

### SCARA Robots TH Series

# THP700

## Continuous 24-Hour Fast-Cycle Operation

0.345 seconds in short bursts, or 120 cycles per minute continuously in 24 hour operations.

#### Robot Specifications



Model	THP700	
Type	Horizontal multi-joint	
Number of axis	4	
Arm length	700mm(350mm+350mm)	
Working envelope	Axis 1	±120°
	Axis 2	±145°
	Axis 3(Z-axis)	0~150mm [300mm(option)]
	Axis 4(Z-axis rotation)	±360°
Maximum speed	Axis 1	340°/s
	Axis 2	600°/s
	Axis 3(Z-axis)	2050mm/s
	Axis 4(Z-axis rotation)	1800°/s
	Composite	7.8m/s
Standard cycle time(with 2kg load) <sup>*1</sup>	0.345sec.	
Maximum payload mass <sup>*2</sup>	10kg	
Allowable moment of inertia <sup>*2</sup>	0.1kg·m <sup>2</sup>	
Positioning repeatability	X-Y	±0.03mm
	Axis 3(Z-axis)	±0.02mm
<sup>*3</sup>	Axis 4(Z-axis rotation)	±0.02°
	Hand wiring	8 inputs/8 outputs
Hand piping	φ6×4pcs	
Position Detection	Absolute Encoders	
Robot controller cable	5m (optional:Max. 25m)	
Mass	57kg	
Options(under development)	Wash-down Design(IP65), Cleanroom Design, Z-axis long stroke,Z-axis Cap, Protective Bellows for Z-Axis	

\*1:Continuous operation of standard cycle motion pattern is not possible beyond the effective load ratio.  
( Horizontal 300mm,vertical 25mm, round-trip, coarse positioning )

\*2:Maximum speed rates and acceleration rates are limited depending on motion patterns, payload mass, and offset value.

\*3:When the environment temperature is constant.

