*phy*MOTION™

empowering your application

phytron
Beyond Steppers

the modular, freely programmable motion controller (PMC) for stepper motors

http://www.phytron.eu/phyMOTION

phytron's *phy*MOTION™ is a modular, freely programmable motion controller for stepper motor applications – from CPU to power stage. With the driving performance of a CNC (linear / circular interpolation), the versatility of a PLC (I/O, modularity, fieldbus interfaces) and phytron's high precision power stage technology for stepper motors, the *phy*MOTION™ is the ideal controller for stepper motor driven multi-axis platforms in machine building, special engineering and plant automation.

An in-house development is hardly ever cost-effective – most of the functionality required is already available on the market. Why not integrate only the missing functions into an existing system with standardised components? Usually, modular controllers are designed *not* to include customised technology. Stepping beyond these restrictions, phytron will modify the modules to a customer's needs or collaborate to develop new components in order to minimise the time and overheads for a fully market-ready product. The *phy*MOTION™ fills the gap between off-the-shelf compact controllers and modular PLCs that have limited functionality, such as no interpolation, non-optimised stepper motor algorithms, limited customisation and a small range of catalogue products to choose from.

Equip every axis individually: whatever a stepper motor application requires, besides integrating power stages up to 300 W / axis (5 A, 70 V), the *phy*MOTION™ comes with the option to connect more powerful external amplifiers. If it's the housing (bench, rack, rail mounted), a touch screen display, limit and position switches, Endat, SSI or quadrature Encoder evaluation, motor temperature readout (K type or PT100 platinum sensor), I/O (analogue, digital) or host interfaces (Ethernet, RS485, RS232, Profinet, Profibus, CAN) – in addition to these standard components phytron offers the option to integrate customised modules into the system.

Especially when an application is in development, the flexibility of the controller's capabilities and meeting constantly changing parameters are vitally important to the project's success. With the *phy*MOTION™ controller concept, phytron has an open licence policy: the use of our hardware and our communication protocols is free of any licensing costs and even the development environment can be downloaded for free. The compact *phy*LOGIC™ commands (based on and compatible with Minilog) can easily be addressed from within your own application via higher language commands (C), and can be used with the free *phy*LOGIC™ Toolbox software. Furthermore, there is no extra cost for software to interface with LabView®.

For many automation projects the fast reaction of limit and intermediate switches, the positioning accuracy and synchronisation of axes are vital features. The *phy*MOTION™ operates close to the application with CNC-like performance and reacts faster to switch states than customary cycle-based PLCs. The *phy*MOTION™ is well-equipped for versatile requirements. The programmable motion controller is capable of most diverse division of tasks between *phy*MOTION™ and the surrounding infrastructure. Whether as a subordinate to a PLC, a decentralised, supporting intelligence, a coordinating stand-alone solution or directly connected to a PC, the *phy*MOTION™ is capable of comprehensively supplementing a PLC for nearly every stepper motor application. *phy*MOTION™ - **empowering your application.**