TM12 / TM14

High payload with extended reach

TM ROBOT

www.tm-robot.com

SMART
Built-in vision system, Masters in robot vision

SIMPLE
Revolutionary user interface, Easy to deploy

SAFE
Complies with ISO 10218-1:2011 & ISO/TS 15066:2016

ONBoard Solutions

TM12/TM14

ONBoard Solutions

Class leading payload and reach

The TM12 & TM14 offer class leading payload and reach capabilities. The **TM12 offers 12Kg payload and a 1300mm reach** and the **TM14 offers a 14Kg payload and 1100mm reach**.
Like the TM5 the new increased specification robots are easy to deploy, are highly flexible, are maintenance free and provide a high performance automation solution for manufacturing.

Built in vision system

TM Robot comes with built in vision hardware and integrated vision software with human machine interface. Functions such as shape matching, barcode & QR code reading, colour recognition, OCR etc are all easily configured from the integral robot design toolbox.

Applications

▪ **Logistics** ▪ **Handling** ▪ **De-Burring** ▪ **Polishing** ▪ **Semiconductor Transportation** ▪ **Palletising**

TM12M/TM14M Mobile version series

The TM-M Series offers solutions for AGV and mobile vehicle integration

The TM-M series are powered by a DC 20-60V supply, making them compatible with most brands of AGV's and mobile vehicles. By utilising the "TM Landmark", the mobile robot can orientate itself within a 3D space, like an auto datum sequence, to multiple machine surfaces. This allows the TM-M robots to operate between two or more locations seamlessly.

Specification

SEMI S2   ISO 10218-1:2011   ISO/TS 15066:2016   CE

Model		TM12	TM14	TM12M	TM14M
Weight		33.3Kg	32.6Kg	33.3Kg	32.6Kg
Payload		12kg	14kg	12kg	14kg
Reach		1300mm	1100mm	1300mm	1100mm
Typical Speed		1.3m/s	1.1m/s	1.3m/s	1.1m/s
Joint ranges	J1	+/- 270°			
	J2,J4,J5	+/- 180°			
	J3	+/- 166°	+/- 163°	+/- 166°	+/- 163°
	J6	+/- 270°			
Speed	J1~J2	120°/s			
	J3	180°/s			
	J4~J5	180°/s	150°/s	180°/s	150°/s
	J6	180°/s			
Repeatability		+/- 0.1 mm			
Degrees of freedom		6 rotating joints			
I/O ports		Control box		Tool conn.	
	Digital in	16		4	
	Digital out	16		4	
	Analog in	2		1	
	Analog out	1		0	
I/O power supply		24V 1.5A 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		DC 22V~60V	
I/O Interface		3×COM, 1×HDMI, 3×LAN, 4×USB2.0, 2×USB3.0			
Communication		RS232, Ethernet, Modbus TCP/RTU (master & slave)			
Programming Environment		TMflow, flowchart based			
Certification		CE, SEMI S2 (Option)			
Variation Models		X: without hand eye camera, SEMI: SEMI S2 certified			
Robot Vision					
Eye in Hand (Built in)		1.2M/5M pixels, color camera			
Eye to Hand (Optional)		Support Maximum 2 GigE cameras			