

## Product Specifications

<b>Arm Length</b>	<b>Full length</b>	450mm
	<b>First arm</b>	200mm
	<b>Second arm</b>	250mm
<b>Range of Motion</b>	<b>First axis</b>	±120°
	<b>Second axis</b>	±145°
	<b>Third axis (Z-axis)</b>	150mm (option: 300mm)
	<b>Fourth axis (Z-axial rotation)</b>	±360°
<b>Maximum Speed</b>	<b>First axis</b>	600°/s
	<b>Second axis</b>	600°/s
	<b>Third axis (Z-axis)</b>	2000mm/s
	<b>Fourth axis (Z-axial rotation)</b>	2000°/s
	<b>Composite speed</b>	7.3m/s
<b>Standard Cycle Time</b>	<b>Horizontal direction: 300 mm</b> <b>Vertical direction: 25 mm, reciprocating</b>	0.30s *1 (with 2 kg weight)
<b>Load</b>	<b>Maximum payload</b>	5kg
	<b>Allowable end moment</b>	0.06kg·m <sup>2</sup> *2
<b>Position Repeatability *3</b>	<b>X, Y (plane surface)</b>	±0.01mm
	<b>Z-axis (vertical)</b>	±0.01mm
	<b>Fourth axis (Z-axial rotation)</b>	±0.005°
<b>Input Signal for Hand</b>		8 inputs, 8 outputs
<b>Air Piping for Hand</b>		φ4×4
<b>Position Detection Method</b>		Absolute encoder mode
<b>Total Weight</b>		26kg
<b>Robot controller cable</b>		Standard: 5m (optional: maximum 25 m)
<b>Controller</b>		→ <a href="#">TS3000</a>

\*1: Horizontal 300 mm, vertical 25mm, round-trip. Continuous operation is not possible beyond the effective load ratio.

\*2: Acceleration/deceleration rates may be limited according to the motion pattern, load mass and amount of offset.

\*3: The table shows unidirectional positioning repeatability at constant ambient temperature, but NOT absolute positioning accuracy.

## Controller Specifications

	<b>TS3000 Controller</b>
<b>Series</b>	TH, THP
<b>Teach Pendant</b>	TP1000, TP3000
<b>Power Supply</b>	Single phase 200-240VAC @ 50/60Hz
<b>Max Power Capacity</b>	2.3~4.8 kVA
<b>Dimensions</b>	290W x 230H x 298D
<b>Mass</b>	13kg
<b>Storage</b>	256 programs 12800 points 25600 steps
<b>CE Version</b>	TS3000E + SFB
<b>USER I/O Count</b>	32/32
<b>SYSTEM I/O Count</b>	13/10
<b>SYSTEM INPUTS</b>	Alarm reset, strobe, program reset, step reset, cycle reset, output reset, start, external servo on, stop, cycle mode, break, low speed, servo off
<b>SYSTEM OUTPUTS</b>	Servo ready, battery alarm, acknowledge, teach mode on, external mode on, system ready, autorun, alarm, cycle end, low speed on
<b>Fieldbus SLAVE options</b>	DeviceNet, Profibus, CC-Link, Ethernet I/P, EtherCat, ProfiNet
<b>Extended I/O Options</b>	TR48-DIOC Module Add 28In/20Out Up to 2 modules can be added to controller
<b>Communications</b>	RS232C (3), Ethernet (TCP/IP), USB
<b>Standard SCOL Functions</b>	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, pulse output control, conveyor tracking, vision+conveyor tracking
<b>Optional SCOL Functions</b>	All options included as standard.
<b>External Control Standard Functions</b>	HOST Protocol, .dll library, LabView integration support