



▶ **TANGO Desktop** high-resolution stepper motor controller

High-resolution stepper motor control Tango Desktop now enables you to control up to 4 axes. It has been especially developed for demanding positioning performance in medical technology and industry.

As an option, the position can be controlled by external optical and magnetic measuring systems.

- ▶ **Positioning within sub- μm range:**
Position resolution of 819,200 $\mu\text{-steps}$ / revolution
- ▶ **Maximum torque, even at high speed**
48 V motor voltage and phase currents of up to 2.5 A
- ▶ **Energy-efficient ecological design:**
Lower power dissipation, resulting in decreased caloric development and lower power consumption, no fan needed
- ▶ **"Microsoft Authenticode Certificated Driver":**
compatible to all Windows operating systems including Windows 7 (32 / 64 bits)
- ▶ **Sensitive manual operation**
via Joystick, Handwheel, Trackball and Ergodrive
- ▶ **"Plug & Play" functionality:**
Operational controls are automatically identified and can be connected during operation ("hot plugging").
- ▶ **Intuitive operating surface and DLL support**
enables easy integration and command input
- ▶ **Easy switch within the TANGO product family:**
software compatible with TANGO PCI-E and TANGO PCI-S

Order Information

- TANGO 1 Desktop, controller for Z axis
incl. motor cable and joystick
Order No.: 00-76-125-1801
- TANGO 2 Desktop, controller for 2 axes
incl. motor cable and joystick
Order No.: 00-76-125-1802
- TANGO 3 Desktop, controller for 3 axes
incl. motor cable and joystick
Order No.: 00-76-125-1803
- TANGO 4 Desktop, controller for 4 axes
incl. motor cable and joystick
Order No.: 00-76-125-1804
- TANGO 2 Desktop, controller for 2 axes
incl. motor cable and 2-axes operating
device Ergodrive
Order No.: 00-76-125-1802-ED
- TANGO 3 Desktop, controller for 3 axes
incl. motor cable and 3-axes operating
device Ergodrive
Order No.: 00-76-125-1803-ED

Accessories

- Operating Device Trackball
Order No.: 00-76-550-8800

For further accessories please refer to:
www.marzhauser.com



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Performance Motor Controller

Number of Axes:	up to 4
Type of Motor:	stepper motor 2/4 phases, e.g. 100, 200 or 400 full steps / revolution
Microstep Resolution	819.200 steps / revolution (motor with 200 steps / revolution)
Motor Driver:	Automatic adaptation to a wide range of stepper motors
Max. Phase Current:	1.25A / 2.5A, depends on order
Motor Current:	selectable per software 10% to 100% of max. phase current
Current Reduction after Movement:	0% to 100% of selected motor current
Motor Voltage:	48 V
Various Motion Modes:	vector, velocity controlled, trajectory, single axis Vector movement of 1 - 4 axes and single axis movement is possible at the same time.
Max. Amount of Vectors/s (PC):	250 vectors per second (depends on used PC and software)
Speed Range:	0.000001...70 revolutions/s
Acceleration / Deceleration:	0.0001...20 m/s ² programmable, each axis separately
Position Range:	+/-20 m
Command Set:	various current command sets

Processing System

Processor:	DSP, 400 Mhz
Flash Memory:	4 MBit for programme storage
EEPROM:	256 KBit for configuration data
SDRAM:	16 Mbyte for extended system processing
Fast DSP RAM:	84 kByte for fast data / instruction processing

Communication Interface

RS232:	Standard baud rate: 57,6 kBaud. Max. baud rate: 115,2 kBaud
USB:	USB 2.0 compatible.

I/O:

Human Device Interface (HDI):	For connecting joystick, handwheel, trackball or Ergodrive, all with automatic device identification (Plug & Play)
Further Interfaces:	optional CAN-Bus, I ² C

Optional Modules

Encoder Interface:	up to 3 encoders, Märzhäuser nanoScale or optical scales
Encoder Signal Inputs:	1 Vpp (14 bit), 5 Vpp (14 bit), RS422 / TTL (30 Mhz), depends on order.
AUX Inputs:	3x TTL, position snapshot, motion stop, analogue (0 - 5 V), motor driver enable, pulse / dir
AUX Outputs:	3x TTL, position synchronised trigger, 2x analogue (14 bit), shutter, pulse / dir

Power Requirements

Motor Voltage:	100 to 240 V AC
Frequency:	50... 60 Hz
Power:	max. 400 VA
Inrush Current:	max. 30 A

Environment

Dimensions:	L x W x H: 242 x 102 x 159 mm (without connected cable)
Operating Temperature:	+5... +45°C ambient
Cooling:	Normal convection, refer to safety instructions.
Humidity:	RH = 85% max., non condensing
Weight without cable:	approx. 2.500 g

Please note:

All Märzhäuser scanning stages come with a joystick for their designated use. If the stage is operated automatically, we recommend using the optionally available emergency shut-off.