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The VT250 allows various combinations of Profibus, Profinet, DeviceNet, Ethernet/IP, Modbus-TCP, CANopen and EtherCAT

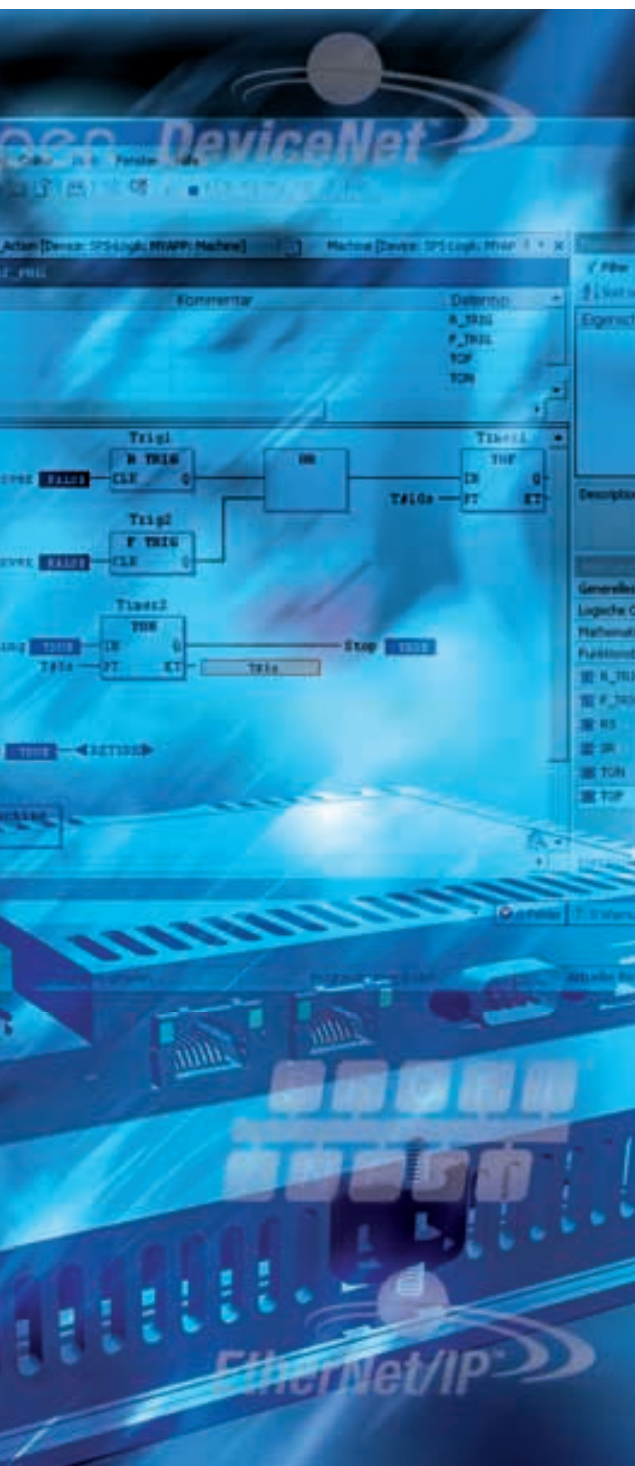
Triple Play

New HMI series with controlling, visualizing and outstanding communication functionality emphasizes Turck's comprehensive solution know-how

The human machine interface (HMI), the communication device between man and machine, will always play a major role for an efficient system operation – despite all automation efforts. In the past, huge switchboards were used to establish a communication channel between man and machine. Nowadays, most users rely on modern computer screens. They do so for a good reason: modern touchscreens with integrated PLC functionality provide a flexibility. New programming simplifies plant upgrades, and even simple signalers in the field may be replaced with small HMIs that

are more versatile and – thanks to decreasing prices for powerful microprocessors – becoming a less expensive option.

For decades, Turck has been working to develop a comprehensive knowledge in the field level, where sensors, fieldbus systems and PLCs work together. During this time, Turck has extended its sensor, interface and fieldbus portfolio with CoDeSys programmable gateways with integrated PLC functionality. This technology enables certain tasks to be performed directly in the field, like reading and writing RFID data carriers. These compact PLCs support



decentralized automation concepts. After intense market inquiries, Turck decided to extend its portfolio with a new HMI series that not only provides controlling and visualization functionalities but also outstanding communication characteristics. The first new model, VT250, will be launched at the SPS/IPC/Drives. Additional models will follow in 2010.

Versatile interface

The VT250 features a 5.7-inch thin-film transistor touch-screen (QVGA) in a compact plastic housing.

Quick read

There are quite a few vendors of human machine interfaces – HMIs for short – in the market, already. Nevertheless, Turck is expanding its portfolio with a new HMI series that combines controlling and visualizing functionality with outstanding communication characteristics – ultimately, this is what users can come to expect from a fieldbus specialist.

