

Articulated Robots

Viper 650

Articulated robot for machining, assembly, and material handling

- Ethernet capability to control the robot through the familiar programming language (IEC 61131-3) of Machine Automation Controller NJ/NX/NY Series
- Diagnostics display enables faster trouble shooting
- High-resolution, absolute encoders to provide high accuracy, superior slow-speed following, and easy calibration
- High-efficiency, low-inertia Harmonic Drives and a lightweight arm to deliver maximum acceleration
- Reach 653 mm
- Maximum payload 5 kg
- Weight 34 kg



Specifications

Product name	Viper			
	Size	650		
	Cleanroom/IP	Standard	Cleanroom	IP54/65
Model		1720[]-36000	1720[]-36020	1720[]-36010
Mounting	Table/Floor/Inverted			
Number of axes	6			
Reach	653 mm			
Maximum Payload	5 kg			
Repeatability	XYZ	±0.02 mm		
Joint Range	Joint 1	±170°		
	Joint 2	-190°, +45°		
	Joint 3	-29°, +256°		
	Joint 4	±190°		
	Joint 5	±120°		
	Joint 6	±360°		
Inertia Moment (Max.)	Joint 4	0.295 kgm ²		
	Joint 5	0.295 kgm ²		
	Joint 6	0.045 kgm ²		
Joint Speeds	Joint 1	328°/s		
	Joint 2	300°/s		
	Joint 3	375°/s		
	Joint 4	375°/s		
	Joint 5	375°/s		
	Joint 6	600°/s		

Product name	Viper			
	Size	650		
	Cleanroom/IP	Standard	Cleanroom	IP54/65
Power Requirements	24 VDC: 6 A 200 to 240 VAC: 10 A, single-phase			
Protection	Base	IP40	IP40	IP54
	Robot Joints (J4, J5, J6)	IP40	IP40	IP65
Clean Class	---	Class10	---	
Environment Requirements	Ambient Temperature	5 to 40°C		
	Humidity Range	5 to 90% (non-condensing)		
Weight	34 kg			
cULus Compliant	(Yes) *1			
Basic configuration	Controller	eMotionBlox-60R		
	On-board I/O (Input/Output)	12/8		
	Conveyor tracking input	2		
	RS-232C serial communications port	1		
	Programming environment	ACE, PackXpert, ePLC		
	ACE Sight	Yes		
	ePLC Connect	Yes		
	ePLC I/O	Yes		
Connectable controller *2	eMotionBlox-60R, SmartController EX, NJ/NX/NY Series *3			

*1. cULus option

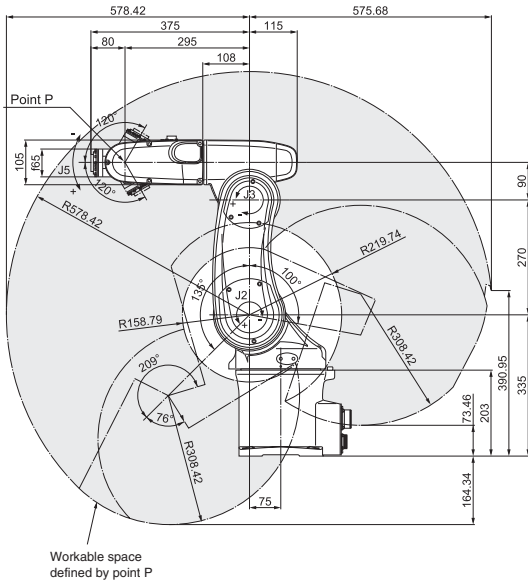
*2. Choose a controller to suit your application.

*3. The robot version 2.3.C or later is required to connect with the NJ/NX/NY Series.

Dimensions

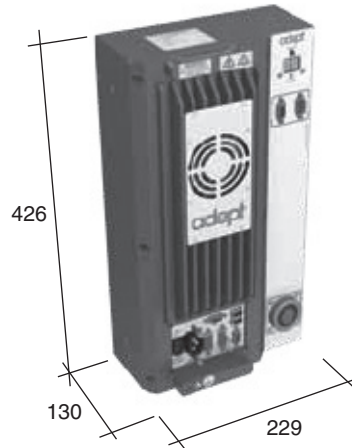
(Unit: mm)

