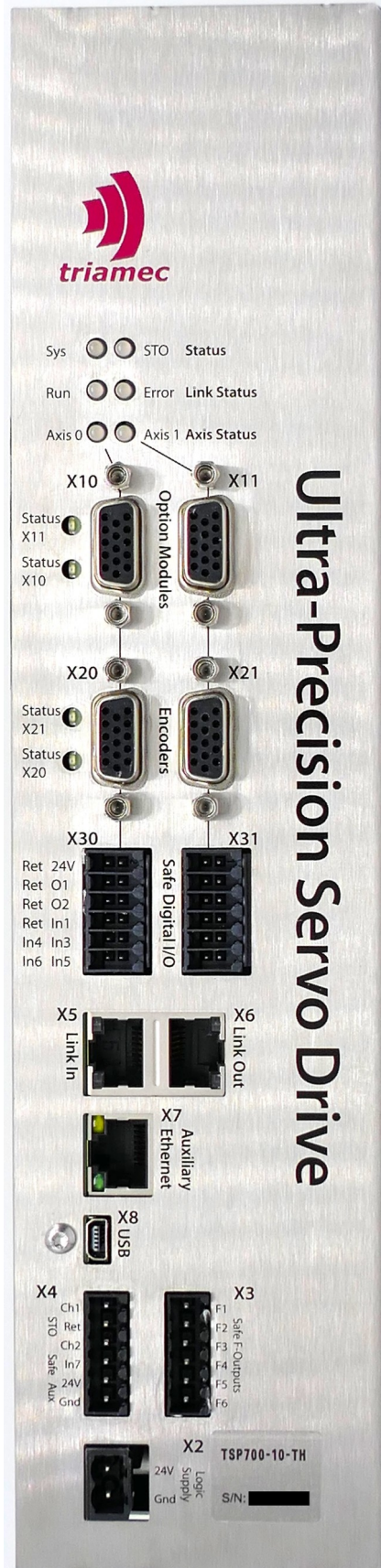


Servo-Drive TSP700

Highest Dynamics and Precision at 100kHz 3-Level PWM



The TSP700 series is unique with its 3-Level PWM technology, ensuring high efficiency and ultra-precision in the most demanding motion tasks.

The integrated AC power supply simplifies the connection to AC power.

Spindle motors can be rotated at up to 360'000 rpm, yet at very low losses and best speed stability.

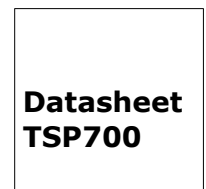
Option Modules are available as for all Triamec Drive products.

Properties

- 100kHz control loop (current & position)
- 3-level PWM power stage
- Freely programmable in C# for control loop extensions and general control purposes
- Up to 2.6MHz 16 bit sin/cos-Encoder
- Up to 10kHz set point rate
- 10, 20 or 40 Arms nominal current
- Safety "Safe Torque Off"
- EtherCAT ready

Applications

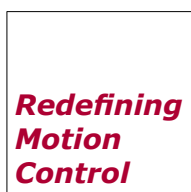
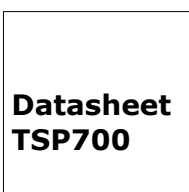
- Machine tool (Optics, Molds, etc.)
- Positioning tables (<1nm stand still)
- Direct drives for highest precision and stiffness
- Ultra-precision machining (optics etc.)
- Position controlled high-speed spindles



Specifications

	TSP 700-10	TSP 700-20	TSP 700-40
Motor configuration	1 Motor, 2 and 3 phase synchronous or asynchronous AC, DC		
Supply, AC rated, DC	3x208-480V _{AC} ±10% (L-L) – 50/60Hz, 50-770V _{DC}		
Current nominal / peak	10A _{RMS} / 20A _{pk}	20A _{RMS} / 40A _{pk}	40A _{RMS} / 80A _{pk}
Peak current duration	2s		
Output power, cont.	9550W	19100W	38200W
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 inputs on the D-Sub encoder connector		
Digital outputs	2x 2 Outputs isolated, 24V, 1A		
Option Modules	Extension for encoder, analog I/O, FFT, laser PWM, etc.		
Logic supply	24VDC ±10%		
	@ 1.5A max.	@ 2.5A max.	
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	69x315x295mm ³		153x315x308mm ³

Subject to change without notice.



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