Articulated Robots

Viper 850

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 855 mm
- Maximum payload 5 kg
- Weight 36 kg

Specifications

<table>
<thead>
<tr>
<th>Product name</th>
<th>Viper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>850</td>
</tr>
<tr>
<td>Cleanroom/IP</td>
<td>Standard</td>
</tr>
<tr>
<td>Model</td>
<td>1720-38000</td>
</tr>
<tr>
<td>Mounting</td>
<td>Table/Floor/Inverted</td>
</tr>
<tr>
<td>Number of axes</td>
<td>6</td>
</tr>
<tr>
<td>Reach</td>
<td>855 mm</td>
</tr>
<tr>
<td>Maximum Payload</td>
<td>5 kg</td>
</tr>
<tr>
<td>Repeatability</td>
<td>XYZ ±0.03 mm</td>
</tr>
</tbody>
</table>

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 kgm²
- Joint 5 0.295 kgm²
- Joint 6 0.045 kgm²

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

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<td>Size</td>
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<tr>
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</tr>
<tr>
<td>Power Requirements</td>
<td>24VDC: 6A</td>
</tr>
<tr>
<td>Protection</td>
<td>Base IP40</td>
</tr>
<tr>
<td>Robot Joints (J4, J5, J6)</td>
<td>IP40</td>
</tr>
<tr>
<td>Clean Class</td>
<td>---</td>
</tr>
<tr>
<td>Environment Requirements</td>
<td>Ambient Temperature 5 to 40°C</td>
</tr>
<tr>
<td>Humidity Range</td>
<td>5 to 90% (non-condensing)</td>
</tr>
<tr>
<td>Weight</td>
<td>36 kg</td>
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<tr>
<td>cULus Compliant</td>
<td>---</td>
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</tbody>
</table>

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 #1

- eMotionBlox-60R, SmartController EX, NJNX/NX/NY Series #2

#1. Choose a controller to suit your application.
#2. The robot version 2.3.C or later is required to connect with the NJ/NX/NY Series.
Robot Parts Code and Bundled Accessories

<table>
<thead>
<tr>
<th>Type</th>
<th>Viper</th>
<th>Viper Add-On</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleanroom/IP</td>
<td>17201-38000</td>
<td>17203-38000</td>
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<tr>
<td>Cleanroom</td>
<td>17201-38020</td>
<td>17203-38020</td>
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<tr>
<td>IP54/65</td>
<td>17201-38010</td>
<td>17203-38010</td>
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</tbody>
</table>

_Viper 850_

Overview: Robot + eMotionBlox60N amplifier with fully integrated controls

Purpose: Typically for use in single robot system

Bundled Accessories:
- XSYS cable with jumpers, 1.8m/6ft (13323-000)
- Front panel kit (90356-10358)
- Arm power/signal cable, 4m (05020-000)
- XSYS cable with jumpers, 1.8m/6ft (13323-000)
- XSYS cable, 5m/15 ft (11585-000)
- DB9 splitter (00411-000)
- 1394 latch cable, 5m/15 ft (13632-045)
- eV+ license to connect to controller (14529-103)

_Viper Add-On_

Overview: Robot + eMotionBlox60N + required connection cables

Purpose: Typically added to systems with an existing SmartController EX to create multi-robot systems

Bundled Accessories:
- o PKQK VTUX;j yj cXxf &h(2 1)yg# M-/.-*.*$s
- o =>ba@CaX" "yg#+ /0 yf /2 $s
- o 9e cby Xyf Vz@ VTUX& y#/ *,*.*$s
- o PKQK VTUX;j yj cXxf &h(2 1)yg# M-/.-*.*$s
- o PKQK VTUX& yj yf# W2/*.*$s
- o <- 3 fc uXe#+ ,*.*$s
- o + 3 3yM VTUX& yj yf# = 0,./ $s
- o XNs\cXyfx yb\a\a\a Xyj yf yb\azXe#/. ,3+/-$s