

Emotron's FDU/VFX Variable Speed Drives Support Modbus TCP with Plug-in Anybus Module from HMS

Emotron FDU/VFX variable speed drives now support communication via industrial Ethernet using Modbus TCP. This international networking standard provides high capacity and reliability as well as full connectivity to existing communication systems. Connecting an Emotron variable speed drive to an industrial Ethernet network offers simplified installation, commissioning and troubleshooting.

Ethernet communication for the Emotron FDU/VFX is currently being tested by Emotron customers and will be on sale at the turn of 2008/2009. The solution is based on the certified plug-in module **Anybus CompactCom from HMS**, supporting all major fieldbus protocols and industrial Ethernet protocols. Like all Emotron products, the Emotron FDU/VFX also supports fieldbus communication via Profibus and DeviceNet.

More efficient and reliable process control

Connecting an Emotron FDU/VFX to an industrial Ethernet network also offers the operators quicker access to more information. They can use a laptop to have a more comprehensive and informative operator interface than with a control panel display.

A built-in web server using the HTTP protocol provides the option of remote monitoring and configuration, for example using a PC in the control room or from another location via the Internet over a secure VPN connection. This improves efficiency and reliability by providing easy access to the connected units for setting process parameters, viewing process status etc.



Photo: Emotron FDU/VFX variable speed drives now support communication via industrial Ethernet using Modbus TCP and the plug-in module Anybus CompactCom from HMS.

High performance demands of industrial environments

Ethernet was first introduced in the 1970s as an office network but has evolved into a widely used international standard for industrial environments as well. Industrial Ethernet

is quickly gaining ground thanks to the support of multiple fieldbus protocols and technical advances offering higher communication speeds and increased reliability.

Using Ethernet in industrial applications require high networking capacity. The network needs to support large data flows while also guaranteeing interruption-free communication. In this case, high security is ensured thanks to a redundant network structure. The network operates at 10/100 Mbit/s and also provides the precise and fully predictable response times required in automation applications.

Connection to existing fieldbus systems

One of industrial Ethernet's main strengths is its ability to handle several communication standards, offering interconnectivity with existing systems on the factory floor. This allows the continued use of various fieldbus protocols optimized for specific applications and of existing cabling and other hardware installations.

Ethernet also enables integration with, for example, sourcing and production planning systems such as MES/ERP. The system can signal if raw material is running out, identify bottlenecks in the process, locate errors in the production line etc.

Modbus TCP is the leading transfer protocol

Since there are several protocols available for industrial Ethernet, automation equipment manufacturers need to decide which ones to support. The first Emotron solution soon to be available uses Modbus TCP, one of the first Ethernet protocols and now the market leader with the largest number of installed nodes worldwide.

Modbus TCP is an open and vendor-neutral protocol which is easy to implement and use. It is compatible with all standard Ethernet hardware and software. The performance serves approximately 90 per cent of industrial applications, excluding only critical motion control demanding real-time communication with response times down to microseconds.

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