<b>Oxi 296</b>	Sensor input, signal inputs and outputs, mains supply: via plug-in terminal strips; accessible from rear
<b>Input Power</b>	115/230 VAC (-15/+10 %), 48 ... 62 Hz (18 VA max.), 24 VAC (-15/+10 %), 24 VDC (-30/+20 %)	
<b>Integrated Lightning Protection</b>	Coarse and fine protection, surpasses EN 61326 requirements	
<b>EMI/RFI Conformance</b>	EN 61326 class B, FCC Class A	
<b>Certifications</b>	CE	
<b>Housing</b>	<b>Oxi 170</b>	Watertight housing (PC/GF20) with threaded receptacle and four cable feed-through connections (PG compression fittings, 10 - 14 mm dia.); Protection rating IP 66 (exceeds NEMA 4X)
	<b>Oxi 296</b>	Fiberglass-reinforced Noryl housing with membrane keypad (Polyester); Protection rating IP 54 (front panel)
<b>Dimensions</b>	<b>Oxi 170</b>	8.74 x 7.95 x 4.13 in. (222 x 202 x 105 mm, WxHxD)
	<b>Oxi 296</b>	3.78 x 3.78 x 7.32 in. (96 x 96 x 186 mm, WxHxD)
<b>Weight</b>	<b>Oxi 170</b>	Approx. 7.7 lb (3.5 kg)
	<b>Oxi 296</b>	Approx. 2.2 lb (1 kg)
<b>Guaranty</b>	3 years for defects of quality	

**Ordering Information**

EcoLine Oxi 170		Order No.
<b>Oxi 170, 230 VAC</b>	D.O. field monitor, 230 VAC 50/60 Hz; standard model	281 112
<b>Oxi 170 RT, 230 VAC</b>	Same as standard model, with 2 programmable relays and second analog output for temperature	282 212
<b>Oxi 170 RT RS, 230 VAC</b>	Same as standard model, with 2 programmable relays and second analog output for temperature and RS 485 interface	282 222
QuadroLine® Oxi 296		Order No.
<b>Oxi 296, 230 VAC</b>	D.O. panel mount monitor, 230 VAC 50/60 Hz; standard model	291 112
<b>Oxi 296 RT, 230 VAC</b>	Same as standard model, with 2 programmable relays and second analog output for temperature	292 212
<b>Oxi 296 RT RS, 230 VAC</b>	Same as standard model, with 2 programmable relays and second analog output for temperature and RS 485 interface	292 222

EcoLine Oxi 296:



QuadroLine® Oxi 296:



Other power supplies see brochure "Product Details"

ⓐ R-T-version, ⓑ R-T-RS-version