

## Application Note

### ControlEdge™ PLC: Secure and Flexible Control For Water/Wastewater Applications



Honeywell's ControlEdge PLC is an advanced, yet cost-effective solution for demanding discrete control applications in the water/wastewater industry. This leading-edge controller offers key features like Universal I/O for greater configuration flexibility, and embedded OPC UA connectivity for easier data exchange with third-party devices.

For the economic operation of a water/wastewater plant, all of the various units must function together through optimally coordinated interfaces and automation systems.



Figure 1. The water/wastewater industry has a wide range of challenging control applications.

Industrial and municipal water/wastewater processes are typically controlled and monitored by a network of Programmable Logic Controllers (PLCs), which need to be carefully engineered for accuracy and user friendliness, with telemetry and supervisory control technologies tightly integrated for unified performance.

### Demanding Operational Requirements

Water/wastewater facilities require plant-wide process control, integrated monitoring and data reporting. They also need effective solutions to comply with industry regulations, minimize energy usage, and reduce risks to assets and the community.

Water/wastewater plants are seeking to get more out of each stage of their processes. This necessitates effective automation technology in all phases of operation to achieve the best performance, reliability and compliance.

### Choosing the Right Solution

Honeywell is a leading supplier of automation solutions for the water/wastewater industry, with a worldwide presence and broad application experience. The ControlEdge PLC meets the unique requirements of water treatment facilities. With this next-generation PLC, users are able to achieve unprecedented connectivity to optimize operations and maintenance efficiencies, and release personnel from manual processes.

ControlEdge PLC is one of the first controllers supporting Honeywell's Industrial Internet of Things (IIoT)-ready initiative and offering built-in cyber security.

Combined with the best-in-class Experion® PKS Distributed Control System (DCS), Honeywell provides easy integration and configuration flexibility for improved project implementation in a unified solution for both facility control and PLC applications – all through a single vendor.

### Technology That Meets Your Needs

ControlEdge PLC's innovative technologies can be implemented in a way that suits individual sites. This advanced line of controllers, compliant with the IEC 61131-3 standard, offers impressive scalability and features for different environments:

- Universal I/O (UIO) for greater channel density and configuration flexibility
- Groundbreaking open network integration through embedded OPC UA
- Tightly integrated with Experion DCS and Supervisory Control and Data Acquisition (SCADA) system, and safety system
- Native controller redundancy

- Optionally redundant power supplies
- Leverages Honeywell's innovative LEAP™ approach and Universal I/O for greater configuration flexibility
- Very large I/O counts with a small footprint
- Integration with third-party systems and devices such as motors, drives, and compressors
- Connects to Human-Machine Interface (HMI) through Modbus and OPC UA protocols
- Powerful IEC 61131-3 programming environment
- Best-in-class cyber security ensuring the safety of the system, personnel and critical information
- Single vendor service/support across PLC, DCS and Safety

ControlEdge is the only PLC to offer Honeywell's robust UIO solution, which provides users the flexibility to make last minute changes to I/O schedules without impacting the rest of the system. UIO also has advanced diagnostics like open circuit and short circuit detection, thus making it very reliable and efficient.

The OPC UA protocol is directly embedded in the ControlEdge PLC, providing easier data exchange with third-party devices over OPC without additional equipment. Use of OPC UA provides smooth integration with diverse instruments and software.

In addition, ControlEdge PLC is tightly integrated with Honeywell's Experion DCS/SCADA systems, available as a small Original Equipment Manufacturer (OEM) package or a large process system.

#### For More Information

Learn more about how Honeywell's ControlEdge PLC solution can optimize your performance, visit our website [www.honeywellprocess.com](http://www.honeywellprocess.com) or contact your Honeywell account manager.

#### Honeywell Process Solutions

Honeywell  
1250 West Sam Houston Parkway South  
Houston, TX 77042

Honeywell House, Arlington Business Park Bracknell,  
Berkshire, England RG12 1EB

Shanghai City Centre, 100 Zunyi Road  
Shanghai, China 200051

[www.honeywellprocess.com](http://www.honeywellprocess.com)

## Benefits to End Users



Figure 2: ControlEdge PLC is the first PLC to offer Honeywell's robust Universal I/O (UIO) solution.

With the ControlEdge PLC solution, water/wastewater facilities are assured of utmost cost and performance advantages over the life of the asset. Specific benefits include:

- Optimized plant performance
- Increased operational efficiency
- Improved process uptime
- Plant safety assurance
- Reduced energy usage
- Lower maintenance and lifecycle costs

## Service and Support Worldwide

Honeywell, a global leader in process automation for more than 40 years, stands behind your investment in the ControlEdge PLC. Our channel partners are fully trained, authorized and experienced to implement and support your project — whether small or large, new or expansion. Rely on readily available local service when you need it.

In addition, ControlEdge PLC users have full access to Honeywell's Global Technical Assistance Center (GTAC) for product support and consulting. Our experts will resolve issues in a timely manner and keep the system running at peak performance.

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