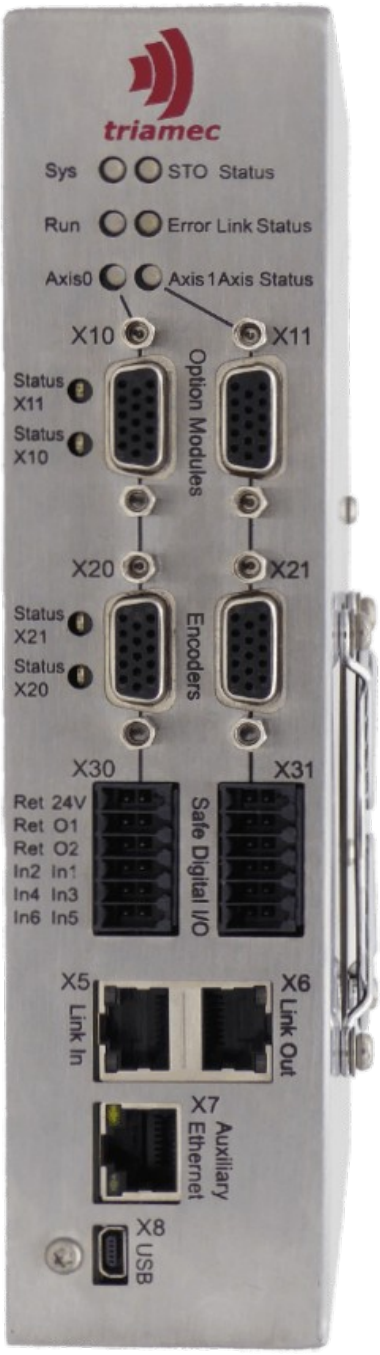
with EtherCAT®

Dual Axis Servo Drive TSD80/TSD130

Highest Dynamics and Precision at 100kHz



The TSD series consists of two complete servo drives in one case.

Current and position control loops operate both at 100kHz and have improved current and position capturing. The control loop is extensible by C# user code, allowing to solve even the most challenging tasks.

Option modules allow for dual-loop control, sin/cos Encoder with 2.5MHz/16bit, analog I/O, FFT, Laser-PWM etc.

Properties

- 100kHz control loop (current/position)
- Freely programmable in C# for control loop extensions and general control purposes
- Improved current resolution
- Up to 2.5MHz 16bit sin/cos-Encoder
- Up to 10kHz set point rate
- Up to 15Arms nominal current (30A peak)
- Safety "Safe Torque Off"
- Tria-Link or EtherCAT fieldbus

Applications

- Machine tool (Optics, Molds, etc.)
- Positioning tables (<1nm stand still)
- Direct drives for highest precision and stiffness
- Ultra precision machining (optics etc.)
- Position controlled high-speed spindles
- Gantries

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Redefining Motion Control

Datasheet TSD80 TSD130

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Specifications

	TSD80-06	TSD80-10	TSD80-15	TSD130-10
Motor configuration	2 Motors, 2 and 3 phase synchronous or asynchronous AC, DC			
Supply, rated / min.-max.	80VDC / 24 - 85VDC			130VDC / 24 - 135VDC
Current nominal / peak	4.2Arms / 6Apk	10Arms / 20Apk	15Arms / 30Apk	10Arms / 20Apk
Thermal time constant	20s			
Output power, cont.	460W	1100W	1650W	1680W
Safety	Safe Torque Off: SIL3/PLe			
Protection	Drive and motor temperature (KTY83/84, PT100, PT1000, PTC-1K); i2t, over voltage, over current			
Position measurement: Analog (per axis)	sin/cos 1Vss: 65536 times interpolation, auto calibration, FIR filtering, max. frequency 500kHz (with option module EH: 2MHz 18bit / 10MHz quadrature)			
Position measurement: Incremental (per axis)	RS422: max. pulse frequency 500 kHz (RS422 Fast: 10MHz), TTL: max pulse frequency 2.5MHz			
Position measurement: Digital (per axis)	Standards: EnDat 2.1 & 2.2; BiSS B, BiSS C, Tamagawa, Nikon (Encoder with additional sin/cos signals recommended)			
Sensorless	Sensorless commutation/control, suitable for fast spindles			
Digital inputs	2x 6 Inputs isolated, 24V, 2x 300µs, 4x 1200µs 2x 4 fast TTL level inputs on the D-Sub encoder connector			
Digital outputs	2x 2 Outputs isolated, 24V, 1A			
Option Modules	2x, Extensions for encoder, analog I/O, FFT, laser PWM, etc.			
Logic supply	24VDC ±10% @ 1.5A max. (incl. 2 Option Modules)			
Fieldbus	EtherCAT 100Mbps / Tria-Link 200Mbps allowing direct transmission of values from one servo drive to others on the same bus.			
Service Interfaces	USB / Ethernet			
Programming within the servo-drive	10kHz hard real time task, freely programmable in C# incl. coupling of axes; additional asynchronous task			
Programming PC side	TAM API for .NET Framework; Beckhoff TwinCAT; Python			
Dimensions	WxHxD: 51 x 230 x 170mm^3			

Subject to change without notice.

Datasheet
TSD80
TSD130

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