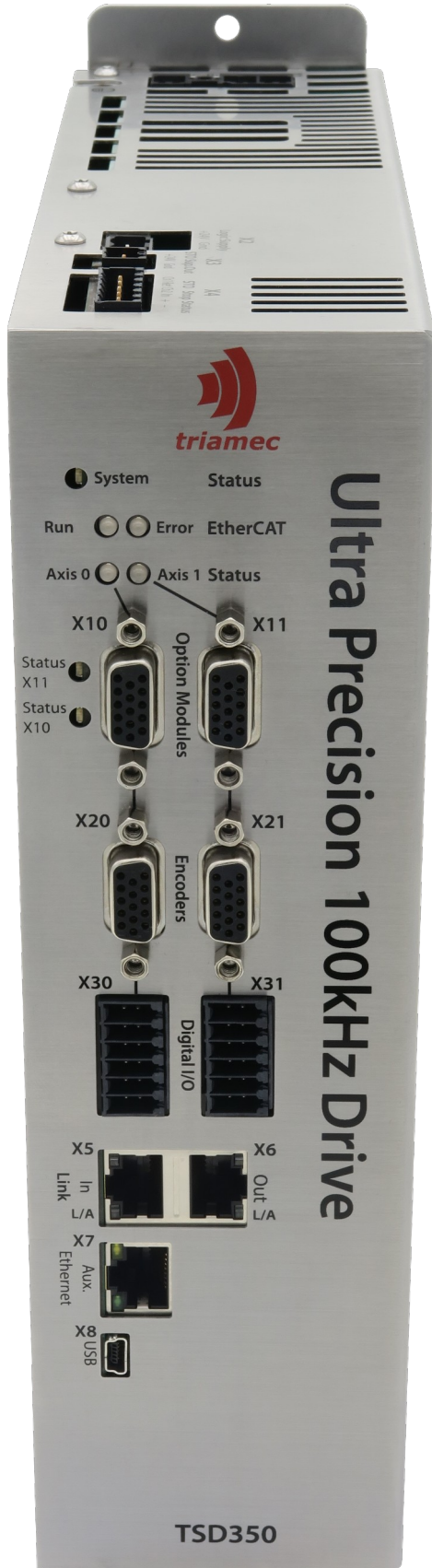


Double Servo-Drive TSD350

Highest Dynamics and Precision at 100kHz



The TSD350 consists of two complete 350V/10A-15A 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.

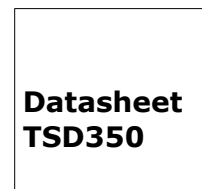
Option modules allow for dual-loop control, sin/cos Encoder with 2.5MHz/16bit, analog I/O, FFT, Laser-PWM etc.

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
- 10 or 15Arms nominal current (20 or 30A peak)
- Safety "Safe Torque Off"
- Tria-Link or EtherCAT fieldbus

Applications

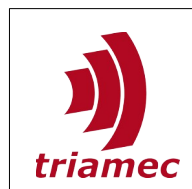
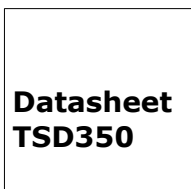
- Machine tool (Optics, Molds, etc.)
- Positioning tables (<1nm stand still)
- Direct drives for highest precision and stiffness
- Ultra precision machining (optics etc.)
- Position controlled high-speed spindles
- Gantry



Specifications

	TSD350-10	TSD350-15
Motor configuration	2 Motors, 2 and 3 phase synchronous or asynchronous AC, DC	
Supply, rated, min.-max.	350V _{DC} , 24 - 380V _{DC}	
Current nominal / peak	10A _{RMS} / 20A _{pk}	15A _{RMS} / 30A _{pk}
Peak current duration	2s	
Output power, cont.	4600W	6900W
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% @ 1.8A 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 inside 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: 68 x 262 x 230mm ³	

Subject to change without notice.



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