



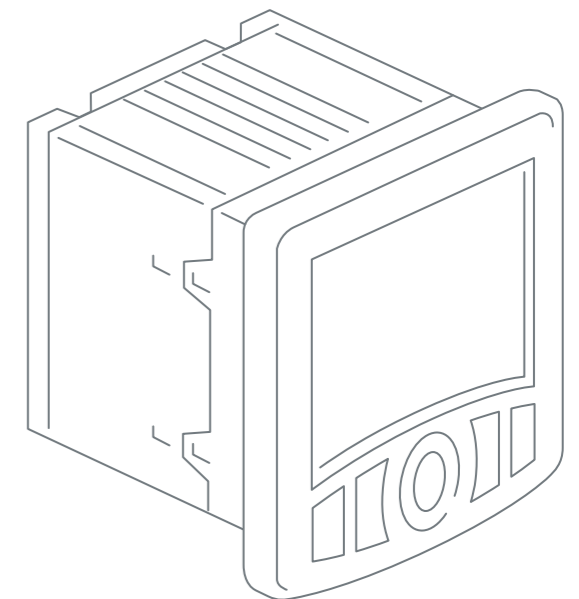
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FLUID CONTROL SYSTEMS



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# Type 8619

Multichannel Transmitter/Controller  
multiCELL for Flow and Analytical  
Sensors



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# Type 8619

## Product Features and Resulting Advantages

### multiCELL

Modular multivariable remote transmitter/controller with multichannel inputs for different sensor types such as flow, pH, ORP, conductivity etc.

### General features, advantages, user benefits

Highly flexible modularity in hardware and software starting on a basic device up to a device with extended functionality and multichannel I/O capability.

### Standard device

- Graphic display with adjustable backlight and user friendly dynamic softkey operation, like that used in cell phones.
- Mainboard with power supply and I/O: 2 AO, 2 DO, 2 DI
- Remote panel mount and wall mount via separate housing.
- Out of the box functions:
  - Flow measurement via pulse input
  - Information system, code access, control functionality, calculation formulas
  - Calibration at highest level, yet easy to use
  - Integrated test functions and simulation for each I/O channel offer fast start-up and minimum maintenance and allows process behaviour test at any time.
  - Device status diagnosis provides permanent device status and prevents frequent device checks.

### Extended device Features

- Up to 6 I/O boards with additional AO, AI, DO, DI – factory built and pre configured.
- Defined optional reloadable software packages allow optimal adaptation to the required functionality in hardware and software at each measurement point. The price of the device is adjustable to what is required by the application. One device can be used for a wide range of applications, with the advantage of having to learn operation, handling and maintenance only once. Additionally, it is possible to reduce the number of variants in stock.
- Storing calibration data and min./max. measurement values allow transparency at specific passed production times.
- Multipoint data logging and data setting backup on SD card support date and time oriented transparency to process behaviour and quality and ensure maximum reliability and confidence in operation.

