



Water and wastewater solutions

# BlueLinQ Pro controller



# BlueLinQ Pro – the next generation equipment controller

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The efficiency and reliability of your network pumping stations can be improved in many ways – even without changing a single pump. The BlueLinQ Pro controller is an easy, all-in-one solution that can boost performance and safeguard a 1-6 pump station.

BlueLinQ Pro is designed primarily for sewage pumping stations. A compact, modular design for easy retrofit makes it ideal for upgrades to existing infrastructure or new builds. The device can be used as a stand-alone monitoring unit and/or pump station controller. It can also control additional equipment such as valves, submersible mixers, flushing devices, and drainage pumps.

## A versatile control solution

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An extensive number of standard functions are included in the BlueLinQ Pro controller to help monitor equipment condition, as well as optimize performance and minimize the risk of overflow. Built-in BEP (Best Efficiency Point) control logic functionality ensures the pump always operates at peak efficiency.

The controller is easy to configure and operate with no need for any special programming, helping you to enhance your operations.

The scalability means similar equipment can be used in small, medium and large pumping stations – minimizing training requirements and boosting familiarity for operators.

## Simple installation

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The BlueLinQ Pro controller provides a smart and flexible solution for the control and monitoring of equipment in a single unit. Regardless of whether the control logic is based on simple float technology or an advanced VFD control, BlueLinQ Pro offers a range of easily configured standard settings and a step-by-step setup wizard which gets you up and running in no time.

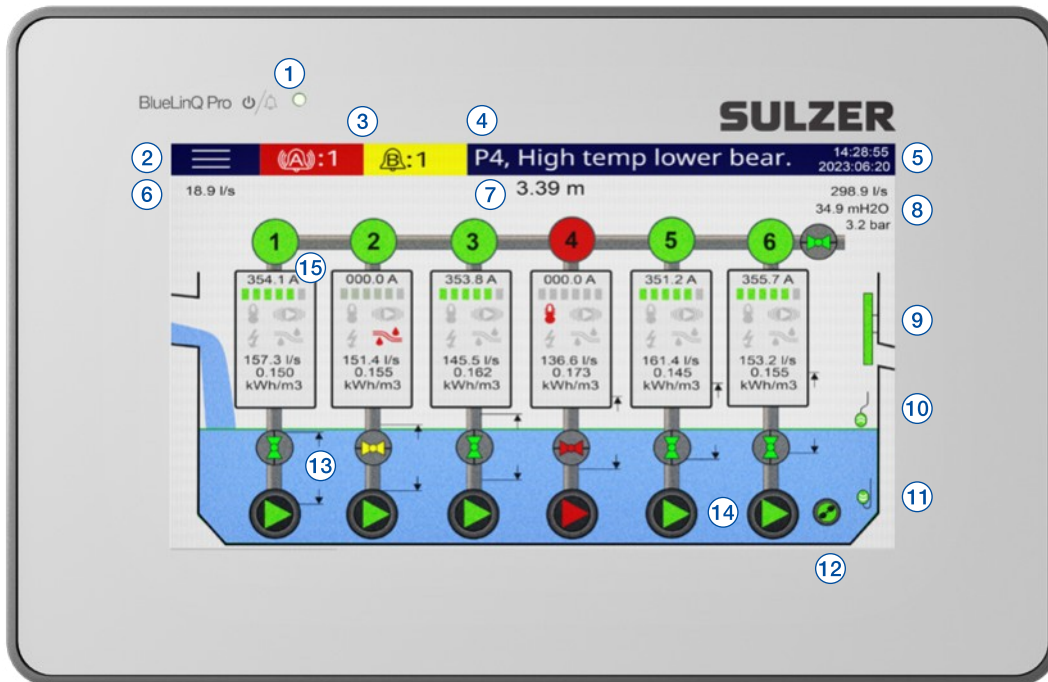
## Room for growth

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The modular design of the BlueLinQ Pro ensures any expansion or upgrade to the pumping station can be achieved easily. Adding pumps and mixers is a simple task, even upgrading level controls from digital to analog is a breeze.



# Your pumping station's health at a glance



BlueLinQ Pro controller with a 7" HMI with an IP54 rated screen

The BlueLinQ Pro controller has an intuitive user interface for easy configuration and status information.

