

SYSTEM R-J3iB™ Controller

Basic Description

FANUC Robotics' SYSTEM R-J3iB Controller uses advanced technology packaged in a proven, reliable and efficient controller design. Process capability and open architecture features provide intelligence to improve application and motion performance while simplifying system integration.

SYSTEM R-J3iB Controller incorporates FANUC Robotics' unique "plug-in options" concept, which allows flexibility for application specific configurations while maintaining a commonality for all users of the system.

Hardware Features/Benefits

- Use of surface mounting and 3-D packaging reduces components and increases reliability.
- Multi-processor architecture permits concurrent operations, reduces program execution times and increases path accuracy.
- Quick change servo amplifier improves maintainability and controller uptime.
- Distributed and network I/O options reduce system and integration costs and simplify troubleshooting.
- Provides extensive line of compact I/O modules for both digital and analog signals.
- Standard iPendant with multi-window and internet browser interface.



System Features/Benefits

- ANSI/RIA safety circuits standard.
- Ergonomically designed, light-weight teach pendant with large, easy-to-read backlit LCD display.
- High-speed, precision control of up to 16 axes of motion.
- Auxiliary axes options can support up to five separate motion groups, each with its own control program and simple kinematic models.
- Multi-tasking operating system allows execution of several concurrent user programs.
- Advanced storage, communications and networking capabilities include built-in Ethernet and PCMCIA interfaces.

Process Features/Benefits

- AccuPath provides enhanced path tracking during linear and circular motion while minimizing speed variations.
- Instant trigger response (1ms) increases repeatability and improves tracking performance.
- Collision detection minimizes potential damage to the robot or end-of-arm tooling.
- Zone I/O provides application flexibility by monitoring and controlling robot interface signals independent of the taught path.
- Coordinated motion simplifies the teaching of part programs on a moving table or positioner.
- TurboMove provides minimal cycle time by computing robot dynamics in real-time.

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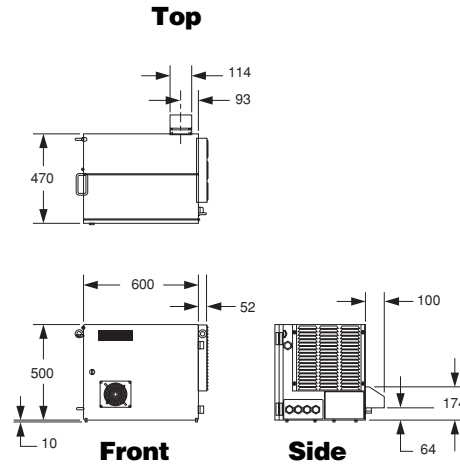
R-J3iB Standard Hardware Features

Items	Specifications
B-size cabinet	See drawing for dimensions
Operating environment	- Ambient temperature: 0-45°C (standard) 0-50°C (conditional) Humidity: 75% RH or less non-condensing (95% max) Vibration: 0.5G or less
Power supply	- Three phase 200-575 VAC +10%,-15%, 50/60Hz ±1Hz with circuit breaker
CPU	- Multi-processor architecture (separate motion and communication) with real-time clock/calendar
Controlled axes	- 16 (up to five motion groups)
Serial/host-communications	- Built-in Ethernet - 100 Base-TX/10 Base-T with RJ-45 connector - Three RS-232 ports (one can be configured as RS-422)
Teach pendant	Standard iPendant with available touch screen option

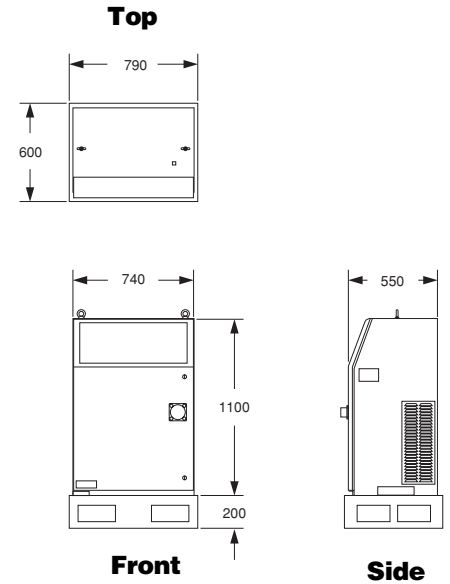
R-J3iB Options

Items	Specifications
I/O sub-systems	- Model A (modular rack mounted - 5 or 10 slots) - Model B (distributed DIN rail mounted) - FANUC I/O link
I/O types	- DI/DO: 512 point maximum each (includes process I/O) - Digital AC or DC input modules - Digital AC or DC output modules - 12-bit Analog input or output modules
Process I/O	- Digital input: 40 points maximum - Digital output: 40 points maximum - Multiple points can be utilized as a code (group I/O) - Analog inputs: 6 points - Analog outputs: 2 points - Digital input for welding: 8 points - Digital output for welding: 8 points - Wire stick detect
Remote I/O sub-systems	- Allen Bradley Remote I/O - Genius I/O - DeviceNet (master and slave up to four channels) - Profi-bus DP slave - ControlNet - Ethernet I/O (EGD and EIP) - Interbus (master and slave) - cc-Link (slave)
Diskette drive	- 3.5" HD MS-DOS format (PS-110) - IBM-PC compatible disk emulator program
Memory card for system software installation or program backups	- PCMCIA type 2 interface for: ATA flash disk cards (SanDisk compatible)
Host communications (Ethernet-based)	- PC Interface: enables PC application communication
Integrated PMC	- Ladder logic control for peripheral devices including ladder monitor on iPendant

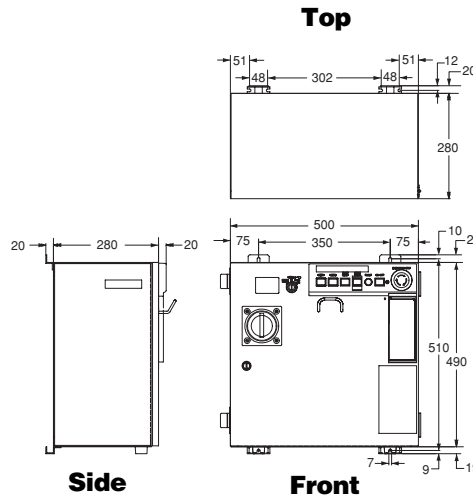
A-size Cabinet Standard on M-410iB, M-420iB, M-421iB Robots



B-size Cabinet



Operator Panel for A-Cabinet



iPendant for R-J3iB Controller



Note: Dimensions are shown in millimeters.
Detailed CAD data are available upon request.

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