Enabling the smart factory for smooth IIoT implementation

Smart manufacturing practices making use of connected technology hold the power to improve efficiency and optimise factory operations. However, with the increased use of the Industrial Internet of Things (IIoT) comes the threat of a cyber breach.

To ensure that customers can make a safe digital transition, Schneider Electric has built cybersecurity measures into its latest motor control solution.

TeSys™ island is a new, innovative load management solution that makes machines smarter and more reliable while ensuring that the benefits of connectivity do not present vulnerabilities to your industrial network. The solution makes use of Achilles Level 2 protection and safety up to Cat 4. TeSys island is designed to switch, protect, and manage motors and other electrical loads up to 80 Amps (AC3) in an electrical control panel.

Simplified system integration

For intuitive customisation of machines, TeSys island has simplified PLC programming by featuring a catalogue of 40 TeSys avatars that are similar to a digital twin and represent a range of pre-configured functions. With embedded programming, the TeSys island bus coupler enables reduced PLC programming time and is simple to use. Seamless integration is achieved through function blocks in the EcoStruxure architecture as well as those of other major automation players' PLCs. In addition, application selection and system configuration are simplified, and engineering tasks are reduced, which enables faster machine installation.

A TeSys island installed on a rack. With embedded programming, the TeSys island bus coupler enables reduced PLC programming time.

Advanced diagnostics and maintenance for reduced downtime

EcoStruxure Machine Advisor, part of EcoStruxure Apps & Analytics architecture, features a dashboard that displays energy consumption and other critical data for C-level and plant managers, as well as advanced diagnostics of particular issues. The system makes it possible to track, monitor and increase system performance remotely, and conduct maintenance outside of operational hours.

Using EcoStruxure Augmented Operator Advisor, the operator or maintenance service is provided with easy, secure access to the live data of the machine while in operation, as well as datasheets, tutorials, and other documents used during operation or maintenance.

Thanks to pre-alarms that help reduce machine stoppages and machine downtime, TeSys island provides device-related data that enables the end-user to make informed decisions ahead of time. If a breakdown does occur, the system enables faster prescription of spare parts using QR codes and device replacement thanks to embedded functions and SD cards.

Enabling digital transformation

"As a leader in reliable, sustainable, and efficient motor control, it is our responsibility to provide industry with industrial automation solutions they can trust," says Christo Kotze, Offer Marketing manager for TeSys at Schneider Electric South Africa. "By ensuring cyber protection, reducing installation time and enabling integration into third-party automation systems, we help industry to reap the rewards of a smart factory."

Delivered through their EcoStruxure architecture, Schneider Electric's IIoT technologies, including integrated software, are ready for smart manufacturing and can deliver new business opportunities for plants and machine builders. ❑

GEMÜ cPos positioner with new Profinet fieldbus interface

GEMÜ has expanded its tried and tested GEMÜ 1436 cPos positioner to include additional options in fieldbus environments.

With the new Profinet fieldbus interface, the GEMÜ 1436 cPos positioner now achieves a transmission rate up to 8x higher. However, the option to perform all setting options easily via the fieldbus interface, instead of having to enter these locally on the operating unit, remains unchanged. In this way, the process data for controlling the valve position is also transmitted digitally. The new fieldbus type with Profinet also offers the user other practical benefits, such as a more stable connection and additional configuration options.

In addition to the 'standard' versions with analogue signals (0/4...20 mA) and the already available DeviceNet versions and Profibus DP, the electro-pneumatic positioner is now also available with Profinet, the industrial Ethernet standard which will increasingly become the established standard in the automation sector.

GEMÜ is therefore expanding its product range in the area of positioners for pneumatically operated equipment. To achieve the widest range of control tasks, the valve specialist now offers a complete product range of positioners. In doing so, the individual series each have specific features and characteristics whereby a balance must always be struck between wide-ranging functionality and cost/benefits. ❑