









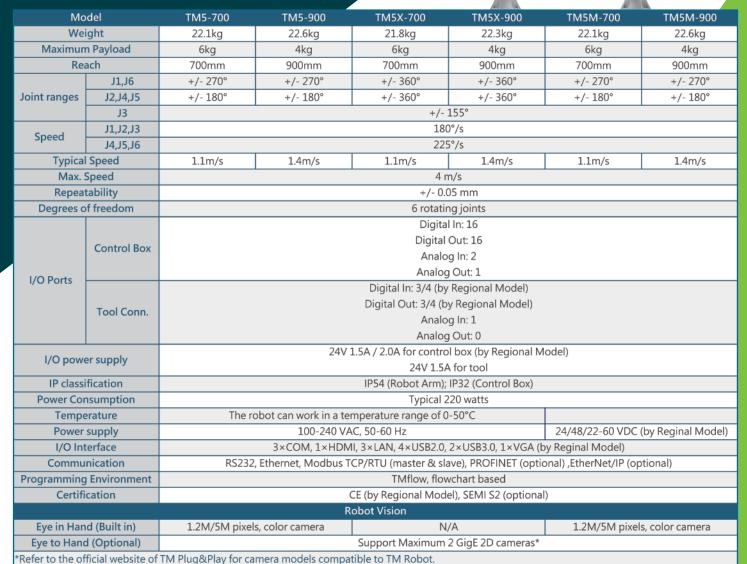
TM5

The most intelligent collaborative robot with built-in vision



Specification

SEMI S2 ISO 10218-1:2011 ISO/TS 15066:2016 **(€**







TM12 TM14



High payload with extended reach

Specification

SEMI S2 ISO 10218-1:2011 ISO/TS 15066:2016 **(€**



| Model | | TM14 | TM12 | TM14X | TM12X | TM14M | TM12M |
|--|-------------|---|---|----------|----------|----------|----------|
| Weight | | 32.5kg | 32.8kg | 32.2kg | 32.5kg | 32.5kg | 32.8kg |
| Maximum Payload | | 14kg | 12kg | 14kg | 12kg | 14kg | 12kg |
| Reach | | 1100mm | 1300mm | 1100mm | 1300mm | 1100mm | 1300mm |
| Joint ranges | J1,J6 | +/- 270° | +/- 270° | +/- 360° | +/- 360° | +/- 270° | +/- 270° |
| | J2,J4,J5 | +/- 180° | +/- 180° | +/- 360° | +/- 360° | +/- 180° | +/- 180° |
| | J3 | +/- 163° | +/- 166° | +/- 163° | +/- 166° | +/- 163° | +/- 166° |
| Speed | J1,J2 | 120°/s | | | | | |
| | J3,J6 | 180°/s | | | | | |
| | J4,J5 | 150°/s | 180°/s | 150°/s | 180°/s | 150°/s | 180°/s |
| Typical | Speed | 1.1m/s | 1.3m/s | 1.1m/s | 1.3m/s | 1.1m/s | 1.3m/s |
| Max. Speed | | 4 m/s | | | | | |
| Repeatability | | +/- 0.1 mm | | | | | |
| Degrees of freedom | | 6 rotating joints | | | | | |
| I/O Ports | Control Box | Digital In: 16 | | | | | |
| | | Digital Out: 16 | | | | | |
| | | Analog In: 2 | | | | | |
| | | Analog Out: 1 | | | | | |
| | Tool Conn. | Digital In: 4 | | | | | |
| | | Digital Out: 4 | | | | | |
| | | Analog In: 1 | | | | | |
| | | Analog Out: 0 | | | | | |
| I/O power supply | | 24V 2.0A for control box and 24V 1.5A for tool | | | | | |
| IP classification | | IP54 (Robot Arm); IP32 (Control Box) | | | | | |
| Power Consumption | | Typical 300 watts | | | | | |
| Temperature | | The robot can work in a temperature range of 0-50°C | | | | | |
| Power supply | | 100-240 VAC, 50-60 Hz 22-60 VDC | | | | | |
| I/O Interface | | 3×COM, 1×HDMI, 3×LAN, 4×USB2.0, 2×USB3.0 | | | | | |
| Communication | | RS232, Ethernet, Modbus TCP/RTU (master & slave), PROFINET (optional), EtherNet/IP (optional) | | | | | |
| Programming Environment | | TMflow, flowchart based | | | | | |
| Certification | | CE, SEMI S2 (optional) | | | | | |
| Robot Vision | | | | | | | |
| Eye in Hand (Built in) | | 1.2M/5M pixel | 1.2M/5M pixels, color camera N/A 1.2M/5M pixels, color camera | | | | |
| Eye to Hand (Optional) | | Support Maximum 2 GigE 2D cameras* | | | | | |
| *Refer to the official website of TM Plug&Play for camera models compatible to TM Robot. | | | | | | | |
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