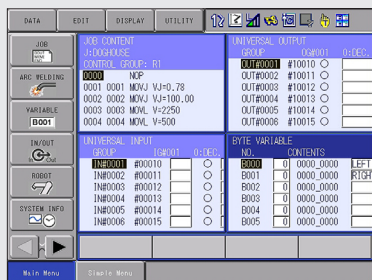
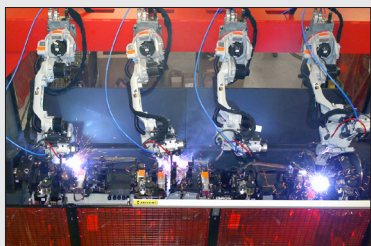


YASKAWA



MULTIPLE WINDOW DISPLAY



MULTIPLE ROBOT CONTROL



DXM100 CONTROLLER

KEY FEATURES

- Patented multiple robot control (up to 8 robots/72 axes)
- Faster processing, high performance
- Integrated cell (system-level) control capabilities
- Open communication
- Energy savings
- Compliant to safety standards
- Controller connections through back of unit optimize floorspace



DX100

ROBOT/SYSTEM CONTROLLER

Option:

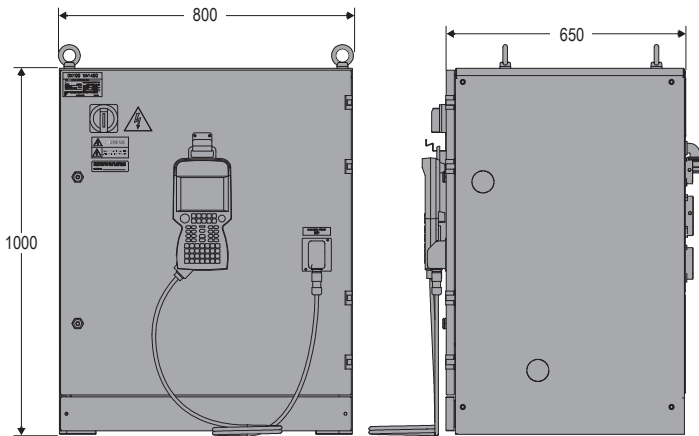
DXM100 Controller (smaller cabinet)

Dynamic Next-Generation Controller

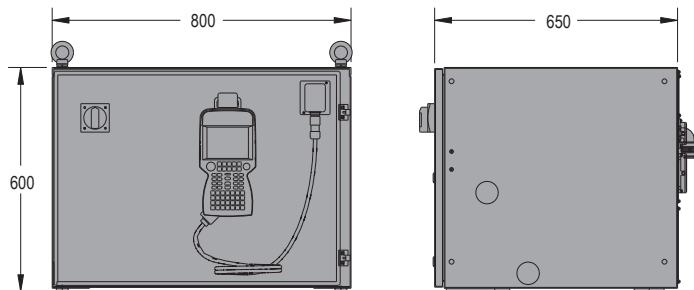
- Features robust PC architecture. Provides system-level control for robotic workcells.
- Patented multiple robot control (up to 8 robots/72 axes), as well as I/O devices and communication protocols. Dynamic interference zones protect robot arm and provide advanced collision avoidance.
- Fast processing speed provides smooth interpolation.
- Advanced Robot Motion (ARM) control provides high performance. Best-in-class path planning dramatically reduces teaching time.
- Small, lightweight Windows® CE programming pendant features color touch screen with multiple window display capability. Unique cross-shaped navigation cursor reduces teaching time. All operator controls are located on pendant. Program file names can be up to 32 characters long.
- Convenient compact flash slot and USB port facilitate memory backups.
- Conserves power during robot idle time, providing up to 25% energy savings.
- Highly flexible fieldbus support. Easy connection to information infrastructure through standard network options.
- Compliant to ANSI/RIA R15.06-1999 and other relevant ISO and CSA safety standards. Includes dual-channel E-Stop functionality, integrated speed monitoring and manual brake release for robot. Optional Category 3 functional safety unit.
- Often eliminates need for separate PLC and human machine interface (HMI). Delivers significant cost savings at system level, while decreasing workcell complexity and improving overall reliability.
- Connections to controller cabinet are made through the back of the unit, optimizing floorspace.
- DX100 control cabinet allows for up to three external axes and can be remote-mounted. DXM100 supports up to two external axes. Top- or side-mount expansion options available for DX100 controller only.
- Easy maintenance with reducer status check function, enhanced troubleshooting and alarm recovery, and 20% improvement in MTTR.