Its semi-standardized assembly dimension (212 mm x 156 mm x 50 mm) enables users to apply the new HMI to various applications in no time. Even the HMI's sophisticated back side provides a new practicability. Unlike many established HMIs, the VT250 allows accessing the SD memory card and the backup battery from outside the housing, so users may replace both components without a hassle.

The well-protected, counter-sunk fieldbus port supports DeviceNet, CANopen and Profibus, and allows the sub-d 9-pin connector cable to be conducted in exactly the same direction as all the other cables. The HMI's bottom side provides a 24V power supply, a communication port supporting RS232 and RS485 (allowing integration of barcode readers, light screens and the like) and an additional USB port that may be used to install a new firmware, for example.

All-rounder netX

Turck's new HMI features yet another highlight: Providing two real-time Ethernet ports, the VT250 enables users to set up a line topology; only very few HMIs on the market allow that. A netX series controller by Hilscher, that may be configured as master or as slave, provides enough power for communication between virtually every fieldbus and realtime Ethernet systems on a single chip. The netX controller allows various combinations of Profibus, Profinet, DeviceNet, Ethernet/IP, Modbus-TCP, CANopen and EtherCAT – and even Powerlink and Sercos systems can be integrated, if required. Another example of the controller's flexibility: The VT250 can be operated as a Profibus master and a Profinet slave at the same time – or in virtually every other combination of fieldbus and Ethernet protocols.

The 200MHz/32Bit RISC processor not only provides communication power, but also enough resources for the visualizing and controlling software that may be run on Turck's new HMI, as well. Hilscher's visualizing software, QVIS, is perfectly suited for this hardware, thus allowing to fully utilize the controller's computing power. QVIS enables the user to create and arrange graphical user interfaces and provides all functions of a modern visualizing system, such as alarm handling, composition management, password protection, history, trending and simulation. Thanks to an integrated variable interface for the CoDeSys controller that is also integrated into

The HMI's back side provides connectors for 24V power supply, a fieldbus port, two Ethernet-ports, a communication port supporting RS232 and RS485 and an USB port



the VT250, both systems work together perfectly – the more so as the run-time system CoDeSys SP is already implemented into the netX controller.

Proven controlling solution

Like the programmable gateways Turck offers for its distributed I/O systems BL20 and BL67, the new HMI fully supports the very popular CoDeSys software. The hardware-independent application software enables users to create their own controlling solution. Based on the international standard IEC 61131-3, CoDeSys supports all common programming languages for this standard and provides complete backends – including compilers – for all common processor types. In this way, CoDeSys helps create and operate software controlling applications for virtually every possible hardware.

The VT250 is one of the first automation solutions to support CoDeSys V3. This version combines all of the proven software functionality with brand-

new options like object-oriented PLC programming. CoDeSys V3 supports the operating system Windows CE for mere visualizing applications; Hilscher's rcX operating system provides enough power for more complex controlling tasks.

Solution know-how

With the new HMI series, Turck once again confirms its comprehensive solution know-how. The first model, VT250, excels in flexibility and superior communication characteristics. It provides application-oriented visualizing and controlling functionality with enough power to handle communication between virtually every fieldbus system and real-time Ethernet. The new HMI can even be configured as master or slave – regardless of the communication direction. The cooperation with a strong business partner, such as Hilscher, and open standards like CoDeSys (FDT/DTM will be supported in the future) guarantee cost-effective interface solutions made in Germany. ■



The QVIS software provides all functions of a modern visualization system



CoDeSys V3 promises proven functionality with new options like object-oriented PLC programming

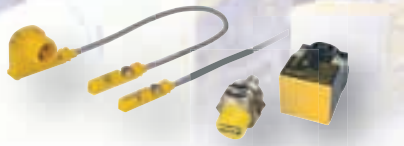
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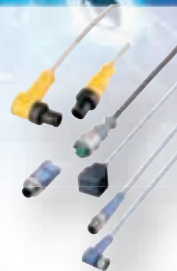
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Also under the most adverse conditions. The complete programme includes sensors and components for all applications.

- **Safe connections**

From connectors right up to actuator/sensor boxes: The connection technology portfolio made by TURCK leaves nothing to be desired.

- **Perfect transmission**

No matter which fieldbus you use: TURCK offers a complete programme for fieldbus technology.

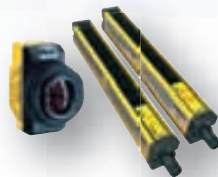
- **Efficient automation**

RFID is only one example of how TURCK products and know-how guarantee optimal automation solutions for your systems.

FLUID



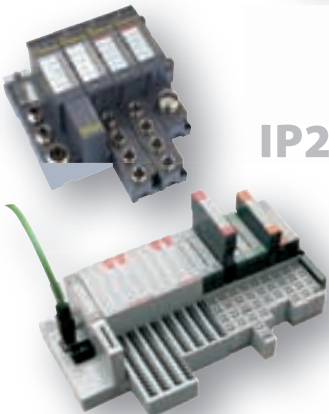
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IP67



IP20



HMI



RFID-SYSTEM



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