

The OMRON TM16 Collaborative Robot adds more power and versatility to an already strong collaborative robot line up.

The 16 kg payload allows customers to expand their material-handling possibilities and handle heavier parts and materials. Our collaborative robot family is designed for various applications and now provides additional options for handling a wider variety of tasks.

#### Key features:

- 16 kg payload capacity
- 900 mm reach
- Built-in vision (Optional)
- Profinet and Ethernet/IP options

Small footprint means simple integration into a production line.

Floor space is a valuable asset in production facilities. The Omron collaborative robot complies with ISO/TS 15066, allowing it to be installed with reduced amounts of safeguarding. This enables Omron Cobot to work side-by-side with human workers and minimize the amount of space dedicated to the robot. The physical footprint of the robot itself is minimized to help you get the most out of your workspace.

#### Assembly

Our cobots can improve throughput and consistency of repetitive or complex assembly tasks including part joining, insertion, tool changing, and working alongside people.

#### Mobile Manipulation

Mounting an Omron TM cobot onto an Omron LD mobile robot automates not only materials transport, but also complicated picking operations.

#### Palletizing

Our space-saving cobots can streamline end-of-line case stacking onto a pallet. With built-in vision, cases can be sorted by barcode or other visual indication.

#### Packaging

Our cobots can inspect and sort products, before putting them into cases. Customers can quickly adapt production lines to new products or seasonal models.

#### Machine Tending

Cobots can be used to tend CNC machines, injection molding machines, stamping and punch pressers, grinding, and cutting machines, relieving workers from repetitive and dangerous work.

#### Pick and Place with Inspection

Omron cobots feature a built-in vision system that allows for easy pick-and-place together with sophisticated inspection, without the need for installing additional cameras or lighting equipment.

#### Screwdriving

Our cobots add precision and consistency to your screwdriving and parts fastening applications. A complete ready-to-use solution is provided with a screwdriving kit and pneumatic control box.



# OMRON™ Collaborative Robots

Product Name		TM16		TM16X	
Power Source		AC	DC	AC	DC
Part Number		RT6-3009001	RT6-3109001 RT6-3109011**	RT6-3019001	RT6-3119001
Part Number with Fieldbus Option		RT6-3009021	RT6-3109021	RT6-3019021	RT6-3119021
Power Supply		110 to 240 VAC 50/60 HZ	20 to 60 VDC	110 to 240 VAC 50/60 HZ	20 to 60 VDC
Weight (kg)		32			
Controller Weight (kg)		14.1			
Max Payload (kg)		16			
Reach (mm)		900			
Mounting		Wall, Table, Ceiling			
Typical 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 3-6	180°/s			
Repeatability (mm)		±0.1			
Ingress Protection		IP 54 (robot arm), IP 32 (control box), IP 40 (robot stick)			
Cleanroom Class		ISO Class 5			
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		100 to 240 VAC	50/60 Hz	100 to 240 VAC	50/60 Hz
Robot Arm Cable Length		3 m	1.5 m	3 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			
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		5M pixels, color		None	
SEMI S2 Certification Available**		No	Yes	No	No



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**Authorized Distributor:**

In the interest of product improvement,  
specifications are subject to change without notice.

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\* If water-soluble cutting oil is present, use a protective sleeve to prevent damage to the robot housing.

\*\* 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).