Viper 650

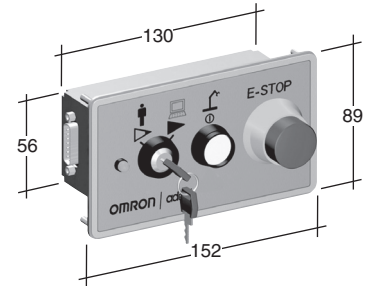


eMotionBlox-60R

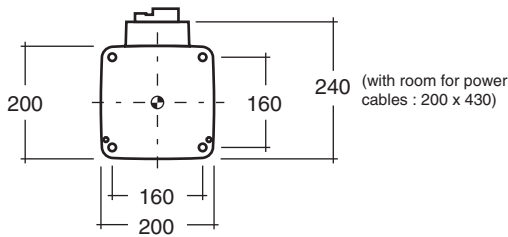
Weight : 9.3 kg



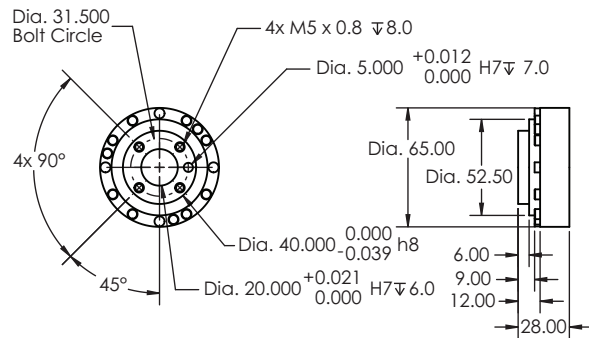
Front panel



Footprint



Flange



Robot Parts Code and Bundled Accessories

Type	Viper			Viper Add-On			
	Cleanroom/IP	Standard	Cleanroom	IP54/65	Standard	Cleanroom	IP54/65
Viper 650		17201-36000	17201-36020	17201-36010	17203-36000	17203-36020	17203-36010
Overview	Robot + eMotionBlox-60R amplifier with fully integrated controls			Robot + eMotionBlox-60R + required connection cables			
Purpose	Typical for use in single robot system			Typically added to systems with an existing SmartController EX to create multi-robot systems			
Bundled Accessories	<ul style="list-style-type: none"> XSYSTEM cable with jumpers, 1.8 m/6 ft (13323-000) Front panel kit (90356-10358) Arm power/signal cable, 4 m/13 ft (05020-000) 			<ul style="list-style-type: none"> XSYSTEM cable with jumpers, 1.8 m/6 ft (13323-000) XSYS cable, 4.5 m/15 ft (11585-000) DB9 splitter (00411-000) 1394 latch cable, 4.5 m/15 ft (13632-045) eV+ license to connect to controller (14529-103) 			

OMRON AUTOMATION AMERICAS HEADQUARTERS • Chicago, IL USA • 847.843.7900 • 800.556.6766 • www.omron247.com

OMRON CANADA, INC. • HEAD OFFICE

Toronto, ON, Canada • 416.286.6465 • 866.986.6766 • www.omron247.com

OMRON ELECTRONICS DE MEXICO • HEAD OFFICE

México DF • 52.55.59.01.43.00 • 01-800-226-6766 • mela@omron.com

OMRON ELECTRONICS DE MEXICO • SALES OFFICE

Apodaca, N.L. • 52.81.11.56.99.20 • 01-800-226-6766 • mela@omron.com

OMRON ELETRÔNICA DO BRASIL LTDA • HEAD OFFICE

São Paulo, SP, Brasil • 55.11.2101.6300 • www.omron.com.br

OMRON ARGENTINA • SALES OFFICE

Cono Sur • 54.11.4783.5300

OMRON CHILE • SALES OFFICE

Santiago • 56.9.9917.3920

OTHER OMRON LATIN AMERICA SALES

54.11.4783.5300

OMRON EUROPE B.V. • Wegalaan 67-69, NL-2132 JD, Hoofddorp, The Netherlands. • +31 (0) 23 568 13 00 • www.industrial.omron.eu

Authorized Distributor:

Controllers & I/O

- Machine Automation Controllers (MAC) • Motion Controllers
- Programmable Logic Controllers (PLC) • Temperature Controllers • Remote I/O

Robotics

- Industrial Robots • Mobile Robots

Operator Interfaces

- Human Machine Interface (HMI)

Motion & Drives

- Machine Automation Controllers (MAC) • Motion Controllers • Servo Systems
- Frequency Inverters

Vision, Measurement & Identification

- Vision Sensors & Systems • Measurement Sensors • Auto Identification Systems

Sensing

- Photoelectric Sensors • Fiber-Optic Sensors • Proximity Sensors
- Rotary Encoders • Ultrasonic Sensors

Safety

- Safety Light Curtains • Safety Laser Scanners • Programmable Safety Systems
- Safety Mats and Edges • Safety Door Switches • Emergency Stop Devices
- Safety Switches & Operator Controls • Safety Monitoring/Force-guided Relays

Control Components

- Power Supplies • Timers • Counters • Programmable Relays
- Digital Panel Meters • Monitoring Products

Switches & Relays

- Limit Switches • Pushbutton Switches • Electromechanical Relays
- Solid State Relays

Software

- Programming & Configuration • Runtime