



## **DEPOLOX® 700 M ANALYZER FOR POTABLE WATER**

### **WALLACE & TIERNAN® ANALYZERS/CONTROLLERS**

The DEPOLOX® 700 M is designed for measurement and limited control tasks in the drinking and process water industry. The analyzer can incorporate up to six well proven measurement parameters: free chlorine, total chlorine, pH, oxidation reduction potential, conductivity and temperature.

The system includes four single feedback controllers that can be used in constant process flow applications. In case of drinking water as well as other variable flow disinfection applications four milliamp outputs and fieldbus modules can be utilized to transmit the measurement data to a plant logic control system for chemical feed automation.

The DEPOLOX 700 M device uses a 7" color touch panel for an intuitive user interface and an LED lit flow cell that can be programmed to change color in case of an alarm condition. The user interface can be replicated on a smart phone or tablet via the standard Ethernet communication port.

All measurement parameters are shown on the main screen and a single touch of any of the configured parameters leads to a trend graph, parameter set-up and calibration detail.

The flow cell, with either pressurized or non-pressurized sample water outlet, can be fitted with up to six measurements. The well proven bare electrode cell is integral to the flow cell and can be configured to measure either free chlorine, chlorine dioxide, ozone or potassium permanganate.

The flow cell includes a small electronics where all analog sensor signals are converted to a digital signal which allows it to be separated from the electronics up to 3000 feet without risking the loss of the sensitive sensor signal.

### **Benefits**

- Intuitive operation as well as easy visualization of all measured parameters via a 7" color touch panel
- State of the art communication possibilities via an Ethernet interface as well as a RS 485 connection
- LED lit flow cell that can be programmed to change to color in case of an alarm condition
- External USB port for a number of integrated functions including data downloading of up two years of measurement data
- Digital communication between the flow cell and electronics allows the two components to be separated up to 3000 feet without a loss in sensor signal

## ELECTRONIC MODULE

### Touchpanel:

7 inch graphic display with backlight  
Resistive touch screen; resolution 800 x 480 Pixel

### Measurement inputs:

1 x DEPOLOX® 5 for free chlorine, ClO<sub>2</sub>, O<sub>3</sub>, KMnO<sub>4</sub>,  
1 x pH, 1 x Redox, 1 x Conductivity, 1 x temperature  
1x total chlorine; 1 x dosing quantity display (feedback  
signal of positioner)

### Digital inputs:

3 x freely definable, e.g. controller stop, operating mode  
switch, external set-point

### Output contacts:

Max. eight freely definable alarm contacts/general fault  
messages as well as controller outputs for the  
measured parameter. Expandable as an option with an  
internal 4 x relay module

Relay status is depicted on the display;  
max. 6 A/250 V AC; 0.2 A/220 V DC

### Special outputs:

Time-controlled contact (timed dosing)

### Analog outputs (optional):

4 x 0/4 - 20 mA, freely configurable  
Load ≤ 1000 Ohm, accuracy < 0.5 % FS  
Galv. isolated up to 50 V relative to earth

### Interfaces:

Ethernet interface  
RS 485 to connect to the Wallace & Tiernan® Process  
Monitoring System (option)  
External fieldbus converter (option)

### Power supply:

100 - 240 V AC ± 10 %, 50/60 Hz, 48 VA  
24 V DC ± 20 % 30 W

**Ambient temperature:** 0 - 50 °C (32 - 122 °F)

**Protection:** IP 66

**Certifications:** CE, CSA

**Weight (incl. packaging):** 4.5 kg (9.9 lbs)

**Dimensions (W x H x D):**

320 x 311 x 153 mm (12.6 x 12.2 x 6.0 ")

## FLOW CELL MODULE

It is possible to install up to five sensors, up to five  
sensors in a non-pressurized cell whereas the  
pressurized cell excludes the total chlorine sensor.  
Stable measuring signals are achieved with  
hydrodynamic grit cleaning together with optimised  
flow around all sensors. The following components are  
integrated into the flow block module:

### Flow control valve:

- Controlled sample water flow: 33 l/h (0.15 USgpm)
- Control range: 0.25 - 3.0 bar (3 - 60 psi at valve inlet)
- Back-pressure: max. 1.5 bar (21.7 psi) for press. model
- Sample water temperature: max. 50 °C (122 °F)

### Multi-sensor:

- Monitoring of correct sample water flow
- Switching point: 21 l/h +/- 3 l/h Switching hysteresis: 2 l/h
- Measurement of sample water temperature with sensor  
Pt 1000 for the temperature compensation of the  
chlorine and possibly the pH measurement
- Sample water earthing with stainless steel sleeve

### Sample water connections:

PVC hose 6 x 3 mm or PE hose 6 x 1 mm hose  
connector adaptors to 1/2 " threaded hose connection

**Weight (incl. packaging):** approx. 2.5 kg (5.5 lbs)

**Dimensions (W x H x D):**

253 x 375 x 163 mm (9.9 x 14.7 x 6.4 ")

## MEASURING RANGES

**free chlorine, ClO<sub>2</sub>, O<sub>3</sub>, KMnO<sub>4</sub>:** 0 to 20 mg/l  
min 200 µS/cm

**Conductivity:** 1 µS/cm to 300 mS/cm

**pH:** pH 0 to 12 (short time to 14)

**pH compensation:** within the pH range of 5.0 - to 8.0  
according to the HOCl relationship

**ORP:** 0 to 1000 mV

**Membrane sensors TC2 CAN and TC2-S CAN:**

**Total chlorine:** 0.05 to 10 mg/l

For applications with salt water and conductivity values  
from 2.5 to 60 mS/cm (approx. 4 % salt) the TC2-S CAN is  
required.



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