Food packaging

Remote access optimises support and reduces costs

Ibonhart chooses Omron system to enable software upgrades and fault-finding without the need for site visits

Company:
Ibonhart (Norwich) Ltd

Application:
Bred packaging machine

Omron products:
CP1L-M packaged PLC, NS-series colour touch-screen, 2 kW JX-series inverter drives, G9SA safety relays, E3ZM photoelectric sensors, Modbus network.

Introduction

Ibonhard is one of the UK's leading manufacturers of automatic bread slicing and packaging equipment, with machines that can typically handle between 3,000 and 4,000 loaves per hour. These speeds means that machine downtime must be minimised as even minor stoppages can have a substantial impact on production and profitability. When Ibonhart won an order for its IB360 bagger from one of the largest bakeries in Kazakhstan, it decided that a remote access solution was essential to allow efficient software upgrades and effective fault-finding without the need for an engineer to visit the site.

Background

Ibonhart is committed to applying modern technology to deliver genuine benefits for its customers, and invited several automation suppliers, including Omron, to propose solutions for adding remote access to the IB360 control system. Chris Barfe, a Director of Ibonhart, says: "There was absolutely no doubt that Omron gave the most authoritative presentation, clearly understood our requirements and knew how they could be met efficiently and cost effectively. Omron was able to show us similar projects it had worked on with other clients, all of which were operating very successfully." The decision was, therefore, taken to use Omron automation equipment for all key functions in the new control system.

Challenge

All of the equipment had to be suitable for food-industry use with, for example, stainless-steel housings where required. It was also important to reduce the complexity of installation, and avoid compatibility issues, and it would also be necessary to adapt existing application software for the IB360 bagger to work with the Omron automation components. One final issue to be addressed was the need for machine control to be read in Russian when installed on site, but programmable by English-speakers during build and testing.

Solution

All of the - subheadingse issues were addressed with the Omron solution. The company could supply and integrate all of the automation equipment, which reduced time and development costs, and all of the components were already available optimised for the food-industry. Remote communication facilities are incorporated directly on an Omron NS touchscreen rather than on the programmable logic controller (PLC), so a lower-cost PLC could be used without compromising performance or capabilities.

Omron field application engineer, Martin White, says that "We

were able to reuse much of the programming from the old PLC, which saved time and money, and meant that the new code was instantly familiar to the Ibonhart service engineers." The touchscreen is able to handle several languages, so the system could be programmed in English and then, immediately prior to despatch, switched to Russian to suit the end user. The NS automatically resizes the text to accommodate the different word and message lengths in the two languages.

In addition to the versatile yet inexpensive CP1L-M packaged PLC and NS-series colour touch-screen for the operator interface, Omron also supplied four 2 kW JX-series inverter drives, G9SA safety relays and E3ZM photoelectric sensors. All of the major components were linked with a Modbus network.

Benefits

The machine and the remote access system were extensively tested at the Ibonhart factory before it was sent to site, with Omron providing on-site support. Chris Barfe says that although there wasn't much need to call on this support, because the the testing went very smoothly, "it was nevertheless very reassuring to have an engineer on site just in case we did need his services." Installation and commissioning of the IB360 bagger in Kazakhstan was straightforward and entirely uneventful, and the remote communications feature was problem-free in operation. It gives Ibonhart's engineers complete access to the system without needing to leave their desks in the Ibonhart UK factory. Chris Barfe again: "The remote link lets us work with comprehensive diagnostic features on the machine, and, while these have all worked perfectly in trials, they haven't yet been proved in a real fault situation. That, I'm very pleased to say, is because we haven't had any real faults! Nevertheless, we have used the link to install a software upgrade and, of course, to make routine checks on machine status. The link does exactly what it was designed to do, and it does it very reliably." Both Ibonhart and its customer in Kazakhstan are delighted with the performance of the new IB360 bagger, and Ibonhart is now planning to use Omron automation equipment on a number of future projects.