TANGO 3 mini
The Small Sized High-Resolution Stepper Motor Controller.

Product Features

TANGO 3 mini is the miniaturized and compact model type within the TANGO product family. The flexibly mountable steel case is intended for installation in control cabinets and positioning systems – on account of it's small construction space it can be used anywhere where applications permit only small space. The positioning is done through programming or via manual operating device. Digital and analog inputs/outputs provide numerous additional functions.

Control of up to 3 axes

- ▶ motor voltage 24 V typ. / phase current 1,25 A max.
- ▶ all axes can be moved individually or linear interpolated simultaneously

High position resolution

- ▶ 819,200 microsteps/revolution
- ▶ exact positioning within sub-μm range
- ▶ smooth running of motors

Functions

- ▶ precise positioning in closed-loop operation with incremental length and angle measuring systems
- ▶ saving coordinates
- ▶ position-synchronous trigger output
- ▶ backlash compensation
- ▶ optional connection of motor brake

Compact case

- ▶ robust steel case
- ▶ small dimensions

Software support for easy integration

- ▶ „Microsoft Authenticode Certificated Driver", compatible to all Windows operating systems including Windows 10 (32/64 bit)
- ▶ compatible with native instruction set of TANGO product family
- ▶ programming by means of DLL, LabView VI and software „SwitchBoard"

Order Information

TANGO 3 mini	00-76-100-5800

Options

Encoder interface[1]	00-76-650-5800
Snapshot/trigger[1]	00-76-801-5800

Accessories

2-Axes Joystick digital	00-76-200-1820
3-Axes Joystick digital	00-76-300-1820
3-Axes Joystick digital with Multi-Function Wheel	00-76-300-1821
4-Axes Joystick digital with Multi-Function Wheel	00-76-400-1820
ERGODRIVE 2 digital[2]	00-27-322-7000
ERGODRIVE 3 digital[3]	00-27-322-8000
PROFILER SCD CL	00-76-900-4840
Motor cable 3 axes[4]	00-76-700-5800
Encoder cable 2 axes[4]	00-76-650-5801
RS-232 interface cable	on request
Adapter cable LED 100	00-76-700-5801
Mounting kit for 35 mm cap rail	00-76-100-0800

For more accessories please visit:
www.marzhauser.com

[1] activation code needed
[2] for 2 axes
[3] for 3 axes
[4] cable length: 2 m

Motor Output Stage

Number of axes	3
Supported motor types	stepper motors 2 or 4 phases, individual adaption to various motor types
Step resolution	4,096 microsteps/macrostep, 819,200 microsteps/revolution (with 200-step motor)
Phase current	max. 1.25 A
Motor current setting	motor current adjustment control from 0.03…1.25 A, adjustable via software, short-circuit-proof outputs
Motor current reduction during standstill	0…100 % of set motor current
Power supply	20.1…28.9 V DC (ext. 24 V power supply incl. mains cable enclosed in delivery)

Positioning

Positioning modes	distance and vector positioning, positioning by setting speed and direction, simultaneous positioning of vectors and single axes, manual positioning, endless rotation
Speed range	0.000001…70 rps (selectable for each axis individually)
Acceleration	0.0001…20 m/s^2, linear or sin^2 (selectable for each axis individually)
Travel range	depending on motor and spindle pitch (e.g. max. ±2.6 m with 200-step motor and 1 mm spindle pitch)
Instruction set	TANGO native (more than 180 instructions), Venus-1, Venus-2, others on request
Processing speed	up to 250 vectors/s (depending on PC model and software)

Interfaces and Functions

Communication	USB 2.0 (standard), RS-232 (additional cable needed), CAN bus (available on request at AUX mini port)
Motor connection	output 24 V / 0.5 A max. (e.g. for motor brake), TTL limit switch inputs
Encoder interface (optional)	connection of incremental length and angle measuring systems type nanoScale[1], 1Vpp or RS-422 (selectable via software) for precise positioning in closed-loop operation, analog resolution: 16 bit, max. frequency with RS-422: 33 MHz
Operating devices (optional)	Joystick digital, ERGODRIVE digital (automatic identification of all operating devices)
Additional inputs/outputs (AUX mini, optional)	analog output 0–5 V, output 24 V / 1 A max. (switchable vis software, e.g. for connection of additional peripherals), TTL I/O
Connection of additional peripherals	e.g. LED 100, PROFILER SCD CL, Liquid Dispenser (adapter cable needed for each device)
Input/output functions	save coordinates / move to coordinates, safety shutdown of output stage, limit switch evaluation, fast trigger functions (optional), closed-loop positioning (optional)
Other functions	on-board measuring of temperature, measuring of current consumption, position correction with and without measuring system

Ambient Conditions

Ambient temperature	+5…+45 °C (external power supply: 0…+40 °C)
Cooling	convection, no fan required
Humidity	85 % max., non-condensing
Dimensions	approx. 190 × 30.5 × 67 mm (W × H × D, incl. mounting plate)
Weight	approx. 500 g (incl. mounting plate, without cables/plugs)

[1] MR/analog 5Vpp

For more technical details please refer to the operating manual which we will gladly provide on request.