CORVUS
stage controller for stepper motors

The stage controller CORVUS sets new standards around the domain of motion control for stages. Newest technology combined with a superior technique for stepper motor control, lets the CORVUS achieve specifications that were believed to be unachievable until now.

The resolution (smallest single step size) equals a mere 1,5 nm (0,0015 µm) and the minimum speed a stage can travel with, in conjunction with the CORVUS, is 0,015 µm per second. A 32 bit high-performance RISC-processor, supported by a real-time operating system, as well as a maximum speed of travel of 180 mm per second (with 4 mm lead screw pitch), allow for a very fast, yet precise operation with even the most complex programs. Utilizing the new 22-LED diagnostic system, the most used functions and status of the controller may be identified at a glance.

By means of a very distinctive method - the so-called sin² acceleration profile - the CORVUS controls a stage in, the torque is not abruptly, but gradually released in form of a sinus curve. Accordingly, all starts and stops of the stage motors are accomplished in a very soft manner. In turn, this spares the driving components and minimizes vibration excitation.

Most notewothy is the option for an ETHERNET and TCP/IP interface. Via the TCP/IP protocol the entire internet can be explored. Innumerous applications use this protocol where each can effectively communicate with the other.

The controller can be operated with any internet browser, Linux, Mac, or Windows based. Long distance maintenance, or operation is merely child's play now. In the web-server version of the CORVUS the operator panel is directly built into the controller itself.

The Ethernet interface makes it possible to easily integrate the controller into an existing network, within minutes. Anyone, who is working on that net, has access to all of the CORVUS' functions. Most certainly, the CORVUS offers the option of firmware updates via the RS 232 interface.

For applications that require a very precise absolute positioning, the error correction provides a very valuable asset.

Specifications

Order information

CORVUS-2 for two axes
Part No.: 00-74-220-0815

CORVUS-3 for three axes
Part No.: 00-74-220-0816

Accessories

Ethernet interface
Part No.: 00-74-220-0817

Encoder interface, RS 422
Part No.: 00-74-220-0828

SIN/COS interface, 12Bit, MR
Part No.: 00-74-220-0818

SIN/COS interface, optical
Part No.: 00-74-220-0829

Position display
Part No.: 00-74-220-0820

Software WinPos
Part No.: 00-74-220-0821

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Resolution (smallest step size):	1,5 nm (0.0015 µm)
Velocity:	max. 45 s^{-1} (= 180 mm / sec.) with 4 mm lead screw pitch
Acceleration:	max. 4000 mm/s^2
Processor:	133 MHz RISC processor with flash memory
RS 232 baudrate:	max. 115200
Diagnostic system:	22 LED
Interface*:	ethernet interface (10 BaseT, 10 Mbit) RS 422, IEEE488, USB
Dimensions (h x w x d):	70 x 240 x 305 mm

All CORVUS stage controllers include joystick, interface- and motor cables

*optional

For more detailed information, please visit our web-site at: www.marzhauser.com