DX100 ROBOT CONTROLLER

DX100 Controller



DXM100 Controller



All dimensions are metric (mm) and for reference only.
Please request detail drawings for all design/engineering requirements.

Standard I/O - NPN

Forty optically isolated inputs, 32 transistor outputs, 8 relay contact outputs (configured to optimize each application), and four break-out cards are provided as standard. For arc welding applications, one YEW01 welder interface board is installed in the DX100 cabinet as standard (not available in DXM100).

I/O Expansion - DX100

The DX100 supports I/O expansion via:

- EtherNet/IP
- DeviceNet
- Profibus-DP
- Mechatrolink II
- CC-Link
- Remote I/O
- Discrete I/O, NPN or PNP
- Analog I/O
- Other networks available

I/O Expansion - DXM100

The DXM100 supports I/O expansion via:

- EtherNet/IP
- DeviceNet
- Remote I/O
- CC-Link

DX100 ROBOT CONTROLLER SPECIFICATIONS

CONTROLLER	
Dimensions	DX100: 800 (w) x 1000 (h) x 650 (d) (31.5" x 39.4" x 25.6") DXM100: 800 (w) x 600 (h) x 650 (d) (31.5" x 23.6" x 25.6")
Approximate Mass	150-250 kg (330.8-551.3 lbs.)
Cooling System	Indirect cooling
Ambient Temperature	During operation: 0° to 45° C (32° to 113° F) During transport and storage: -10° to 60° C (14° to 140° F)
Relative Humidity	90% max. non-condensing
Primary Power Requirements	3-phase, 240/480/575 VAC at 50/60 Hz
Digital I/O	Standard I/O: 40 inputs/40 outputs consisting of 16 system inputs/16 system outputs, 24 user inputs/24 user outputs 32 Transistor Outputs; 8 Relay Outputs Max. I/O (optional): 2,048 inputs and 2,048 outputs
Position Feedback	Absolute encoder
Program Memory	JOB: 200,000 steps, 10,000 instructions CIO Ladder Standard: 15,000 steps Expanded: 20,000 steps
Interface	Ethernet, RS-232C
Multiple Robot Control	Ability to control up to 8 robots/72 axes

SAFETY FEATURES	
Safety Specs	Controller Dual-Channel Emergency Stop & Safety Gate user interface. Programming Pendant includes: Dual-channel Emergency Stop Pushbutton, 3-Position Enable Switch with key-lock and Manual Brake Release built into programming pendant. Meets ANSI/RIA R15.06-1999, ANSI/RIA/ISO 10218-1-2007 and CSA Z434-03
Collision Avoidance	Collision avoidance zones and radial interference zones
Collision Detection	Protects robot by monitoring torque levels on manipulator
Machine Lock	Permits testing of peripheral devices without robot operation
Safety Interlock	Prevents robot operation while safety circuit is open

PENDANT	
Pendant Dimensions	169 (w) x 314.5 (h) x 50 (d) (6.6" x 12.4" x 2")
Pendant Display	5.7-inch full-color touch screen, 640 x 480 (VGA)
Pendant Languages	English, German, Japanese, Spanish, Chinese
Pendant Weight	.998 kg (2.2 lbs)
Coordinate System	Joint, rectangular, cylindrical, tool, 24 user-coordinate frames
Windows® Menu-Driven Interface	User-selectable touch-screen menu. Multiple windows supported One Compact Flash slot; One USB port (1.1)
Pendant O/S	Windows® CE
Protection Rating	IP65

PROGRAMMING	
Programming Language	INFORM III, menu-driven programming
Robot Motion Control	Joint motion, linear, circular, spline interpolation
Speed Adjustment	Percentage of maximum for joint motion; mm/sec, cm/min, in/min for displacement; °/sec for orientation
Device Instructions	Application-specific (ARCON, ARCOFF, LASERON, LASEROFF, HANDON, HANDOFF)
I/O Instructions	Discrete I/O, 4-bit and 8-bit manipulation, analog output, analog input, analog scaling, sloping
Operation	Up to 5 levels of undo/redo

MAINTENANCE	
Maintenance Functions	System monitor, internal maintenance clocks
Self-Diagnostics	Classifies errors and major/minor alarms and displays data
User Alarm Display	Displays alarm messages for peripheral devices
Alarm Display	Alarm messages and alarm history
I/O Diagnosis	Permits simulated enabled/disabled input/output
TCP Calibration	Automatically calibrates parameters for end-effectors, optional TCP recovery function
Tool Weight Calibration	Automatically calibrates total weight of tool, center of gravity and inertia for peak performance

www.motoman.com

YASKAWA

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