







TM5

TM AI COBOT

Native Al engine + Robotic arm + Vision system

Perfectly in one





				4					
Model		TM5-700	TM5-700 TM5-900		TM5M-900				
Weight		22.1kg	22.1kg 22.6kg		22.6kg				
Maximum Payload		6kg			4kg				
Reach		700mm	900mm	700mm	900mm				
Joint ranges	J1,J6	+/- 270°	+/- 270°	+/- 270°	+/- 270°				
	J2,J4,J5	+/- 180°	+/- 180°	+/- 180°	+/- 180°				
	J3		+/- 155°						
Carrel	J1,J2,J3		180°/s						
Speed	J4,J5,J6		225°/s						
Typical Speed		1.1m/s	1.4m/s	1.1m/s	1.4m/s				
Max.	Speed		4 m/s						
Repea	atability	+/- 0.05 mm							
Degree Of Freedom		6 rotating joints							
		Digital In: 16							
	Controller	Digital Out: 16							
	Control box		Analog In: 2						
1/0		Analog Out: 1							
I/O			Digital In: 4						
	T 16	Digital Out: 4							
	Tool Conn.	Analog In: 1							
		Analog Out: 0							
I/O Power Supply		24V 2.0A for control box							
		24V 1.5A for tool							
IP Classification		IP54 (Robot Arm); IP32 (Control Box)							
Power Consumption		Typical 220 watts							
Temperature		The robot can work in a temperature range of 0-50°C							
Cleanliness		ISO Class 3							
	nliness		ISO C	<u> </u>					
	· Supply	100-240 VA		lass 3	50 VDC				
Power		100-240 VA		lass 3	50 VDC				
Power I/O In	Supply		C, 50-60 Hz	lass 3 22-(N, 4×USB2.0, 2×USB3.0					
Power I/O In	Supply terface		C, 50-60 Hz 3×COM, 1×HDMI, 3×LA	lass 3 22-6 N, 4×USB2.0, 2×USB3.0 ave), PROFINET (optional) ,Eth					
Power I/O In Commu	Supply terface unication		C, 50-60 Hz 3×COM, 1×HDMI, 3×LA Modbus TCP/RTU (master & sla	lass 3 22-6 IN, 4×USB2.0, 2×USB3.0 ave), PROFINET (optional) ,Eth					
Power I/O In Commu	Supply sterface unication g Environment		C, 50-60 Hz 3×COM, 1×HDMI, 3×LA Modbus TCP/RTU (master & sla TMflow, flov	lass 3 22-6 IN, 4×USB2.0, 2×USB3.0 ave), PROFINET (optional) ,Eth					
Power I/O In: Commu Programming Certifi	Supply sterface unication g Environment	RS232, Ethernet, I	C, 50-60 Hz 3×COM, 1×HDMI, 3×LA Modbus TCP/RTU (master & sla TMflow, flov CE, SEMI S2 AI & Vision* (1) Classification, Object D	lass 3 22-6 N, 4×USB2.0, 2×USB3.0 ave), PROFINET (optional) ,Ether that based 2 (optional) etection, Segmentation	erNet/IP (optional)				
Power I/O In: Commu Programming Certifi	terface unication g Environment	RS232, Ethernet, I	C, 50-60 Hz 3×COM, 1×HDMI, 3×LA Modbus TCP/RTU (master & sla TMflow, flow CE, SEMI S2 AI & Vision* (1)	lass 3 22-6 N, 4×USB2.0, 2×USB3.0 ave), PROFINET (optional) ,Ether that based 2 (optional) etection, Segmentation	erNet/IP (optional)				
Power I/O In: Commu Programming Certifi Al Fui	r Supply Iterface unication g Environment fication inction	RS232, Ethernet, I	C, 50-60 Hz 3×COM, 1×HDMI, 3×LA Modbus TCP/RTU (master & sla TMflow, flov CE, SEMI S2 AI & Vision* (1) Classification, Object D	lass 3 22-6 N, 4×USB2.0, 2×USB3.0 ave), PROFINET (optional) ,Ether than the sed (optional) etection, Segmentation fect Detection, Measurement,	erNet/IP (optional)				
Power I/O In: Commu Programming Certifi Al Fui	r Supply Iterface unication g Environment fication	RS232, Ethernet, I	C, 50-60 Hz 3×COM, 1×HDMI, 3×LA Modbus TCP/RTU (master & sla TMflow, flow CE, SEMI S; AI & Vision* (1) Classification, Object D (2D Barcode Reading, OCR, De	lass 3 22-6 N, 4×USB2.0, 2×USB3.0 ave), PROFINET (optional) ,Ether that based 2 (optional) etection, Segmentation fect Detection, Measurement, ag: 0.1 mm* (2)	erNet/IP (optional) Assembly Check				
Power I/O In Commu Programming Certifi Al Fu Appli Positionin	r Supply Iterface unication g Environment fication inction	RS232, Ethernet, I Positioning, 1D, TM Landmark 3D Positi	C, 50-60 Hz 3×COM, 1×HDMI, 3×LA Modbus TCP/RTU (master & sla TMflow, flow CE, SEMI SZ AI & Vision* (1) Classification, Object D (2D Barcode Reading, OCR, De	lass 3 22-6 N, 4×USB2.0, 2×USB3.0 ave), PROFINET (optional) ,Ether of the second of	erNet/IP (optional) Assembly Check i): 0.24/0.53/1.00 mm* (2)				