- 1 A green diode indicates power and system ok. A red diode indicates a system alarm
- 2 Access to menu structure
- 3 Indication of unacknowledged or active alarms
- 4 Indication of the oldest non-acknowledged alarm
- 5 Indication of date and time
- 6 Indication of momentary inflow
- 7 Indication of momentary basin level
- 8 Indication of outflow, total head and out pressure
- 9 Indication of overflow status
- 10 Status indication of the high-level float
- 11 Status indication of the low-level float
- 12 Status indication of the mixer
- 13 Indication of start / stop levels
- 14 Run status indication of the pump
- 15 Health / capacity status of the pump

# Expand your BlueLinQ connectivity

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The range and number of plug-and-play input and output modules that can be connected, enables full control and monitoring of your pumping station.

**BlueLinQ DI-12:** Connects to level float, overflow sensors and more. Digital Input to connect up to 12 DI x 9 modules.

**BlueLinQ DO-8:** Expands the capacity of the pump controller for signals such as pump start/stop, open/close valves, reset motor protector and more. Digital Output to connect up to 8 DO x 9 modules.

**BlueLinQ AI-6:** Connects sensor signals such as level, motor current, pressure and more. Analog Input to connect up to 6 AI, 4-20 mA x 9 modules.

**BlueLinQ AO-6:** Analog Output signals such as level, pressure, flow and more to connect up to 6 AO, 4-20 mA x 9 modules.

**BlueLinQ TI-6:** Analog Input to connect up to 6 temperature signals x 9 modules.

**BlueLinQ LI-6:** Analog Input to connect up to 6 leakage signals x 9 modules.

Combined or separate alarms can be set for each module, with a maximum 32 modules in total.

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## Quick and easy to install

- > Smaller footprint ensures sufficient space is left by the original controller
  - > Each module is mounted on standard DIN rail
  - > Power and communications are simple connections
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# Explore BlueLinQ Pro controller features

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Sulzer's next generation, pump monitoring and control device for up to six pumps. The software included is a further enhancement and extension of the EC 531 and PC 441 advanced surveillance systems. The BlueLinQ Pro controller combines the software functionality of EC 531 and PC 441 into a new compact control and monitoring device.

## New functions supported

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- All main station data is displayed on the main screen
- Full pump status information is available with a single touch
- Controlled valves (per pump and pit) including end point detection
- Analog log capacity extended to 31 days
- Eight separate clock functions to initiate time-based tasks
- Twelve event-triggered timers for creating sequences
- IO controlled register content
- Micro SD card support for configuration up-/download, firmware upload and crash log download
- PC based set-up wizard provides step-by-step support for BlueLinQ Pro
- Support for external flowmeters for each pump or main line



## Other main features

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- Instant access to pump and pump pit information
- Control and monitoring in one system
- Smart control features reduce stress on the downstream network and reduce energy consumption
- Advanced in/outflow and capacity calculation
- Pump alternation and de-ragging reduce maintenance and energy costs
- Emergency pump run timer and level sensor check minimize downtime and flooding
- Thorough data logging help make decisions in time to make a difference
- Crash log provides in-depth fault information
- Secure remote access features for high data security

## Key control parameters

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- Level set-point, including time delays
- Speed of level change
- Random start levels
- Tariff control
- Maximum runtime
- VFD control logic, including flow calculation, day set points, night set-points and adjustable pump reversal speed
- BEP (Best Efficiency Point) control logic

## Safe and secure

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Remote control and configuration can be locally blocked and supervised by the operator.

# Tackling your challenges with BlueLinQ

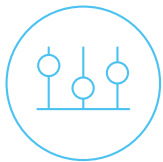
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Here are just a few examples of how you can use the BlueLinQ system to increase availability while reducing maintenance, energy use and costs.



## **Saving energy**

When there is less rain, there is less risk of a sudden rise in water level. With smart on/off controls, energy can be saved during dryer periods by setting higher start/stop levels, so that the pumps run less often. The built-in BEP (Best Efficiency Point) control feature is another smart, energy saving functionality that makes sure the pumps operate at peak efficiency. These options can be set via the operator panel or a PC using Sulzer's monitoring and configuration software, AquaProg.



