FEATURES

FANUC Robot M-1iA is a light weight and compact high speed assembly robot.

- Light weight and compact mechanical unit enables to install to narrow space. Free angle installation is also acceptable.
- Provide variety on degree of freedom at wrist and operating area to meet different application request.
  - Robot total 6 axes
    3 axes in wrist, the flexible wrist motion is suitable for assembling.
  - Robot total 4 axes
    Single axis in wrist, high speed 3000deg/s wrist is suitable for picking.
  - Robot total 3 axes
    Total 3 axes and 1kg payload robot, this model is suitable for high speed picking of plenty work pieces on the conveyor.
  - Long arm type
    Covers more wider operating area with longer arm.
- Unique parallel link mechanism enables quick motion.
- Selectable installation type of no stand, desktop stand and ceiling mount. It makes easy integration into a machine.
- A camera for iRVision (integrated vision) can be integrated in the mechanical unit.

Application Examples

Key board assembling

Screwing

Circuit board insert

Contact lens product packaging

Set lens on the LED illuminator
Compact, Flexibility, High speed and Intelligence

**Space saving**
Work envelope is closed around operation object so that the total installation space can be minimized. It enables to place the robot and the worker along the manufacturing line effectively.

**Free installation**
The stand is selectable and reversible, and the robot installation direction can also be free. Therefore, it increases flexibility for the robot integration into a machine.

**Complex assembling**
The new six axes parallel link configuration enables complex assembling application.

**High speed motion**
The high speed motion increases productivity. 25-200-25mm pick and place motion time is 0.3 sec. The rotation axis of four axes type rotates 3000deg/s. It makes to change the work pieces direction quickly.

**Integrated Vision**
A camera for iRVision (integrated vision) can be integrated in the mechanical unit.(option)
Integrated hardware realizes high reliable image processing. Tight integration between vision and robot functions enables advanced robot control.

**Multi-arm control**
The controller can control maximum four robots. Additional robots configuration is very simple, such as mechanical unit and amplifier box combination.

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General articulated robot working space

R140 (R210 for long arm)

Desktop

Ceiling mount

Circuit board insert

Telephone assembling

200mm
25mm
25mm
3000 deg/s

2rd. robot 3rd. robot 4th. robot

Base robot configuration
Operating space

**M-1iA/0.5A**

**M-1iA/0.5S, M-1iA/1H**

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**Specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>M-1iA/0.5A</th>
<th>M-1iA/0.5S</th>
<th>M-1iA/1H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Parallel link mechanism</td>
<td>Floor and ceiling mount</td>
<td>Floor and ceiling mount</td>
</tr>
<tr>
<td>Controlled axes</td>
<td>6 axes (J1,J2,J3,J4,J5,J6)</td>
<td>4 axes (J1,J2,J3,J4)</td>
<td>3 axes (J1,J2,J3)</td>
</tr>
<tr>
<td>Installation</td>
<td>Floor, angle and ceiling mount</td>
<td>Floor and ceiling mount</td>
<td>Floor and ceiling mount</td>
</tr>
<tr>
<td>Motion range</td>
<td>Diameter 280 mm, height 100 mm</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>(Maximum speed)</td>
<td>J1-J3</td>
<td>J4 720° (1440°/s) 12.57 rad (25.13 rad/s)</td>
<td>J4 720° (3000°/s) 12.57 rad (52.34 rad/s)</td>
</tr>
<tr>
<td>Note1)</td>
<td></td>
<td>J5 300° (1440°/s) 5.24 rad (25.13 rad/s)</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td></td>
<td>J6 720° (1440°/s) 12.57 rad (25.13 rad/s)</td>
<td>–</td>
</tr>
<tr>
<td>Max.payload at wrist</td>
<td>0.5 kg (1 kg with an option)</td>
<td>1 kg</td>
<td></td>
</tr>
<tr>
<td>Repeatability Note2)</td>
<td>±0.02 mm</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Drive method</td>
<td>Electric servo drive by AC servo motor</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Mass Note3)</td>
<td>17 kg</td>
<td>14 kg</td>
<td>12 kg</td>
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**Installation environment**

- Ambient temperature: 0 to 45°C
- Ambient humidity: Normally: 75%RH or less (No dew, nor frost allowed)
- Short term: Max. 95%RH or less (within one month)
- Vibration: 4.9m/s² (0.5G) or less

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Note 1) During short distance motions, the axis speed may not reach the maximum value stated.

Note 2) Compliant with ISO9283.

Note 3) In case of "No stand"
Operating space

M-1Î±A/0.5AL

M-1Î±A/0.5SL, M-1Î±A/1HL

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<tr>
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<td>15 kg</td>
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