



Decrease Downtime by Streamlining Diagnostics White Paper



ENGINEERING YOUR SUCCESS.

Decrease Downtime by Streamlining Diagnostics (PCH Network Portal)

Continuous production with minimal downtime is crucial to staying competitive and reducing costs in today's production environment. The benefit of Cyber Physical Systems is their ability to communicate. When diagnostic data is clearly communicated and interpreted, potential problems can be mitigated or eliminated helping to prevent or reduce downtime. Cyber Physical Systems in the modern industrial factory are critical to supporting production by improving the diagnostic capabilities across the machines, as well as troubleshooting problems and solving them quickly. These are key attributes designed into the PCH Network Portal.

Streamlined Diagnostics

Streamlined diagnostics are an important foundation of the PCH Network Portal design. When a problem on the shop floor is quickly and easily identified, downtime can be greatly reduce or avoided. Simple PLC access is available for usable prognostic and diagnostic data. Process data for prognostic maintenance include voltage warnings, short circuit detection, supply current warning and cycle count flags to name a few. Parameter diagnostics such as auxiliary and logic voltage readings or cycle count data for valves or I/O can be retrieved easily for exact readings. Systems integrators or maintenance personnel can appreciate the accessibility of parameter data for exact voltage readings where power can be an issue in a plant. Cycle count data is often used to predict replacement expectance, eliminating needless unplanned downtime due to component wear.



Working Remotely Enhances Safety

Working outside of a normal tooling cell can greatly enhance safety and prevent injury from unexpected movement of the machine. For this very reason, the PCH Network Portal was enhanced to allow machine setup and troubleshooting from outside of a normal tooling cell. The secure and lockable Bluetooth feature or streamlined web access are suitable means of configuring the PCH



Network Portal from mobile devices, tablets, or PCs with Bluetooth capabilities. Here, the programmer can view the status of all I/O and diagnostics, view rolling errors, warnings and event logs of the last 40 errors with suggestions on how to correct the error. If enabled, controlling the outputs to test or troubleshoot the machine are features that can be achieved. These improved diagnostics to the PLC can save thousands of dollars in system troubleshooting and maintenance costs while increasing safety of the programmer and maintenance personnel.

“Built-in Technician”

Working with the PCH Network Portal is like having your own built-in technician. When an unplanned interruption on a line occurs, the immediate confusion can lead to downtime and needless expense. The root cause can seem a mystery and often stems back to over voltage or other power issues on the plant floor. The PCH Network Portal can diagnose power dips lasting more than 250ms. Rolling 40 errors, warnings and events are time and date stamped allowing the user to spend time on what matters - running the facility. Let PCH Network Portal give details so time can be better utilized elsewhere. The rolling 40 errors, warnings and events log are only an example of the features found in the built-in technician.

A Brilliant Idea! – Improved localized LED Indicators.

Troubleshooting a product from outside a machine work cell can be difficult. The Parker design team had a brilliant idea when they opted for high lumen LEDs for easy visual indication of the PCH Network Portal from a remote location.

Large port labels were also introduced for ease of labelling the ports. When troubleshooting, large port identifiers and visual indicators can significantly reduce the time spent tracing cables or identifying which port is associated with the fault condition.



For more information on the PCH Network Portal visit our website www.parker.com/pdn/PCHPortal for additional whitepapers:



PDNWP-010 The Benefits of Integrating Cyber Physical Systems



PDNWP-014 Streamlined Architecture Reduces Machinery Costs



PDNWP-015 Optimize Integration with Flexible Design



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