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





^{* &}lt;sup>(1)</sup> No built-in vision robot arms TM5X-700, TM5X-900 are also available.

* ⁽²⁾ The data in this table are measured by TM laboratory and the working distance is 100mm. It should be noted that in practical applications, the relevant values may be different due to factors such as the on-site ambient light source, object characteristics, and vision programming methods that will affect the change in accuracy.

 $^{^{\}star\,(3)}$ Refer to the official website of TM Plug&Play for camera models compatible to TM Robot.





TM12/TM14/TM16/TM20

TM AI COBOT with built-in vision

The best and smartest choice for smart factory

Weight 32.8kg 47.180	Model		TM12	TM14	TM16	TM20	TM12M	TM14M	TM16M	TM20M		
Reach	Weight		32.8kg	32.5kg	32kg	32.8kg	32.8kg	32.5kg	32kg	32.8kg		
July	Maximum Payload		12kg	14kg	16kg	20kg	12kg	14kg	16kg	20kg		
Joint ranges J2,J4,J5 +/- 180" +/-	Re	ach	1300mm	1100mm	900mm	1300mm	1300mm	1100mm	900mm	1300mm		
13	Joint ranges	J1,J6	+/- 270°	+/- 270°	+/- 270°	+/- 270°	+/- 270°	+/- 270°	+/- 270°	+/- 270°		
J1,J2 120°/s 120°/s 120°/s 120°/s 120°/s 120°/s 120°/s 120°/s 120°/s 180°/s 180°/s 180°/s 180°/s 180°/s 180°/s 180°/s 120°/s 180°/s 180°/s 120°/s 180°/s 180°/s 120°/s 180°/s 120°/s 180°/s 120°/s 180°/s 150°/s 180°/s 150°/s 180°/s 150°/s 180°/s 150°/s 180°/s 1		J2,J4,J5	+/- 180°	+/- 180°	+/- 180°	+/- 180°	+/- 180°	+/- 180°	+/- 180°	+/- 180°		
J3		J3	+/- 166°	+/- 163°	+/- 155°	+/- 166°	+/- 166°	+/- 163°	+/- 155°	+/- 166°		
Speed J4 180"/s 150"/s 180"/s 150"/s 180"/s 150"/s 180"/s 150"/s 180"/s 150"/s 180"/s 180"/		J1,J2	120°/s	120°/s	120°/s	90°/s	120°/s	120°/s	120°/s	90°/s		
J5		J3	180°/s	180°/s	180°/s	120°/s	180°/s	180°/s	180°/s	120°/s		
180°/s 180°/s 180°/s 180°/s 125°/s 180°/s 180°/s 180°/s 225°/s	Speed	J4	180°/s	150°/s	180°/s	150°/s	180°/s	150°/s	180°/s	150°/s		
Typical Speed 1.3m/s 1.1m/s 1.3m/s 1.3m/s 1.3m/s 1.1m/s 1.3m/s 1.		J5	180°/s	150°/s	180°/s	180°/s	180°/s	150°/s	180°/s	180°/s		
Max. Speed Repeatability Degree Of Freedom Control box Control box Control box Control box Digital In: 16 Digital Out: 16 Analog In: 2 Analog Out: 1 Digital In: 4 Digital In: 4 Digital In: 4 Digital Out: 4 Analog In: 1 Analog Out: 0 I/O Power Supply 1/O Power Supply 1/O Power Supply 1/O Power Consumption Power Consumption Temperature The robot can work in a temperature range of 0-50°C Cleanliness Power Supply 100-240 VAC, 50-60 Hz I/O Interface Communication R5232, Ethernet, Modbus TCP/RTU/(master & slave), PROFINET(Optional), EtherNet/IP(Optional) Programming Environment Certification Al Function Al Function Application Positioning Accuracy TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) TM Landmark 4 Uor La		J6	180°/s	180°/s	180°/s	225°/s	180°/s	180°/s	180°/s	225°/s		
Repeatability Degree Of Freedom 6 rotation joints Digital In: 16 Digital Out: 16 Analog In: 2 Analog Out: 1 Digital Out: 4 Analog In: 1 Analog Out: 0 I/O Power Supply 10/O Power Supply 10/O Power Supply 10/O Power Supply 10/O Power Consumption 10/O Power Consumption 10/O Power Consumption 10/O Power Consumption 10/O Power Supply 10/O Power Supply 10/O Power Consumption 10/O Power Supply 10/O Power Consumption 10/O Power Consumption 10/O Power Supply 10/O Power Supply 10/O Power Consumption 10/O Power Supply 10/O Pow	Typica	Speed	1.3m/s	1.1m/s	1.1m/s	1.3m/s	1.3m/s	1.1m/s	1.1m/s	1.3m/s		
