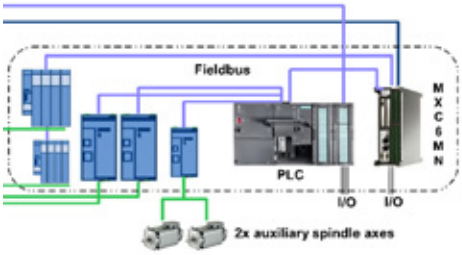
Microteam

ELECTRONICS • AUTOMATION • ROBOTICS • AUTOMOTIVE



THE MXC-6 MN™

MULTI-AXIS CONTROLLER

For controlling machines, robots, manipulators, machine tools and various industrial processes.

The MXC-6 MN (Multi-Axis Controller, 6 axis direct I/O control per unit) is designed to meet the various controlling needs of machinery with multiple simultaneously movable axes.

The control tasks of the motion axes requiring high accuracy, speed and computing power can be made synchronized in real-time. The MXC-6 MN and its software are easy to distribute and are capable to support systems consisting of several motion axes and controllers.

Any amount of the MXC-6 MN units can be linked together in order to build an extensive control system.

In such a system the number of controllable axes, electrical I/O and computing power is practically unlimited.

Alternatively, the MXC-6 units can be linked to a PC and/or to other devices using a fieldbus (CAN, Ethernet – MXC-link), serial ports (RS485 or RS232) or USB port. Further features can be obtained with PCI cards such as Profibus, Sercos or video card. Two PCI card slots are available per unit.

HARDWARE

The control tasks are performed by two powerful RISC processors. The first processor handles the real-time controlling and the second processor the commands of higher level such as interface to production plant information systems.

As standard 8 Mb + 256 Mb RAM and 64 Mb + 64 Mb Flash memory capacity is available for an extensive and efficient processing of the application data. The flash memory capacity can be extended with an internal memory card.

A dedicated DSP processor controls and monitors each six direct I/O controllable axes. All inputs and outputs have galvanic isolation.

SOFTWARE

1. The utility programs for the MXC-6 MN controller include the following:

- Real-time operating system for the processors. Linux operating system for the processor dedicated for the tasks of higher level available as an option.
- I/O interface libraries for the use of controller's built-in I/O
- Drivers for field buses
- The logic, tailor made for a specific application, can be programmed as an compileable C / C++ program
- OEM supplier provides the programming for an application. On customer request Microteam can supply tailor made application programs according to the required specifications.

2. PC programs for Microsoft Windows or Linux operating systems:

- Gnu C / C++ -cross compiler
- Configuration of the controller and the interfaced fieldbus I/O
- Graphic diagnostics program (Data over the controller unit and programs in numerical format, gauges, curves etc.)
- User interface and utilities for applications in operating system

SAFETY LOGIC

The MXC-6 MN unit features a processor independent watchdog (monitoring) logic which cuts the control voltage from all outputs in a case of a malfunction. The monitoring circuit is equipped with a safety relay with its potential free contacts at the terminal blocks. The safety relay contacts can be used to stop the process when a fault is detected.

CONNECTORS

All connections to the motion controller are plug-in connectors and are compatible with Weidmüller BL, Phoenix MSTB and Hartmann BU95 (5.08 mm). The connectors can be removed without tools.

POSITION ENCODERS

Six position encoders can be connected to each MXC-6 MN unit. Encoder types can be the following:

- Encoders producing digital pulses
- Analog encoders producing sinusoidal voltage
- SSI / ENDAT – encoders
- Encoder inputs can be configured to match the selected encoder type.

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