

## A new dimension in power stages



### Powerful: Maximum power, snugly packaged

phytron has managed to pack a lot of power into a compact format. Although the unit itself is small – its strong qualities can't be missed:

- Space-saving design in an EMC-compliant metal housing for easy wall or rail mounting.
- Coding switch or ServiceBus mode  
Operating parameters can be set directly on the power stage or PC.
- Exclusive protection against unauthorised access in ServiceBus mode.
- The control inputs are reliably separated via optocoupler from the supply and motor voltage.
- 4-quadrant precision current controller based on the patented phytron SYNCHROCHOP principle.

### Practical: MCD 93-70 MINI+

With phytron you are always guaranteed perfectly tailored solutions. The MCD 93-70 MINI+ stepper motor compact power stage is the practical example of this: Take advantage of the benefits offered by an advanced mini step power stage with ServiceBus interface.

- **ServiceBus interface**  
bus connection via RS 485/4-wire to multi-axis systems, connection to a PC with RS 422 interface.
- **Variant with USB adapter**  
for direct connection to the PC USB interface.
- **Compact design for wall mounting**  
with cable clamps for shield securing and strain relief, optional rail mounting clip.

### Fast and easy: settings, changes, diagnosis

Configuring, parameterising and monitoring of power stages: These tasks have become and straightforward on units with a ServiceBus interface.

- ServiceBus for RS 485/4-wire connection of different power stages and ServiceBus modules
- For MCD+, A32-48 MINI, PAB 93-70 MICRO 256 or MR8
- setting of operating parameters such as run and stop current, boost current, step resolution
- Status window for inputs, outputs and error messages
- Test functions
- Parameter archiving
- ServiceBus-Comm communication program for PCs with user-friendly interface
- Alternatively: incorporate ServiceBus commands and functions as ASCII strings in own program, e.g. with LabView, HyperTerminal or in C.

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### Stepper motor compact power stage MCD 93-70 MINI+

Qualities that speak for themselves – and for the phytron MCD 93-70 MINI+ stepper motor compact power stage.

- Bi-polar mini step power stage with 4-quadrant current controller and current shaping
- Phase currents from 0.14 to 9 A<sub>PEAK</sub> for 2-phase stepper motors up to size 86
- Coding switch for setting run and stop current, step resolution up to 1/20 step, preferred motor direction and address
- Extended setting options via the ServiceBus: step resolution up to 1/512 step, phase currents in 100 mA steps, boost current, run current recovery time, software diagnosis
- ServiceBus-Comm communication program for PCs included in delivery scope
- Supply voltage 24 to 80 V<sub>DC</sub>
- RS 422 push-pull inputs for 5 V or 24 V input level
- Opto-isolated inputs and outputs
- EMC filter



ServiceBus-Comm® is a registered trademark of the Phytron-Elektronik GmbH.

## Driven by experience – fired by innovation



Customised solutions and series production of industry-compliant stepper motors: Backed by 60 years of experience as one of the leading international manufacturers of stepper motors and stepper motor power stages, phytron has the right solution for every drive problem. The phytron stepper motors and control electronics development departments, mechanical and electronics production at the Gröbenzell factory near Munich, as well as the worldwide sales network, assure first-rate consultancy and top quality standards.

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customized solutions  
in motion

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## Power not size

### MCD 93-70 MINI+ The compact power stage with ServiceBus-Comm®

**NEW!**

