bürkert
FLUID CONTROL SYSTEMS

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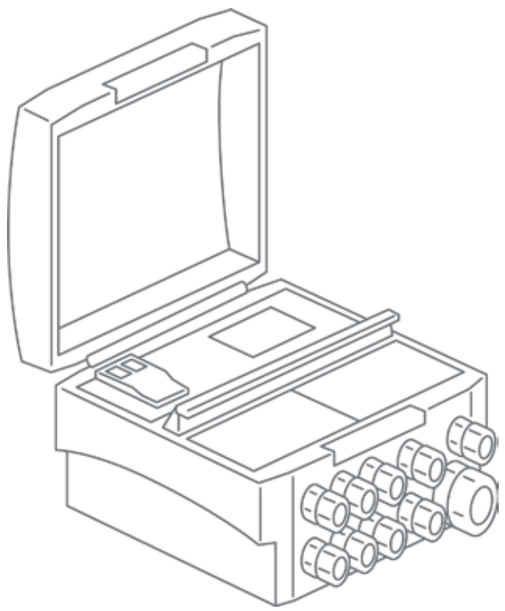
Type 8620
mxCONTROL

Multi-Purpose process and water chemistry controller



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Type 8620

Multiple Control Logic Functions

mxCONTROL 8620 is a multi-parameter controller for use in cooling towers, reverse osmosis and boiler systems. It saves time and space by allowing parameterization and data logging of a wide number of control variants via an SD card slot, USB connection or via an Ethernet interface. Up to eight functions can be performed simultaneously by utilizing up to 23 I/O points.

- **Batch dosing**
- **Biocide dosing or time based back flush (max 16/day)**
- **Chlorine or redox PI control**
- **General PID control**
- **Conductivity on/off control**
- **Conductivity ratio on/off control**
- **Conductivity PI control**
- **Conductivity ratio PI control**
- **Corrosion display, monitoring & alarm**
- **Process monitoring, data logging & retransmit**
- **Oxygen scavenger dosing (boiler systems)**
- **Proportional dosing**
- **pH PI control with outputs for acid & alkali pumps**
- **pH PI control with output for acid or alkali pump**
- **Flow totalizer & differentiator**

The Center of your Process World

Pressure

pH/ORP

Conductivity

Control Valves

Flow

Temperature

Point Level

Continuous Level

Isolation Valves

Dosing Pumps

Solenoid Valves

Field Modularity Makes your Life Easier

INPUTS

4 analog 4-20 mA or Pt 100 inputs
4 digital/frequency inputs (up to 2 kHz)
4 additional on/off only binary outputs
(Model B only)

- Nema 4X and IP65 cover with locking mechanism

- Secondary protective cover for SD Card slot and USB connection

  Data Logging performed directly to SD Card

  Customer specific applications (created with PCTool) uploaded or downloaded via SD Card

- Manual/Automatic selector and LED for alarm indication (Flashing)

- Universal Power Supply 110/220VAC 50/60Hz and 10A Relays

- M16 cable glands for 5-6mm cables

OUTPUTS

4 analog 4-20mA outputs
4 digital/frequency 16W outputs (up to 2 kHz)
5 SPDT relays (250 V, 10 A)
Ethernet connection possibilities
Digital bus communication

- Backlit LCD display 128x64 dots with 4 lines dedicated for process values

- 4 soft keys for field parameter changes

- Low voltage side for 24VDC instrument supply and transistor switches

- Large single cable gland for five 5-6mm cables

PC Software Tool

Burkert's 8620 PCTool is the result of over 60 years involvement in designing system solutions involving instrumentation and process control valves. Understanding the difficulty of selecting the right product for the right application is hard enough only to realize after ordering what you thought was the right controller; your specification changed last minute. After decades of listening to our customers requests to make their life easier, the PCTool 8620 was born. With only 4 controller hardware options to select from and the ability to cover 90% of all chemical delivery and process control applications, the PCTool 8620 allows unlimited flexibility by combining analog, digital or frequency inputs to the right control logic and then correct output. With the flexibility to parameterize your customer's specific application remotely and then email the finished configurated file, days and even weeks of delays and delivery times are saved.

Freely selectable as:

- ON/OFF => 0VDC or 24VDC
- Potential free input =>Dry contact
- Pulse Counter => Totalizer & Batch function
- Frequency =>Hall Effect flow meter (NPN or PNP)

4-20mA or 100ohm RTD (PT100) input

Five 10Amp relays to be configured as:

- ON/OFF
- PWM => PI or PID control of on/off valve
- PFM => PI or PID control of metering pump

Four 16W transistor switches to be configured as:

- ON/OFF
- PWM => PI or PID control of on/off valve
- PFM => PI or PID control of metering pump
- Fast PWM => PI or PID for Modulating Solenoid

Freely configurable 4-20mA outputs to be configured as:

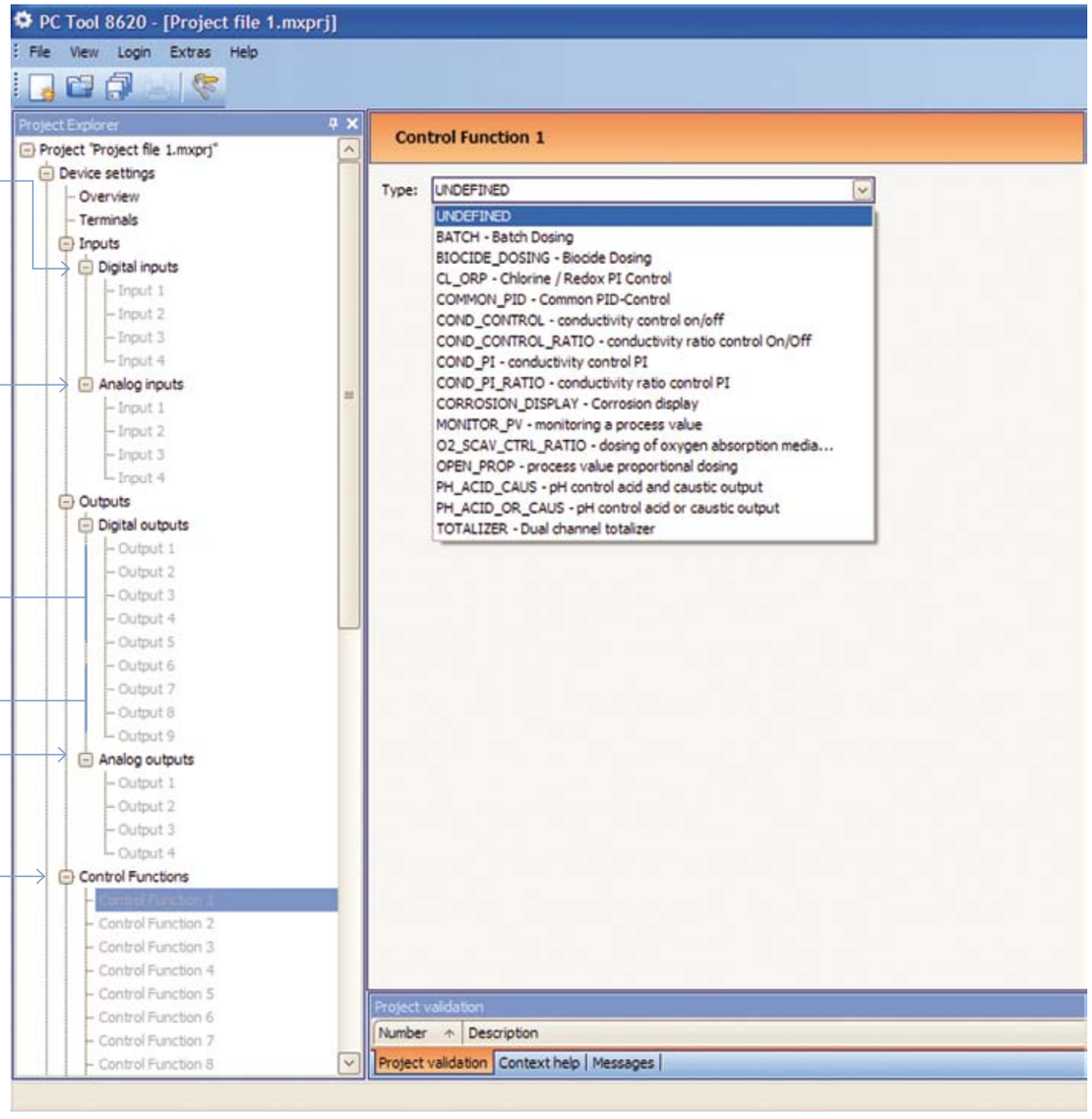
- Signal conditioning or repeating of input process variables
- Output as a PI or PID control function

A maximum of 8 control functions for example:

- 8 PI, PID or ON/OFF control loops
- 4 Cascade PID control loops
- Monitoring and data recording 8 process variables

Oxygen Scavenging

- Receives an input from flow and temperature and provides an output based on a predetermined O2/ Temp concentration curve



Batch Dosing

- Volume to time based chemical dosing.

Biocide Dosing

- Up to two independent outputs energize at pre-determined times (max 8/day) a pre-determined amount of time.

Chlorine / Redox PI Control

- 4-20mA input from Chlorine or ORP instrument will run a digital or analog driven pump to a given set point.

Common PID Control

- Can accept a digital or analog input, runs a PID or cascaded PID loop and then outputs a digital or analog output.

Four choices for Conductivity Control

- ON/OFF
- ON/OFF Ratio- with set point determined via a second conductivity meter.
- PI Control where conductivity is given a specific set point.
- PI Ratio control where conductivity is given a specific set point based on ratio from a second conductivity meter.

