



Omron helps manufacturer retrieve data from spray foam insulation machines with NX1 machine automation controller

Polyurethane Machinery Corporation, abbreviated as PMC, offers a complete product line for urethane spray systems that allow contractors to apply various residential foam insulation coatings in a way that enhances quality while lowering the cost.

PMC first became interested in Omron's technologies and solutions when it learned of some work Omron had done for its sister company, KOMO Machine. Seeking to reduce its costs, PMC recalled the successful KOMO Machine projects and contacted Omron to get a better look at some options.

Omron's engineers and product managers were able to cross over temperature controllers, switches, power supplies, timers and counters with competitive pricing, and this opened the door for further collaboration with PMC.

When it came time for PMC to improve the data collection from its spray foam insulation machines, the company turned to Omron for a comprehensive solution comprised of advanced technology and followed through with expert customer service. Omron's determination to thoroughly address the customer need made the project a success.

Business need

A manufacturer of spray foam insulation machines needed a way to get information about how well they were performing, what temperature they were running at, and how much foam they were delivering.

Unique solution

Omron helped the manufacturer create a highly cost-effective solution using the NX1 Machine Automation Controller, an NB screen and surrounding NX I/O. The NX1 helped keep the solution space-efficient.

Customer benefits

By making it possible to conduct information control and production control directly at the PLC level without the need for other middleware programs, this solution received excellent reviews.

The solution

Data and production control using the NX1 designed to fit PMC's space constrained control panels.



Smart Machine
PHD/PHDX-2 Series



The need

At a trade show, PMC was approached by one of its customers that was looking for a way to get information from deployed spray foam insulation machines about how well they were performing, what temperature they were running at, and how much foam they were delivering.

Because their experience with Omron's products had been positive, PMC turned to Omron for a solution to this new customer need. Omron's sales and application engineering team consulted with PMC to understand their application need and plan out a solution that might help them engineer the new functionality into their machines.

The solution that Omron had initially planned for ran into some challenges due to space constraints, so it ended up being necessary to switch out the proposed controller with another that was more space-efficient.

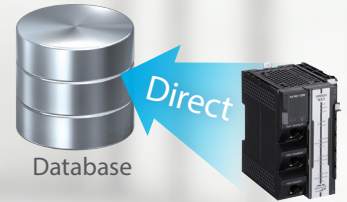


The technology

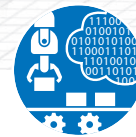
Omron and PMC first settled on a platform with the NJ1 SQL Machine Automation Controller to handle their needs with the NB screen and surrounding NX I/O. The NJ1 is an entry level Sysmac CPU that is designed to address basic industrial controller applications while improving engineering integration time, system flexibility and overall performance. With a built-in SQL client, the NJ1 SQL directly connects to the database to deliver a cost-effective solution for real time data collection and reporting.

Using Omron's platform, PMC came up with a highly cost-effective solution. They then purchased five new systems to start designing the new model. The one major challenge they faced during the design process was getting the NJ to fit in their existing panel. It was a very tight fit, and they weren't able to change things around within the panel to accommodate it. Fortunately, Omron had just launched the NX1, and the Omron team suggested that PMC change over to this new CPU.

OPC UA
EtherNet/IP
EtherCAT
IO-Link



NX1



The outcome

The NX1 was a good fit not only because of its form factor but also because all NJ/NX Series controllers program using the same programming environment (Sysmac Studio), thereby eliminating the need to redesign any code. PMC was instantly impressed with the NX1 and decided to move to that controller.

When they showed the resulting machine to their distributors, it got great reviews. By making it possible to conduct information control and production control directly at the PLC level without the need for other middleware programs, this solution thoroughly addressed the customer's need.

Thanks to the project's success, PMC placed a startup order with the goal of having the new machines ready for the next show. Omron's extensive and flexible product portfolio combined with PMC's innovative design has made this project a win for everyone involved.

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Omron Automation | 800.556.6766 | automation.omron.com

