

TM5

Product Name		TM5-700		TM5X-700		TM5-900		TM5X-900	
Power Source		AC	DC	AC	DC	AC	DC	AC	DC
Weight (kg)		22.1		21.8		22.6		22.3	
Controller Weight (kg)		13.5	14.5	13.5	14.5	13.5	14.5	13.5	14.5
Max Payload (kg)		6				4			
Reach (mm)		700				900			
Mounting		Wall, Table, Ceiling							
Average Speed (m/s)		1.1				1.4			
Joint Range	Joint 1	±270°		±360°		±270°		±360°	
	Joint 2, 4, 5	±180°		±360°		±180°		±360°	
	Joint 3	±155°							
	Joint 6	±270°		±360°		±270°		±360°	
Joint Speeds	Joint 1, 2, 3	180°/s							
	Joint 4, 5, 6	225°/s							
Repeatability (mm)		±0.05							
Ingress Protection		IP54 (robot arm), IP32 (control box), IP40 (robot stick)							
Cleanroom Class		ISO Class 3							
Operating Temperature and Humidity		0 to 50°C, 85% max. (with no condensation)							
Storage Temperature and Humidity		-20 to 60°C, 75% max. (with no condensation)							
Operating and Storage Environment		No corrosive gases or exposure to water-soluble cutting oil. *1							
Motor Power Supply		100 to 240 VAC, 50/60 Hz	22 to 60 VDC	100 to 240 VAC, 50/60 Hz	22 to 60 VDC	100 to 240 VAC, 50/60 Hz	22 to 60 VDC	100 to 240 VAC, 50/60 Hz	22 to 60 VDC
Robot Arm Cable Length		3 m or 12 m	1.5 m	3 m or 12 m	1.5 m	3 m or 12 m	1.5 m	3 m or 12 m	1.5 m
I/O Ports	Control Box	Digital In: 16, Digital Out: 16, Analog In: 2, Analog Out: 1							
	Tool	Digital In: 4, Digital Out: 4, Analog In: 1, Analog Out: 0							
I/O Interface		COM: 3, HDMI: 1, LAN: 3, USB2.0: 4, USB3.0: 2							
Communication		RS232, Ethernet (master), Modbus TCP/RTU (master & slave), PROFINET (optional), EtherNet/IP (optional)							
I/O Power Supply		24 VDC 2.0 A (control box) / 24 VDC 1.5 A (tool)							
Programming Environment		TMflow, flowchart based							
Integrated Camera Available		5 MP, color		None		5 MP, color		None	
SEMI S2 Certified *2 Available		No	Yes	No	Yes	No	Yes	No	Yes
Fieldbus Available		EtherNet/IP, PROFINET *3							

*1 If water-soluble cutting oil is present, use a protective sleeve to prevent damage to the robot housing. OMRON offers enhanced joint covers for these applications. Contact your local OMRON representative for more information.

*2 SEMI (Semiconductor Equipment and Materials International) is the central global network of manufacturers of micro and nano electronics that issues safety guidelines. SEMI S2 is the most well-known standard in semiconductor manufacturing equipment for Environmental, Health, and Safety (EHS).

*3 A Fieldbus upgrade is available for HW3.2 robots with TMflow v1.80 or higher. Contact your local OMRON representative for more information.

The Fieldbus option is not available for SEMI S2 certified robots.

TM12/14

Product Name		TM12		TM12X		TM14		TM14X	
Power Source		AC	DC	AC	DC	AC	DC	AC	DC
Weight (kg)		32.8		32.5		32.5		32.2	
Controller Weight (kg)		13.8	14.5	13.8	14.5	13.8	14.5	13.8	14.5
Max Payload (kg)		12				14			
Reach (mm)		1300				1100			
Mounting		Wall, Table, Ceiling							
Average Speed (m/s)		1.3				1.1			
Joint Range	Joint 1	±270°		±360°		±270°		±360°	
	Joint 2, 4, 5	±180°		±360°		±180°		±360°	
	Joint 3	±166°				±163°			
	Joint 6	±270°		±360°		±270°		±360°	
Joint Speeds	Joint 1, 2	120°/s							
	Joint 3	180°/s							
	Joint 4, 5	180°/s				150°/s			
	Joint 6	180°/s							
Repeatability (mm)		±0.1							
Ingress Protection		IP54 (robot arm), IP32 (control box), IP40 (robot stick)							
Cleanroom Class		ISO Class 3							
Operating Temperature and Humidity		0 to 50°C, 85% max. (with no condensation)							
Storage Temperature and Humidity		-20 to 60°C, 75% max. (with no condensation)							
Operating and Storage Environment		No corrosive gases or exposure to water-soluble cutting oil *1							
Power Supply		100 to 240 VAC, 50/60 Hz	22 to 60 VDC	100 to 240 VAC, 50/60 Hz	22 to 60 VDC	100 to 240 VAC, 50/60 Hz	22 to 60 VDC	100 to 240 VAC, 50/60 Hz	22 to 60 VDC
Robot Arm Cable Length		3 m or 12 m	1.5 m	3 m or 12 m	1.5 m	3 m or 12 m	1.5 m	3 m or 12 m	1.5 m
I/O Ports	Control Box	Digital In: 16, Digital Out: 16, Analog In: 2, Analog Out: 1							
	Tool	Digital In: 4, Digital Out: 4, Analog In: 1, Analog Out: 0							
I/O Interface		COM: 3, HDMI: 1, LAN: 3, USB2.0: 4, USB3.0: 2							
Communication		RS232, Ethernet (master), Modbus TCP/RTU (master & slave), PROFINET (optional), EtherNet/IP (optional)							
I/O Power Supply		24 VDC 2.0 A (control box) / 24 VDC 1.5 A (tool)							
Programming Environment		TMflow, flowchart based							
Integrated Camera Available		5 MP, color		None		5 MP, color		None	
SEMI S2 Certified *2 Available		No	Yes	No	Yes	No	Yes	No	Yes
Fieldbus Available		EtherNet/IP, PROFINET *3							