#### Robot Specifications



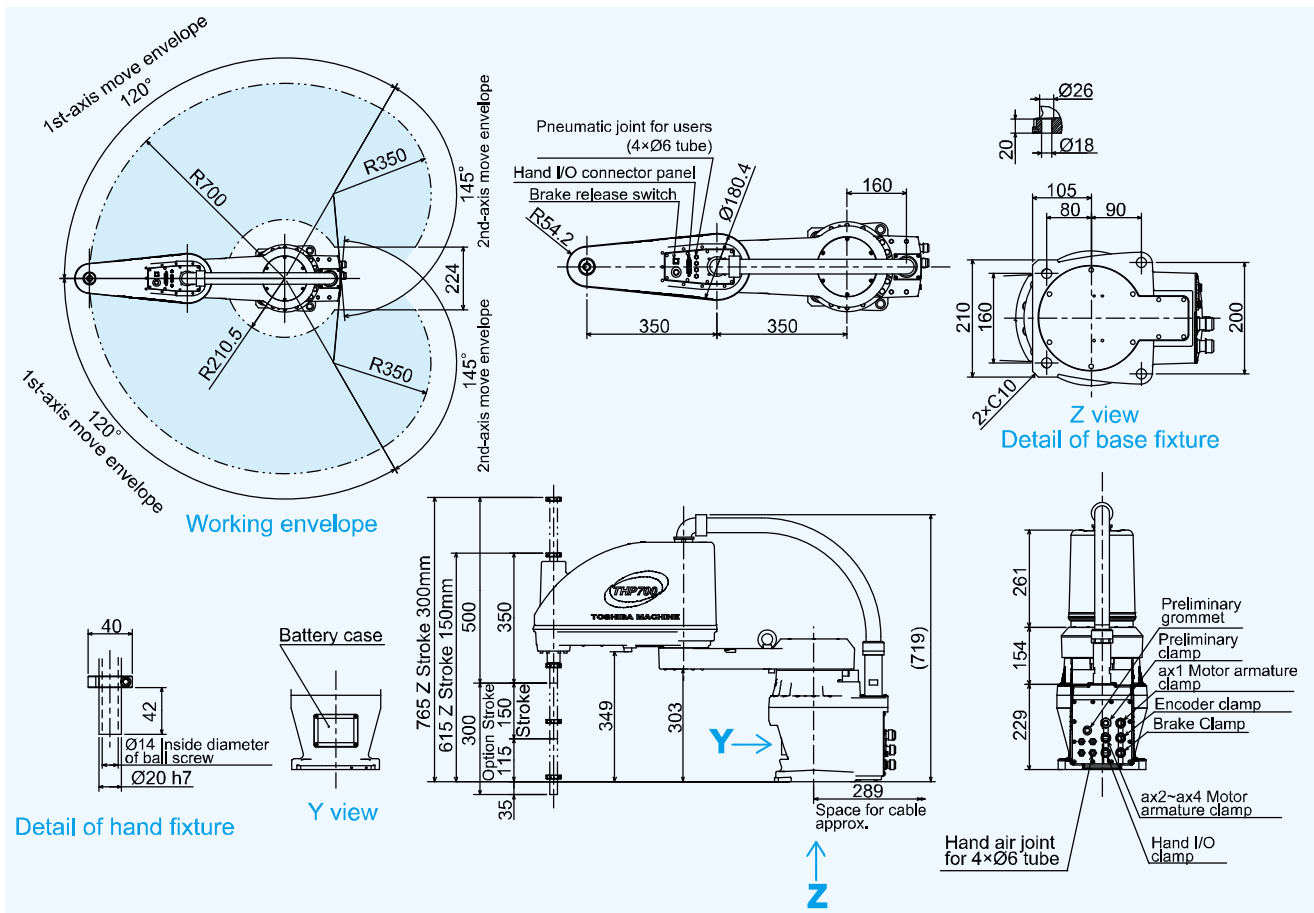
Controller  
TS3100

TEACH PENDANT(OPTION)

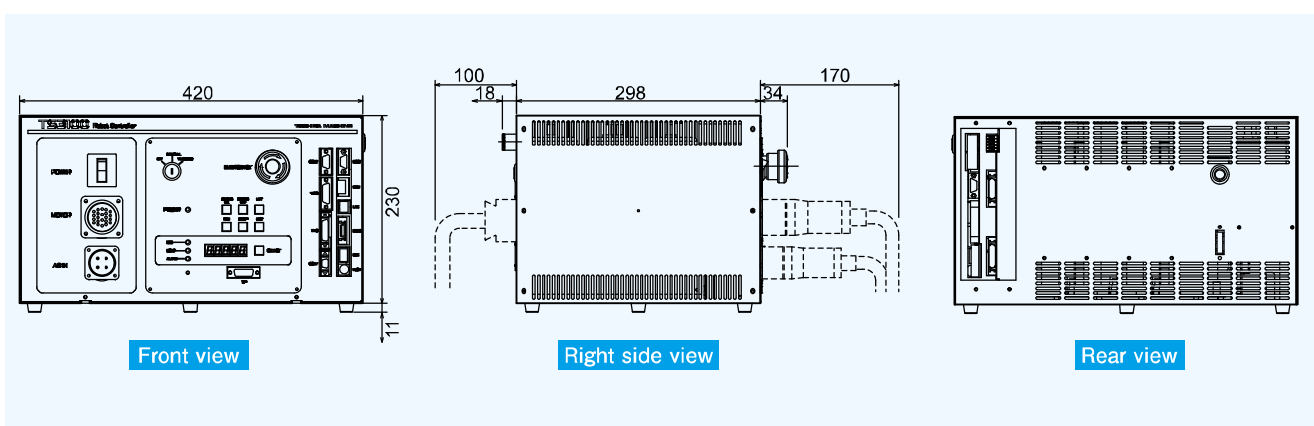
Model	TS3100
No.of axis	No. of simultaneously controlled axes: 8 axes (2 additional axes under development)
Operation mode	PTP,CP(linear·Circular),Short-cut,Arch motion
Storage capacity	Total: 6400 points + 12800 steps 1 program: 2000 points + 3000 steps
No.of programs	Max.256(247 user files + 9 system files)
Programming language	SCOL(proprietary,similar to BASIC)
Teaching unit(option)	Teach pendant TP1000, with 5-meter cable (Program can be written on PC)
External I/O	32 inputs/32 outputs
Hand control signals	8 inputs/8 outputs
External operation signal(exclusive)	Inputs:Program selection, start, stop, reset, etc Outputs:Servo-On status, emergency stop, ready for operation, malfunction alarm, etc
Serial communication port	RS-232C: 2 ports, Ethernet: 1 port <sup>*4</sup>
Other functions	Torque control,Interruptive functions, self-diagnosis, I/O control and communications during motion, Coordinate calculations, Built-in PLC, etc
Power supply	Single phase AC200V~240V 50/60Hz 4.8kVA
Outer dimensions and mass	420W×230H×298D(mm),17kg
PC software(option)	TSPC:Program editor,Teaching,Remote operation,etc
Options	I/O extension, I/O cables, Field-Network(CC-Link,DeviceNet,Profibus) <sup>*4</sup>
External Memory	USB memory stick

\*4:Ethernet is a registered trademark of XEROX Corp. in the U.S.A.  
CC-Link is a registered trademark of CC-Link Partner Association.  
DeviceNet is a registered trademark of ODVA,  
Profibus is a registered trademark of Profibus User Organization.

## THP700 [External View]



## TS3100 [External View]



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Caution

Before operating the industrial robot, read through and completely understand the instruction manuals.

■ The contents included in this catalog are subject to change without prior notice to reflect improvements.