Controller DULCOMETER® D1Cb/D1Cc

The water analysis workhorse

The D1Cb/D1Cc controller is a 1-channel P/PID controller for the measured variables pH, ORP, chlorine, chlorine dioxide, chlorite, ozone, bromine, peracetic acid, hydrogen peroxide, fluoride, dissolved oxygen and conductivity via mA. The sensors for pH and ORP can be directly connected via coaxial cable or using the 4-20 mA sensor input. The controller can bidirectionally control the measured variables, monitor limit values and transmit the measured value via an mA output, e.g. to a PLC Programmable Logic Controller. The mA output can optionally also be configured as an interference variable output. The controller has two pulse frequency outputs to control two metering pumps (raise and lower). Two output relays can optionally be used as limit value relays or to control motor-driven pumps or solenoid valves. An alarm relay signals the occurrence of a fault. A digital input is used to switch off the control or to process a sample water limit contact by remote control. The impact of temperature on the measurements can be provided by temperature measurement or by manual input. Menu-driven operation is possible in 20 languages.

Your benefits

- Flexibility through free selection of variables from all measured variables
- Safety through sensor monitoring of pH for glass breakage and line breakage
- Flexibly upgradable, thanks to subsequent activation option of functions by means of an activation code
- Various installation options: wall-mounted or installation in a control cabinet

Field of application

- Measurement and control of water parameters in industrial and process water treatment plants
- Waste water neutralisation
- Measurement of the pH value and the disinfection parameters in potable water treatment and in the food and beverage industry
- Measurement and control of the hygiene parameters in swimming pools

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Technical Data

Measuring range	**Type of connection mV:** pH 0.00 … 14.00 ORP - 1,000 … +1,000 mV **Type of connection mA:** Chlorine: 0.00...0.500/2.00/5.00/10.0/20.0/50.0/100.0 ppm Chlorine dioxide: 0.00...0.500/2.00/10.0/20.0 ppm Chlorite: 0.02...0.50/0.1...2 ppm Bromine: 0.02...2.0/0.1...10.0 ppm Ozone: 0.00...2.00 ppm Hydrogen peroxide, PER1 sensor : 2.0...200.0/20...2,000 ppm Peracetic acid: 1...20/10...200/100...2,000 mg/l Dissolved oxygen: 0.1...10/0.1...20 ppm pH: 0.00...14.00 ORP: 0...+1,000 mV Conductivity: 0...20/200/1,000 mS/cm, via mA converter Temperature: 0...100 °C via mA converter
Resolution	pH: 0.01 pH ORP: 1 mV Amperometric (e. g. chlorine): 0.001/0.01 ppm, 0.01 vol.%
Accuracy	0.5% of the upper measuring range value
Measurement input	SN6 (input resistance > 0.5 x 10^{12} Ω)
Correction variable	Temperature via Pt 100/Pt 1000
Correction range temp.	0 … 100 °C
Control characteristic	P/PID control
Control	2-way control
Signal current output	1 x 0/4-20 mA galvanically isolated max. load 450 Ω Adjustable range and allocation (measured variable, correction variable, controlled variable)
Control outputs	2 pulse frequency outputs for metering pump actuation 2 relays (limit value or pulse length)
Alarm relay	250 V ~ 3 A, 700 VA changeover contact
Electrical connection	100 – 230 V, 50/60 Hz, 15 VA
Ambient temperature	-5 … 50 °C
Enclosure rating	Wall mounting: IP 65 Control panel version: IP 54
Dimensions	Wall mounting: 198 x 200 x 76 mm (WxHxD) Control panel version: 96 x 96 x 145 mm (WxHxD) (D1Cc)
Weight	0.8 kg

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ProMinent Group
info@prominent.com
www.prominent.com