Product Specifications

Arm Length	**Full length**	180mm
	First arm	70mm
	Second arm	110mm
Range of Motion	**First axis**	±120°
	Second axis	±140°
	Third axis (Z-axis)	120mm
	Fourth axis (Z-axial rotation)	±360°
Maximum Speed	**First axis**	533°/s
	Second axis	480°/s
	Third axis (Z-axis)	1013mm/s
	Fourth axis (Z-axial rotation)	1186°/s
	Composite speed	2.6m/s
Standard Cycle Time	**Horizontal direction: 100 mm Vertical direction: 25 mm, reciprocating**	0.35s (with 1 kg weight) *1
Load	**Maximum payload**	2kg
	Allowable end moment	0.01kg·m2 *2
Position Repeatability *3	**X, Y (plane surface)**	±0.01mm
	Z-axis (vertical)	±0.01mm
	Fourth axis (Z-axial rotation)	±0.005°
Input Signal for Hand		5inputs°4outputs
Air Piping for Hand		φ4×4
Position Detection Method		Absolute encoder mode
Total Weight		Approx. 9kg
Robot controller cable		Standard: 3m (optional: maximum 10 m)
Controller		→ TS1000

*1: Horizontal 100 mm, vertical 25mm, round-trip.

*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

	TS3000 Controller
Series	TH, THP
Teach Pendant	TP1000, TP3000
Power Supply	Single phase 200-240VAC @ 50/60Hz
Max Power Capacity	2.3~4.8 kVA
Dimensions	290W x 230H x 298D
Mass	13kg
Storage	256 programs 12800 points 25600 steps
CE Version	TS3000E + SFB
USER I/O Count	32/32
SYSTEM I/O Count	13/10
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, teach mode on, 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 (3), 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, pulse output control, conveyor tracking, vision+conveyor tracking
Optional SCOL Functions	All options included as standard.
External Control Standard Functions	HOST Protocol, .dll library, LabView integration support