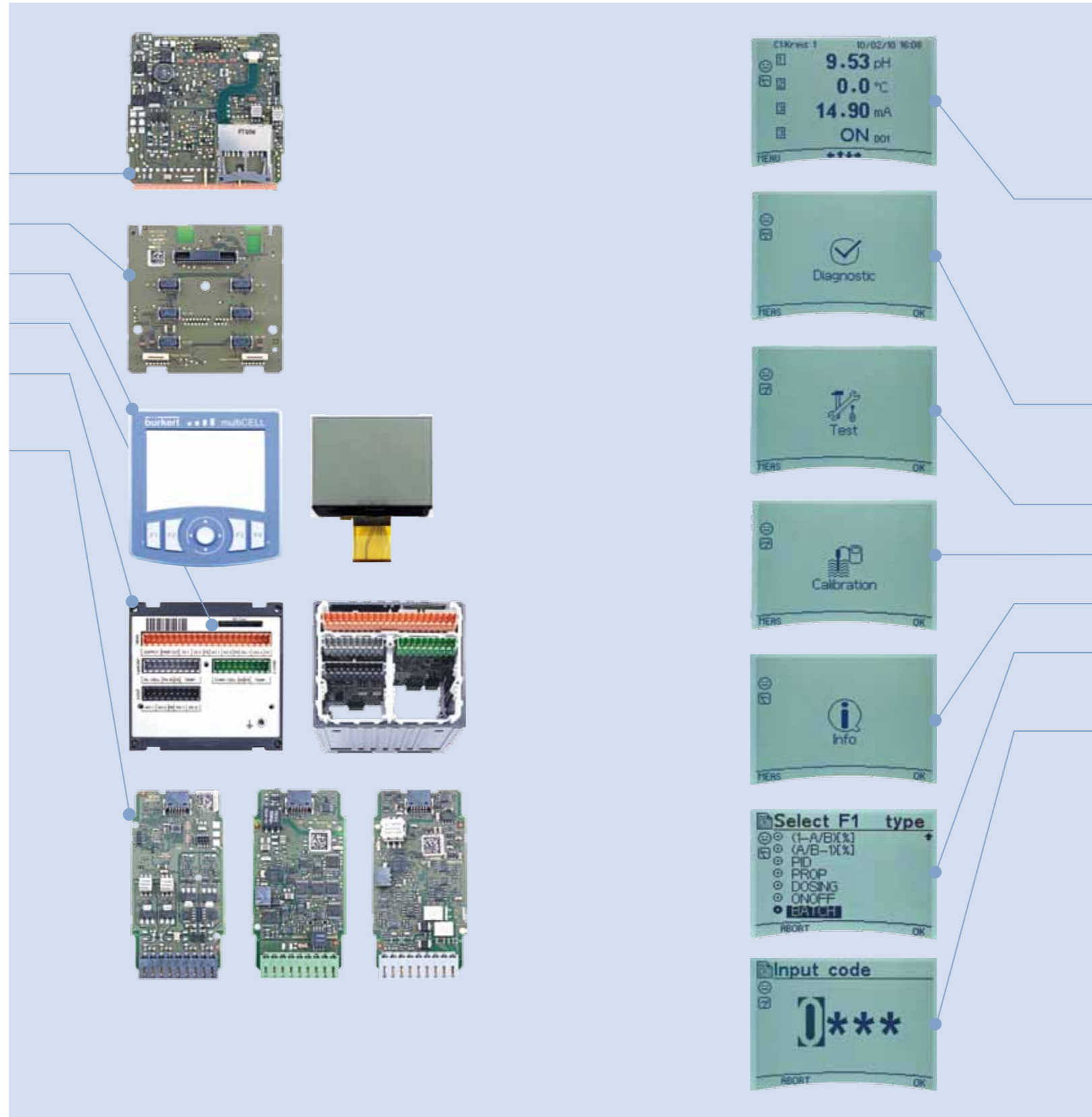


# Modular Setup

## Modular hardware concept

### Components

- Basic
  - Mainboard
  - Carrier board
  - Big display
  - SD slot
  - Housing
- Selectable boards
  - Input board
    - for each measurement principle
    - analog and digital inputs
  - Output board
- Ready configured at the factory based on application requirements



## Modular software concept

### Standard software

- For operation, configuration and parametrisation
- Standard and user configurable displays for data viewing
- Complete measurement functions
- Integrated ultrapure water temperature coefficient curve
- Device status diagnostics
- Maintenance and simulation
- Input/output tests
- Calibration
- Built-in information system
- Usage of built-in calculation formulas on freely selectable process variables
- User code access

### Additional software packages

- Chemical dosing (e. g. cooling tower application)
- Multi control functions like PID, Timer etc.
- Data logging with date/time stamp
- Concentration tables dependent on temperature and conductivity for selected media
- Flow and analytical measurement in one device in parallel

# Exemplary Applications

## Cooling tower water treatment:

The multiCELL can be used as a modular solution for different complexity of treatment programs.

Among others for:

- A bleed and feed can be realised measuring the conductivity value
- Chemical dosing proportional to feed water flow
- Timer-based chemical dosing of up to two channels
- pH control of the cooling water is possible
- Flow circulation check ensures the function of the complete system

## Drinking water:

- Quality monitoring of the water by measuring pH, ORP, conductivity
- Flow measurement for monitoring and control loops

## Ultrapure water:

- Conductivity measurement of ultrapure water (UP) by using integrated special temperature compensation tables including flow measurement of UP water

## Desalination:

- Quality monitoring of the water by measuring pH, ORP, conductivity including reverse osmosis (RO) membrane monitoring

## Reverse Osmosis:

- pH adjustment to avoid scaling of the RO membrane
- ORP monitoring to check maximum chlorine rate for membrane protection
- Conductivity measurement (percentage reject feed-permeate) for RO membrane monitoring
- Flow measurement for control and monitoring of feed water

## In a Bio Reactor the multiCELL allows:

- pH and ORP measurement and building control loops
- Pt100/Pt1000 inputs as additional measurement value
- Usage of up to 4 analogue outputs to monitor the important parameters in a fermentation process.

## In Clean In Place processes the multiCELL can act

as one transmitter/controller for

- pH measurement on caustic and/or acids
- conductivity measurement to ensure the installation is cleaned
- outputs to monitor the valves



multiCELL as multivariable measurement transmitter