Corrosion Display

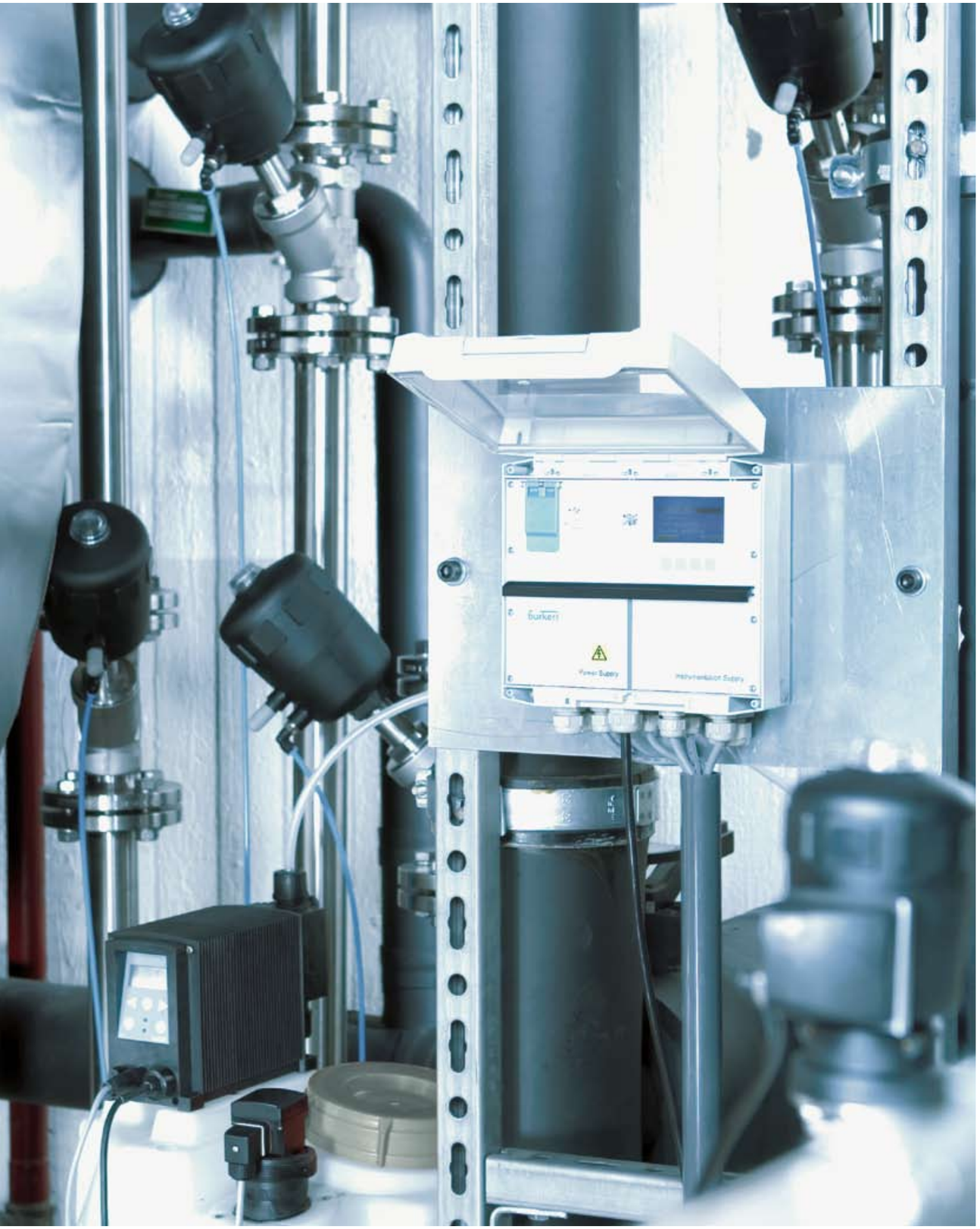
- Allows an independent corrosion meter with a 4-20mA input for monitoring, data logging and alarm output setting.

Monitoring of Process Value

- Allows a digital or analog process value to be monitored, data logged or used as an input to a cascaded control loop.
- Allows a scaled pulse, PT100 or analog 4-20mA input to be signal conditioned and retransmitted as a scaled pulse or analog output.

Acid and/or Caustic pH Control

- Maintains a pH set point via a PI control loop. Allows one output for an acid pump and another output for a caustic pump.



Type 8620

Customized System Solutions

As a full systems solution provider, Bürkert understands both the benefits of maintaining proper chemistry as well as the importance of minimizing energy, water and chemical consumption. Bürkert is the only manufacturer that provides complete system solutions — whether your needs are as simple as a low cost on/off conductivity controller with associated bleed valve, or a complete systems solution including controllers, instrumentation, valves and pumps. We offer solutions that make your job easier, while ensuring personnel safety and minimal environmental impact. With over 60 years of expertise in the water treatment industry, Bürkert is the best partner of choice for your industrial needs.

This is just one example of how Bürkert can provide complete system solutions. Bürkert's controller type 8620 is shown receiving inputs from the 8202 pH transmitter, an 8202 ORP transmitter and the 8222 conductivity transmitter. These inputs along with flow, level and corrosion monitoring are used to maintain critical chemistries through 13 digital and analog outputs. Chemical pumps or valves can be controlled via pulse, on/off or analog signals. All of these conditions can be configured to meet your specific process requirements. Real time process alarms and data logging as well as modem or Ethernet give our customers unprecedented monitoring and control of their system performance.