

Product Specifications

Model		THL300	THL400
Type		Horizontal multi-joint	
No. of controlled axes		4	
Arm length		300mm (125mm + 175mm)	400mm (225mm + 175mm)
Working envelope	Axis 1	±125°	
	Axis 2	±145°	
	Axis 3 (Z-axis)	0 ~ 160mm	
	Axis 4 (Z-axis rotation)	±360°	
Maximum*1 speed	Axis 1	660°/s	
	Axis 2	660°/s	
	Axis 3 (Z-axis)	11200mm/s	
	Axis 4 (Z-axis rotation)	1500°/s	
	Composite	5.1m/s	6.3m/s
Cycle time (with 2kg load)*2		0.48s	0.47s
Maximum payload mass		5kg	
Allowable moment of inertia		0.05kg · m ²	
Positioning*3 repeatability	X-Y	±0.01mm	
	Z (Axis 3)	±0.015mm	
	Axis 4 (Z-axis rotation)	±0.007°	
Hand wiring		8 inputs/8 outputs	
Hand pneumatic joints*4		φ4 ×3 pcs	
Position detection		Absolute	
Robot controller cable		3.5m	
Power capacity		0.7kVA	
Mass		12kg	13kg

*1: Acceleration/deceleration rates may be limited according to the motion pattern, load mass and amount of offset.

*2: When the environment temperature is constant 20°C. Positioning repeatable accuracy in one-direction movement. Not absolute positioning accuracy.

*3: Horizontal 300mm, vertical 25mm, round-trip. Continuous operation is not possible beyond the effective load ratio.

*4: Pneumatic joints are provided on the base. Please refer to the drawings for the details of the pneumatic joints. Pipes to be provided by the customers.

Controller Specifications

TSL3000 Controller	
Series	THL, THE, BAIII
Teach Pendant	TP1000, TP3000
Power Supply	Single phase 190-240VAC @ 50/60Hz
Max Power Capacity	0.7 ~ 1.4 kVA
Dimensions	150W x 266H x 304D
Mass	7kg
Storage	256 programs 6400 points 12800 steps
CE Version	TSL3000E Dimensions change: 320W x 266H x 304D 13kg
USER I/O Count	8/8
SYSTEM I/O Count	13/9
SYSTEM INPUTS	Alarm reset, strobe, program reset, step reset, cycle reset, output reset, start, external servo on, stop, cycle mode, break, low speed, servo off
SYSTEM OUTPUTS	Servo ready, battery alarm, acknowledge, external mode on, system ready, autorun, alarm, cycle end, low speed on
Fieldbus SLAVE options	DeviceNet, Profibus, CC-Link, Ethernet I/P, EtherCat, ProfiNet
Extended I/O Options	TR48-DIOC Module Add 28In/20Out Up to 2 modules can be added to controller
Communications	RS232C (2), Ethernet (TCP/IP), USB
Standard SCOL Functions	Torque control (individual axis), gain control (individual axis), interrupt functions, SPURT function, coordinate calculations, payload command, multi-tasking, AREA output function, NCBOY additional axis control, self-diagnostics
Optional SCOL Functions	Pulse output control, conveyor tracking, vision+conveyor tracking
External Control Standard Functions	HOST Protocol, .dll library, LabView integration support