Degree Of Freedom Control box Control box Digital In: 16 Digital Out: 16 Analog In: 2 Analog Out: 1 Digital In: 4 Digital In: 4 Digital Out: 4 Analog Out: 0 I/O Power Supply 24V 2.0A for control box and 24V 1.5A for tool IP Classification IP 54(Robot Arm); IP32(Control Box) Power Consumption Typical 300 watts Temperature The robot can work in a temperature range of 0-50°C Cleanliness ISO Class 3 Power Supply 100-240 VAC, 50-60 Hz 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 Certification CE, SEMI S2 (Option) Al & Vision* Al Function Application Positioning, 1D/2D Barcode Reading, OCR, Defect Detection, Measurement, Assembly Check 2D Positioning 0.1 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) TM Landmark 3D Positioning Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2)	Max.	Speed	4 m/s									
Digital In: 16 Digital Out: 16 Analog Out: 1 Digital In: 4 Digital In: 4 Digital In: 4 Digital In: 4 Digital Out: 4 Analog Out: 0 I/O Power Supply I/O Power Supply I/O Power Supply I/O Power Consumption IP Classification Power Consumption Temperature The robot can work in a temperature range of 0-50°C Cleanliness Power Supply 100-240 VAC, 50-60 Hz 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 Certification CE, SEMI S2 (Option) Al & Vision* □ Al & Visi	Repea	tability	+/- 0.1 mm									
Control box Digital Out: 16	Degree O	Degree Of Freedom		6 rotation joints								
Analog In: 2 Analog Out: 1 Digital In: 4 Digital Out: 4 Analog Out: 0 I/O Power Supply I/O Power Su		Control box		Digital In: 16								
Analog Dut: 1 Digital In: 4 Digital Out: 4 Analog Out: 0 I/O Power Supply 1/O Power Supply 24V 2.04 for control box and 24V 1.54 for tool IP Classification Power Consumption Typical 300 watts Temperature The robot can work in a temperature range of 0-50°C Cleanliness Power Supply 100-240 VAC, 50-60 Hz 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 Certification CE, SEMI S2 (Option) Al & Vision* (1) Al Function Application Positioning Accuracy TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞			· · · · · · · · · · · · · · · · · · ·									
Tool Conn. Digital In: 4 Digital Out: 4 Analog Un: 1 Analog Out: 0 I/O Power Supply 1/O Power Supply Digital Out: 4 Analog Out: 0 IP Classification Power Consumption Temperature The robot can work in a temperature range of 0-50°C Cleanliness Power Supply 100-240 VAC, 50-60 Hz 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 Certification Al & Vision* (1) Al Function Application Positioning, 1D/2D Barcode Reading, OCR, Defect Detection, Measurement, Assembly Check 2D Positioning 0.1 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞			Analog In: 2									
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 Cleanliness ISO Class 3 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 (Option) Al & Vision* (I) Al Function Positioning, 1D/2D Barcode Reading, OCR, Defect Detection, Measurement, Assembly Check 2D Positioning 3.1 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm); 0.24/0.53/1.00 mm* (2) Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞	1/0		Analog Out: 1									
