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The MPU - a unit for programming complex processes

In today's edition of our Info sheet, *Artur Forich, technical sales at miControl,* informs about the importance and functionalities of the Motion Process Unit in the field of drive technology.

The Motion Process Unit, or MPU for short, represents a unit developed by miControl that allows the user to program specifically for the application in order to optimally adapt the functionality of the devices to the conditions in the application.



MPU is based on the programming language "Python". Thanks to the simple syntax, the user benefits from good readability, which simplifies the design of the MPU program.

The MPU has the functionality of a programmable logic controller (SPS functionality) and is used to automate and optimize industrial applications of a device.

The controllers can thus be operated in stand-alone mode. In the MPU, entire travel profiles or the reactions to certain events can be defined, which are triggered, for example, via the digital inputs/outputs or analog inputs of the controller.

Possible examples of the function of an MPU program:

- Intelligent detection of motor operating time
- Master/slave synchronization of several axes
- Selection of permanently stored motion blocks (set rotation speed/setpoint position) via the states of the digital inputs
- Definition of customer-specific homing methods
- and much more

For data exchange with external devices or computers, the CAN-BUS is available as a communication interface. The controller can proactively establish communication with external devices, but also any parameters including the global variables of the MPU program can be read or written by external devices.

The in-house software "mcTools" and "mPLC" offers the possibility to manage MPU programs. These can be loaded, saved, paused and deleted on the device. Our software also includes an editor "Python Script", which can be used to write the MPU programs.

Our team will be happy to assist you with detailed questions.



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