# 16 measurement locations with just one central unit – with ProMinent

## The NEW Dulcometer® Disinfection Controller/Monitor

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The Dulcometer® Disinfection Controller/Monitor and DULCO®-net technology are revolutionizing measuring, control and metering technology in public water systems. The decentralized modular concept with one single central unit controls sensors and actuators for up to 16 measurement locations.

### Easy to plan

The CANopen bus system known for vehicle technology only needs one single bus line. The central unit can be installed in an easily accessible location, e.g. in the operator's room. It is the DULCO®-Net which offers a cost-effective solution: Up-to 16 systems can be displayed through the central unit!

### Easy to install

Installation and commissioning are quick and easy – one single bus line is sufficient. Coded socket connections prevent incorrect connections and polarity problems. Remote access with any PC and standard Internet Browser is possible.

### Easy to operate

The 1/4 VGA colour display presents clear text dialogues to the user. A built-in on-line help is displayed with the push of a button. The measurement data can be displayed with the integrated videographic recorder and transferred to a PC using the Dulcometer® Disinfection Controller/Monitor's internal SD card.

Dulcometer® Disinfection Controller®

# Key Features and Benefits

## for planners

- **Easy to upgrade**
  Thanks to the bus line, the decentralised modular system can be easily upgraded. Thanks to the CANopen bus, the Dulcometer® Disinfection Controller is prepared for the future.
- **Easy to control**
  An easily accessible central unit displays all sensors and actuators. Dulcometer® Disinfection Controller is the ideal solution for one filtration cycle. DULCO®-Net technology controls up to 16 locations.
- **Easy cost control**
  Dulcometer® Disinfection Controller with DULCO®-Net offers a truly cost-effective solution: An intelligent controller for several locations with guaranteed simple installation. The economic solution for investment and operating costs.

## for fitters

- **Easy with just two lines**
  It only needs a magenta-colored bus line for networking and a main cable - and the Dulcometer® Disinfection Controller is completely wired and ready for commissioning.
- **Easy to connect**
  Coded socket connectors ensure that no polarity problems arise because of accidentally switched terminals. If you know how to use a screwdriver you will be able to install the Dulcometer® Disinfection Controller.
- **Easy to wire up**
  The star-type cable configuration is a thing of the past. Today, one single bus line links all sensors, actuators, and the central unit.

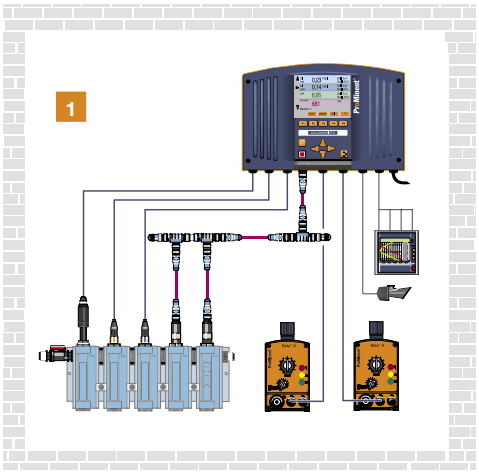
## for operators

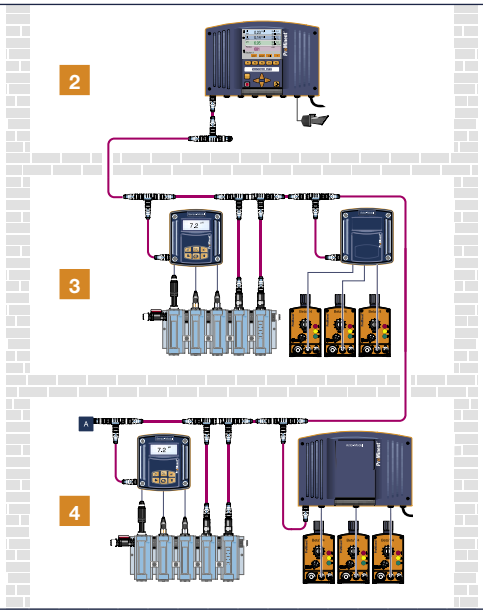
- **Easy to understand**
  The illuminated display has the size of a 1/4 VGA colour screen (approx. postcard size). And all data are displayed in full text in the appropriate language. Cryptic abbreviations are history.
- **Easy to get help**
  And should any queries arise: A context-sensitive online help appears on the display with only one push of a button.
- **Easy to use**
  All data can be displayed on the control unit display and via PC and Internet browser. A multimedia card slot is provided for wireless data transfer.

