

Articulated Robots

Viper 650

EtherCAT (NJ501-R) version

Articulated robot for machining, assembly, and material handling



- EtherCAT connectivity to the Omron NJ501-R controller and programming through the familiar IEC 61131-3 programming language or scripting (eV+).
- 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		
		650		
Size		Standard	Cleanroom	IP54/65
Cleanroom/IP				
Part Number		RL6-2066000	RL6-2066020	RL6-2066010
Mounting		Table/Floor/Inverted		
Number of axes		6		
Reach		653 mm		
Maximum Payload		5 kg		
Repeatability		±0.02 mm		
Joint Range	XYZ			
	Joint 1	±170°		
	Joint 2	-190°, +45°		
	Joint 3	-29°, +256°		
	Joint 4	±190°		
	Joint 5	±120°		
Inertia Moment (Max.)	Joint 6	±360°		
	Joint 4	0.295 kgm ²		
	Joint 5	0.295 kgm ²		
Joint Speeds	Joint 6	0.045 kgm ²		
	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		
		650		
Size		Standard	Cleanroom	IP54/65
Cleanroom/IP				
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		
Basic configuration	Controller	eCS-ECAT		
	On-board I/O (Input/Output)	12/8		
	Conveyor tracking input	2		
	RS-232C serial communications port	1		
	Programming environment	Sysmac Studio 64-bit		
	ACE Sight	Yes		
	ePLC Connect	No		
	ePLC I/O	No		
Connectable controller		Omron NJ501-R Series		

Articulated Robots

Viper 850

EtherCAT (NJ501-R) version

Articulated robot for machining, assembly, and material handling



- EtherCAT connectivity to the Omron NJ501-R controller and programming through the familiar IEC 61131-3 programming language or scripting (eV+).
- 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.
- Max Reach: 855 mm
- Max Payload: 5 kg
- Weight: 36 kg

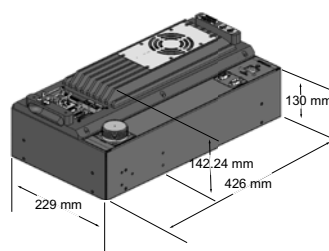
Specifications

Product name		Viper		
		850		
		Standard	Cleanroom	IP54/65
Part Number		RL6-2068000	RL6-2068020	RL6-2068010
Mounting		Table/Floor/Inverted		
Number of axes		6		
Reach		855 mm		
Maximum Payload		5 kg		
Repeatability	XYZ	±0.03 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	250°/s		
	Joint 2	250°/s		
	Joint 3	250°/s		
	Joint 4	375°/s		
	Joint 5	375°/s		
	Joint 6	600°/s		

Product name		Viper		
		850		
		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		
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Weight		36 kg		
Basic configuration	Controller	eCS-ECAT		
	On-board I/O (Input/Output)	12/8		
	Conveyor tracking input	2		
	RS-232C serial communications port	1		
	Programming environment	Sysmac Studio 64-bit		
	ACE Sight	Yes		
	ePLC Connect	No		
	ePLC I/O	No		
Connectable controller		Omron NJ501-R Series		

(Unit: mm)

eCS-ECAT
Weight: 8.57 kg



Front view of the remote control unit. Dimensions: 130 (width), 89 (height), 152 (bottom width), and 56 (depth). The unit features a 'Wire MOUNTING' bracket, a 'Power' button, an 'E-STOP' button, and the 'Omron' logo.

Technical drawing of the front view of a square terminal block. The drawing shows a square body with a central circular hole and four corner holes. Dimensions are indicated: overall width 200, overall height 240 (with room for power cables: 200 x 430), body width 160, and body height 160. A small rectangular protrusion is at the top center.

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Type	Viper		
Cleanroom/IP	Standard	Cleanroom	IP54/65
Viper 850	RL6-2068000	RL6-2068020	RL6-2068010
Overview	Robot + eCS-ECAT Robot Controller		
Purpose	To be used in conjunction with NJ501-R Series controller, which can connect up to 8 robots via EtherCAT		
Bundled Accessories	• XSYSTEM cable with jumpers and Ethernet Management port, 1.8 m/6 ft (13323-100) • Front panel kit (92546-10358) • Arm power/signal cable, 4 m/13 ft -Standard Model: 05020-000 -Cleanroom & IP54/65 Models: 05463-000		