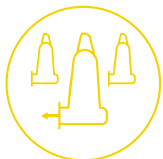
## **Minimizing blockages**

Using the asymmetric start function of BlueLinQ Pro, one pump can be run for fewer hours than the others. This increases availability by reducing the risk of simultaneous breakdowns. Alternatively, a pump that frequently clogs due to flows within the pumping station can be run more frequently, which will help to keep it blockage-free. If a breakdown does occur, the controller will send an SMS alert.



## **Cutting electricity costs**

With BlueLinQ Pro, pumps can be assigned start/stop levels that differ by day and by night. This function can be used to empty the station during off-peak hours, when electricity costs lower. The same function can be used to temporarily lower the stop level and minimize sludge build-up, or to temporarily increase the difference between start and stop level for a pipe-flushing effect.



## **Avoiding water hammer and network choking**

Using the BlueLinQ Pro controller to set individual start and stop levels for pumps and pumping stations puts less pressure on hydraulic and electrical networks. Each pump starts at the optimal time, thereby avoiding water hammer and preventing flooding in the most efficient way. If the risk of flooding arises, BlueLinQ Pro sends an SMS alert.



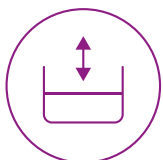
## **Preventing clogging with individual pump exercise runs**

The control functions of BlueLinQ Pro allow the pumps in a station to be run independently, with different start/stop levels and different start/stop delay times. If one pump is not used for a period of time, the controller can force an exercise run to prevent it from clogging due to lack of use.



## **Preventing flooding through intelligent level control**

During heavy rainfall, BlueLinQ Pro can start and stop the pumps based on the speed of level change. If the water level rises more quickly than normal, pumping will begin before the set start point. If the water level drops more quickly than usual, pumping will halt before the stop point is reached. This function prevents peak stress in both the pumping station and the downstream network, because it spreads out the pumped volume over time.



## **Detecting flow deviations between pumping stations**

Leakages and overflows are not limited to pumping stations. Leakage can occur out of a pipeline, just as water can leak into a pipeline and add load downstream. Using the BlueLinQ Pro controller to measure the outflow at one station and the inflow at the next, any problem in between can be quickly identified. If the pump energy consumption is also monitored, the actual pumping efficiency can be calculated as well.

# Complete control solutions

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Tackle the wastewater challenges of today and tomorrow to achieve trouble-free operation and maximum uptime. Use the control and monitoring equipment that forms complete solutions with our pumps, mixers and grinders.

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## Submersible sewage pumps type ABS XFP

- Premium Efficiency IE3 motor in accordance with IEC 60034-30
- Excellent rag handling
- Specially designed impellers for reliable delivery of wastewater containing solids and fibrous material
- Hazardous locations: Approval for ATEX (Ex II 2G k Ex d IIB T4), FM and CSA available
- Quick and easy installation, safe operation and easy maintenance



## Muffin Monster™, Channel Monster™

- Dual-shafted, slow speed, high-torque design grinds tough solids
- Protects pumps and other critical equipment from clogs and damage caused by large debris
- Grinding separates organic from inorganic materials for more efficient wastewater treatment processes
- Cutter stack heights up to 1'500 mm



## Submersible mixer type ABS XRW

- Lowest energy consumption
- Easy upgrade of existing installations supported by a wide range of brackets and adapters
- Operational flexibility with variable speed to match the real mixing task and to manage changes throughout the year
- The robust design and the Premium Efficiency motor give superior reliability and long operating life



## Float switch type ABS KS

- Impact- and shock-resistant
- Fully sealed
- Environmentally friendly



## Measuring devices type ABS MD 126, 127, 131

- Pressure sensors MD 126 and MD 127 are resistant to sewage water and can withstand very high overpressure
- The conductive level switch MD 131 is used as overflow switch in sewage pumping pits



**Making water go around. Water and wastewater solutions by Sulzer.**

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Sulzer offers a broad range of pumps and related equipment for water production and transportation as well as wastewater collection and treatment for municipalities and industries. Our expertise also includes separation technologies, and services on rotating equipment.

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