I/O Power Supply 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 Cleanliness ISO Class 3 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 Cet, SEMI S2 (Option) Al & Vision* (1) Al Function Application Positioning, 1D/2D Barcode Reading, OCR, Defect Detection, Measurement, Assembly Check 2D Positioning: 0.1 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞	1/0		Digital In: 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 Power Consumption Typical 300 watts Temperature The robot can work in a temperature range of 0-50°C Cleanliness ISO Class 3 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 Certification Al & Vision* (1) Al & Vision* (2) Al Sylision* (3) Classification, Object Detection, Segmentation Positioning Accuracy Positioning Accuracy TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞			Digital Out: 4									
I/O Power Supply 1/O Power Consumption 1/O Elassification 1/O Interface 1/O Elassification 1/O Interface 1/O			Analog In: 1									
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 Cleanliness ISO Class 3 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 Certification CE, SEMI S2 (Option) AI & Vision* (1) Classification, Object Detection, Segmentation Application Positioning, 1D/2D Barcode Reading, OCR, Defect Detection, Measurement, Assembly Check 2D Positioning: 0.1 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞			•									
Typical 300 watts Temperature The robot can work in a temperature range of 0-50°C Cleanliness ISO Class 3 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 Certification Al & Vision* (1) Al Function Application Positioning, 1D/2D Barcode Reading, OCR, Defect Detection, Measurement, Assembly Check 2D Positioning: 0.1 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞	I/O Pow	I/O Power Supply										
Temperature The robot can work in a temperature range of 0-50°C Cleanliness ISO Class 3 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 (Option) AI & Vision* (1) AI Function Application Positioning, 1D/2D Barcode Reading, OCR, Defect Detection, Measurement, Assembly Check 2D Positioning: 0.1 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞	IP Classification		IP54(Robot Arm); IP32(Control Box)									
Cleanliness 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 (Option) AI & Vision* (1) Classification, Object Detection, Segmentation Application Positioning, 1D/2D Barcode Reading, OCR, Defect Detection, Measurement, Assembly Check Positioning Accuracy 2D Positioning: 0.1 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞	Power Consumption		Typical 300 watts									
Power Supply 100-240 VAC, 50-60 Hz 22-60 VDC 1/O Interface 3×COM, 1×HDMI, 3×LAN, 4×USB2.0, 2×USB3.0 RS232, Ethernet, Modbus TCP/RTU(master & slave), PROFINET(Optional), EtherNet/IP(Optional) Programming Environment TMflow, flowchart based Certification CE, SEMI S2 (Option) Al & Vision* (1) Al Function Application Positioning, 1D/2D Barcode Reading, OCR, Defect Detection, Measurement, Assembly Check 2D Positioning: 0.1 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞	Temperature											
I/O Interface 3×COM, 1×HDMI, 3×LAN, 4×USB2.0, 2×USB3.0 RS232, Ethernet, Modbus TCP/RTU(master & slave), PROFINET(Optional), EtherNet/IP(Optional) Programming Environment TMflow, flowchart based Certification CE, SEMI S2 (Option) Al & Vision* (1) Al Function Classification, Object Detection, Segmentation Application Positioning, 1D/2D Barcode Reading, OCR, Defect Detection, Measurement, Assembly Check 2D Positioning: 0.1 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞	Cleanliness		ISO Class 3									
