App-controlled Neuron Actuator for remote control

”Have you tried turning it off and on again?” This question or advice is often heard. And yes, most of the time, that’s all it takes to get a computer or electronic control unit working properly again.

There are several remote facilities that play a significant role in how society functions, such as pump stations for hydropower and sewage. These pump stations are crucial in everyone’s daily life, ensuring efficient and reliable water supply to power stations and managing wastewater from homes, commercial buildings, and public facilities.

Because of their importance, it is critical to ensure the optimal operation of remote facilities and stations to avoid problems like flooding and blockages, and to reduce the risk of potential contamination of water sources and the environment.

Challenge

- Restarting something right in front of you is easy. Usually, you just need to unplug it and plug it back in. But what if the equipment you need to restart is miles away?
- Remote facilities, like pumping stations transporting water to/from reservoirs or wastewater from residential and industrial areas to sewage treatment plants, require regular maintenance and continuous monitoring.

- Time-based maintenance could mean that pumps fail before scheduled maintenance or that pumps are taken out of service for maintenance when it isn’t necessary - both with negative financial implications over time.
- Manual readings and supplier data are often inadequate to determine if maintenance is required. Corrective maintenance based on breakdowns or faults can take a long time to carry out and poses a higher risk to both technicians and the system’s overall operation.
- Based on maintenance needs, staff may be dispatched to facilities to investigate potential faults, only to find that the units simply need to be turned off or on.
- In such cases, the company loses valuable time and uses resources on trivial tasks that could easily be avoided with condition monitoring and remote control.

Solution

- By using the Neuron Dry Contact sensor for monitoring the position of your valves, you can ensure accurate and reliable status monitoring of valves in many different industrial environments.
- The sensor is connected to the valve’s position switch and registers open/closed states. The wireless transmission of the valve’s status allows for monitoring the position in real-time and helps identifying deviations or irregular changes in the system.
- This provides the opportunity to implement

measures to resolve any issues and maintain optimal production and safety. By having reliable and continuous monitoring of the valve position, your company can optimize production efficiency, reduce energy consumption, and improve operational safety.

What you get

1. Staff can restart equipment in remote facilities from a simple app.
2. The Neuron Actuator allows quick and safe responses to irregularities, protecting remote equipment from further damage.
3. Combined with other sensors for condition monitoring, the Neuron Actuator can act as a safety link to prevent equipment from operating above desired limits.
4. Status and data from IoT sensors can be transferred to monitoring software for further analysis and storage using API integration from Neuron Cloud.
5. Fewer resources are spent on unnecessary trips, saving costs and the environment.
6. Reduced time spent on simple tasks means work time can be spent on tasks that benefit the company and motivate the employees.

Products in use

- Neuron Actuator