

Success story

Industry: Graphics/Printing

PLC
+ HMI
ALL IN ONE™

How can PLC control improve process speed and reliability?

Summary:

To meet the growing demand for shorter prep times and greater reliability in the printing and graphics industries, B3Servis, a Slovenian company that manufactures book-binding equipment, wanted to redesign their equipment. They wanted to update their current system and

implement barcode scanners capable of reading both 1D and 2D codes. The new scanners communicate with a Unitronics Vision570 PLC+HMI, which process the data, as well as monitoring relevant data and logging it in a SQL database. The Vision570's powerful communication options and sleek design helped B3Servis achieve their goals.

The graphics industry has a rapidly increasing demand for computer-controlled machines. This demand resulted in a drive towards greater productivity and responsiveness; from order to delivery, lead times are becoming shorter, which puts pressure on companies in these industries to provide adequate printing equipment that can produce short preparation times and high reliability. B3Servis d.o.o., a Slovenian company that represents and sells book-binding machinery, found themselves caught in this crunch.

B3Servis' existing systems were old and could only read 1D barcodes. These machines were outdated and could be confusing to use. To keep their competitive edge in the market, B3S needed a new system that could read both 1D and 2D barcodes. They also wanted to increase process speeds and make the machines more modular and user friendly.

B3S replaced the old, laser barcode scanners with image-based Cognex Dataman 100Q readers, which are able to decode 1D barcodes and 2D symbols. However, the maximum length of the new readers' verifying capability is 40 characters. B3Servis implemented a Vision570 PLC+HMI control system, which enabled them to work around this limitation; by having the scanners communicate to the Vision570™, B3S is able to verify barcodes of "unlimited" lengths. The PLC is equipped with two RS232 ports and an Ethernet port; each serial port connects to a barcode reader. Using the Ethernet port, the controller communicates with a PC through UDP while running an SQL database, which B3S uses to log operator information, process and store work orders and print reports.

The all-in-one PLC + HMI aspect of this controller, as well as the physical size make the Vision570 a compact option—an advantage for B3Servis as their control enclosure is fixed to the printing machine. The 5.7-inch screen size and color features also make it easy for workers to interact with the PLC to set the system up for operation.

