

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) ^{*1} | 0.345sec. | |
| Maximum payload mass ^{*2} | 10kg | |
| Allowable moment of inertia ^{*2} | 0.1kg·m ² | |
| Positioning repeatability | X-Y | ±0.03mm |
| | Axis 3(Z-axis) | ±0.02mm |
| ^{*3} | 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 ^{*4} |
| 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) ^{*4} |
| 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.