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*3 A Fieldbus upgrade is available for HW3.2 robots with TMflow v1.80 or higher. Contact your local OMRON representative for more information.

The Fieldbus option is not available for SEMI S2 certified robots.

TM16

Product Name		TM16		TM16X	
Power Source		AC	DC	AC	DC
Weight (kg)		32.2		31.9	
Controller Weight (kg)		14.1			
Max Payload (kg)		16			
Reach (mm)		900			
Mounting		Wall, Table, Ceiling			
Average Speed (m/s)		1.1			
Joint Range	Joint 1	±270°		±360°	
	Joint 2, 4, 5	±180°		±360°	
	Joint 3	±155°			
	Joint 6	±270°		±360°	
Joint Speeds	Joint 1, 2	120°/s			
	Joint 3, 4, 5, 6	180°/s			
Repeatability (mm)		±0.1			
Ingress Protection		IP54 (robot arm), IP32 (control box), IP40 (robot stick)			
Cleanroom Class		ISO Class 3			
Operating Temperature and Humidity		0 to 50°C, 85% max. (with no condensation)			
Storage Temperature and Humidity		-20 to 60°C, 75% max. (with no condensation)			
Operating and Storage Environment		No corrosive gases or exposure to water-soluble cutting oil.*1			
Motor Power Supply		110 to 240 VAC, 50/60 Hz	22 to 60 VDC	110 to 240 VAC, 50/60 Hz	22 to 60 VDC
Robot Arm Cable Length (m)		3	1.5	3	1.5
I/O Ports	Control Box	Digital In: 16, Digital Out: 16, Analog In: 2, Analog Out: 1			
	Tool	Digital In: 4, Digital Out: 4, Analog In: 1, Analog Out: 0			
I/O Interface		COM: 3, HDMI: 1, LAN: 3, USB2.0: 4, USB3.0: 2			
Communication		RS232, Ethernet (master), Modbus TCP/RTU (master & slave), PROFINET (optional), EtherNet/IP (optional)			
I/O Power Supply		24 VDC 2.0 A (control box) / 24 VDC 1.5 A (tool)			
Programming Environment		TMflow, flowchart based			
Integrated Camera Available		5 MP, color	None	5 MP, color	None
SEMI S2 Certified*2 Available		No	Yes	No	No
Fieldbus Available		EtherNet/IP, PROFINET			

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TM20

Product Name		TM20		TM20X	
Power Source		AC	DC	AC	DC
Weight (kg)		33		33	
Controller Weight (kg)		14.1			
Max Payload (kg)		20			
Reach (mm)		1300			
Mounting		Wall, Table, Ceiling			
Average Speed (m/s)		1.3			
Joint Range	Joint 1	±270°		±360°	
	Joint 2, 4, 5	±180°		±360°	
	Joint 3	±166°			
	Joint 6	±270°		±360°	
Joint Speeds	Joint 1, 2	90°/s			
	Joint 3	120°/s			
	Joint 4	150°/s			
	Joint 5	180°/s			
	Joint 6	225°/s			
Repeatability (mm)		±0.1			
Ingress Protection		IP54 (robot arm), IP32 (control box), IP40 (robot stick)			
Cleanroom Class		ISO Class 3			
Operating Temperature and Humidity		0 to 50°C, 85% max. (with no condensation)			
Storage Temperature and Humidity		-20 to 60°C, 75% max. (with no condensation)			
Operating and Storage Environment		No corrosive gases or exposure to water-soluble cutting oil.			
Motor Power Supply		110 to 240 VAC, 50/60 Hz	24 to 60 VDC	110 to 240 VAC, 50/60 Hz	24 to 60 VDC
Robot Arm Cable Length (m)		3 or 12	1.5	3 or 12	1.5
I/O Ports	Control Box	Digital In: 16, Digital Out: 16, Analog In: 2, Analog Out: 1			
	Tool	Digital In: 4, Digital Out: 4, Analog In: 1, Analog Out: 0			
I/O Interface		COM: 3, HDMI: 1, LAN: 3, USB2.0: 4, USB3.0: 2			
Communication		RS232, Ethernet (master), Modbus TCP/RTU (master & slave), PROFINET (optional), EtherNet/IP (optional)			
I/O Power Supply		24 VDC 2.0 A (control box) / 24 VDC 1.5 A (tool)			
Programming Environment		TMflow, flowchart based			
Integrated Camera Available		5 MP, color		None	
SEMI S2 Certified*1 Available		No	Yes	No	No
Fieldbus Available		EtherNet/IP, PROFINET			

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