Further information:
*http://www.prominent.us*

Dulcometer Disinfection Controller®

# Key Features and Benefits




1 Technician's room

2 Caretaker's room

3 Technician's room Location 1

4 Technician's room Location 2

## Basic Dulcometer® Disinfection Controller

- The Dulcometer® Disinfection Controller is compact and the ideal solution for single installations. It is easy to operate and easy to install
- Integrated videographic recorder – saves on printer, ink and paper
- Measurement of combined chlorine
- Systems control, e.g. UV for reducing the combined chlorine component
- Large VGA colour display
- Easy intuitive operation with full text operator instructions
- Context-sensitive on-line help
- Safety: Sensor monitoring triggers an alarm if the sensors fail and chemical metering stops
- Logbook function saves all events such as calibration data, error messages etc.
- Eco!Mode: Circulation rate is reduced if there is bad weather or during night operation with simultaneous adjustment of controller settings
- Embedded web server – view measurement data from any PC with a standard web browser
- Maintenance/error messages by SMS or e-mail
- Easy integration into existing display system by means of an OPC server
- Control of flocculation aid metering depending on circulation power and pH value

## DULCO®-Net Disinfection System

- The DULCO®-Net Disinfection system provides the full performance capability and range to control up to 16 measurement locations.
- Decentralized modular design - control of up to 16 measurement locations.
- Price advantage due to easy installation and decentralized concept
- Easy on-site calibration
- Plug & Play: automatic sensor and metering pump detection
- Guided commissioning

Further information:
*http://www.prominent.us*

**Dulcometer® Disinfection Controller**

# Specifications and Contact Information

| | | |
|---|---|---|
| Measurement parameters | pH* | -1 to 15 |
| | Redox/ORP | -1200 to +1200 mV |
| (per system, | free chlorine* | 0.01 to 10 ppm |
| up to 16 systems) | total chlorine* | 0.01 to 10 ppm (optional) |
| | combined chlorine as differential measurement | 0.01 to 2 ppm (optional) |
| | temperature | -4°F(-20°C) to +302°F+150°C *(temperature-compensated) |
| Error of measurement | pH, chlorine and ORP: max. ±0.5 % of the measuring scale range (at 77°F / 25 °C)<br>Temperature: max. ±0.5 °C of the measuring range (at 77°F / 25 °C) | |
| Measurement inputs | pH and Redox/ORP via terminal mV<br>chlorine via CANopen bus<br>connection of sensor modules and actuator modules via CANopen bus | |
| Control modes | P/PI/PID control, intelligent control | |
| Control | Bidirectional control for pH (acid/alkali), unidirectional control for disinfectants | |
| Eco!Mode | Eco!Mode – contact provides release for reduction of circulation power, provided DIN values are observed.<br>After completed reduction, the control parameters optimised for reduced operation can be activated. | |
| Digital inputs (per system) | 6 potential-free inputs (sample water, pause, 3 pump fault relays, disturbance variable, changeover of parameter set, contact water meter) | |
| Signal current outputs (per system) | 4 x 0/4-20 mA (for each measured variable galvanically separated), max. load 600 Ω range adjustable | |
| Adjustable outputs (per system) | Reed contacts for acid, alkali and chlorine as pulse frequency outputs<br>2 relays (pulse length) contact type changeover to control solenoid valves or pumps<br>1 actuator control with position feedback<br>max. contact load: 250 V~, 8 A | |
| Alarm relay | 250 V~, 3 A | |
| Interfaces | Local Area Network (LAN), SD expansion slot (for SD or MMC cards) | |
| Communication | Embedded web server or embedded OPC server | |
| Electrical connection | 85 to 265 V~, 50/60 Hz | |
| Ambient temperature | 23°F to 113°F (-5°C to 45°C) | |
| Storage temperature | 14°F to 158°F (-10 to 70 °C) | |
| System of protection | IP 65 NEMA 4x | |
| Dimensions of central unit | 13.46" x 8.94" x 3.07" (342 x 227 x 78 mm) (WxHxD) | |
| Weight | Depending on design: 1.8 to 2.5 kg | |
| Dimensions of external modules | 4.92" x 5.31" x 2.95" (125 x 135 x 75 mm) (WxHxD) | |
| Weight | approx. 16.08 oz. (500 g) | |
| Humidity | Permissible relative humidity: 95 % non-condensing DIN IEC 60068-2-30 | |
| Compliance of all devices with CANopen specifications | All devices meet on the hardware side the harmonised CAN specification 2.0 (ISO99-1, ISO99-2).<br>This specification includes the CAN protocol (ISO 11898-1) and data on the physical layer pursuant to ISO 11898-2 (high speed CAN up to 1MBit/sec) and ISO 11898-3 (low speed CAN up to 125kBit/sec). The device complies with the CANopen specification CIA-DS401 which forms the basis of the European Standard EN50325-4.<br>The control device profile CiA-404 is met. | |


**ProMinent Fluid Controls, Inc. (US)**

136 Industry Drive,
Pittsburgh, PA 15275-1014
Tel: (412) 787-2484
Fax: (412) 787-0704
eMail: sales@prominent.us
www.prominent.us

**ProMinent Fluid Controls Ltd. (Canada)**

490 Southgate Drive,
Guelph, ON N1G 4P5
Tel: 1-888-709-9933 | (519) 836-5692
Fax: (519) 836-5226
eMail: sales@prominent.ca
www.prominent.ca