Communication RS232, Ethernet, Modbus TCP/RTU(master & slave), PROFINET(Optional), EtherNet/IP(Optional) Programming Environment TMflow, flowchart based Certification CE, SEMI S2 (Option) AI & Vision* (1) AI Function Classification, Object Detection, Segmentation Application Positioning, 1D/2D Barcode Reading, OCR, Defect Detection, Measurement, Assembly Check 2D Positioning: 0.1 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞	Power Supply		100-240 VAC, 50-60 Hz 22-60 VDC									
Programming Environment Certification CE, SEMI S2 (Option) AI & Vision* (1) AI Function Classification, Object Detection, Segmentation Application Positioning, 1D/2D Barcode Reading, OCR, Defect Detection, Measurement, Assembly Check 2D Positioning: 0.1 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞	,		3×COM, 1×HDMI, 3×LAN, 4×USB2.0, 2×USB3.0									
Certification CE, SEMI S2 (Option) AI & Vision* (1) AI Function Classification, Object Detection, Segmentation Application Positioning, 1D/2D Barcode Reading, OCR, Defect Detection, Measurement, Assembly Check 2D Positioning: 0.1 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞	Communication		RS232, Ethernet, Modbus TCP/RTU(master & slave), PROFINET(Optional), EtherNet/IP(Optional)									
AI & Vision* (1) AI Function Classification, Object Detection, Segmentation Application Positioning, 1D/2D Barcode Reading, OCR, Defect Detection, Measurement, Assembly Check 2D Positioning: 0.1 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞			TMflow, flowchart based									
Al Function Application Application Positioning, 1D/2D Barcode Reading, OCR, Defect Detection, Measurement, Assembly Check 2D Positioning: 0.1 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞	Certification		, , , , , , , , , , , , , , , , , , , ,									
Application Positioning, 1D/2D Barcode Reading, OCR, Defect Detection, Measurement, Assembly Check 2D Positioning: 0.1 mm* ⁽²⁾ TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* ⁽²⁾ Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞												
Positioning Accuracy 2D Positioning: 0.1 mm* (2) TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞												
TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞	Appli	Application										
TM Landmark 3D Positioning (Working Point away from Landmark 100/200/300mm): 0.24/0.53/1.00 mm* (2) Eye in Hand (Built in) Auto-focused color camera with 5M resolution, Working distance 100 mm ~ ∞	Positionin	Positioning Accuracy										
										mm* ⁽²⁾		
Eye to Hand (Optional) Support Maximum 2× GigE 2D cameras or 1× GigE 2D Camera + 1× 3D Camera* (3)			Auto-focused color camera with 5M resolution, Working distance 100 mm $\sim \infty$									
	Eye to Hand (Optional)		Support Maximum 2× GigE 2D cameras or 1 × GigE 2D Camera + 1 × 3D Camera* $^{(3)}$									

 $^{^{\}star\,(1)}$ No built-in vision robot arms TM12X,TM14X, TM16X, TM20X are also available.

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



^{* &}lt;sup>(2)</sup> The data in this table are measured by TM laboratory and the working distance is 100mm. It should be noted that in practical applications, the relevant values may be different due to factors such as the on-site ambient light source, object characteristics, and vision programming methods that will affect the change in accuracy.

 $^{^{\}star\,(3)}$ Refer to the official website of TM Plug&Play for camera models compatible to TM Robot.