MultiARM[™] Systems for Arc Welding Applications

Basic Description

FANUC Robotics' MultiARM Systems provide hardware and software designed to expand the capability of a traditional robotic work cell. Multiple robots and positioners are tightly integrated by the single CPU used for all motion. One teach pendant improves operator safety by providing a single point of control and simplifying work cell integration and maintenance.

Up to four robots can be controlled by one CPU to enhance manufacturing flexibility. Material handling robots can be combined together with ARC Mate[®] robots to optimize part placement while minimizing cycle time. New work cell designs can be used to decrease capital expense while increasing productivity.

Benefits

- Single teach pendant operation enhances ease of programming by providing single point of control.
- One E-stop interface reduces complexity and cost of safety hardware.
- Software on one CPU reduces software option cost with each option being used for all robots.
- Common Ethernet connection simplifies offline connectivity and backup procedures.
- Expanded user operator panel signals and elimination of interference zone I/O simplify cell interface and reduce hardware.

Note: ARC Mate is a required trademark of FANUC LTD.



- Automatic Fault Recovery maximizes uptime by automatically moving the faulted robot to a service location keeping the teach pendant out of the operator's hands.
- Arc start synchronization ensures that all robots have established an arc before motion starts along the weld path.

Features

- DualARM[™], TripleARM[™], and QuadARM[™] configurations all available with aux axis.
- Controls up to 40 axes of motion across seven motion groups.
- Enhanced manufacturing flexibility by using handling robots as flexible tooling.
- Track and mirror jogging of robots allows for fast creation and editing of robot programs.
- Use with *i*RVision[™] to find part offsets and apply to multiple robots.

- Allows independent motion for multiple arms working in parallel for increased productivity.
- Multi-Equipment software option allows up to four Arc Start commands controlling separate welding power supplies in one program.
- Key switch panel to independently disable each robot while still allowing all active robots to run production.
- Coordinated Motion Plus option provides capability for multiple robots to work together on one positioner or robot-torobot coordinated motion.
- Accuracy enhancement options reduce touchup of programs generated off-line.
- Interference check option allows zone checking, obstacle checking and arm-to-arm checking.

MultiARM System Examples



DualARM with three aux axis motors



QuadARM with Ferris Wheel positioner



TripleARM with single axis positioner



QuadARM with two ARC Mate robots and two material handling robots

Intelligent Robot Solutions

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