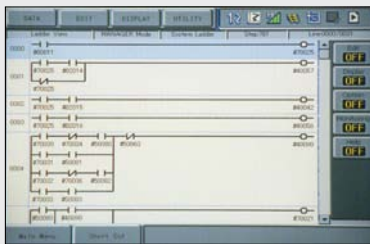




NXC100 CONTROLLER



LADDER EDITOR

FEATURES & OPTIONS

- Compact design minimizes footprint
- INFORM III programming language (same as NX100)
- Patented multiple robot control capability (up to FOUR robots with one pendant)
- Windows® CE operating system on programming pendant
- Standard Ethernet communication
- Compliant with ANSI/RIA R15.06-1999 safety standard
- Unmatched memory: 60,000 steps (taught points), 10,000 ladder (concurrent I/O) instructions
- On-board graphical ladder (concurrent I/O) editor



Motoman Robotics' compact NXC100 robot controller offers high performance, open communication, and integrated cell control

NXC100

—ROBOT CONTROLLER—

The NXC100 controller is one of the smallest controllers in its class. Its compact, but sturdy construction minimizes footprint and allows for easy mounting under conveyors, in control cabinets, or in other small places. It is lightweight and easy to install.

This controller is ideal for robotic applications such as small part handling, assembly, semiconductor, wafer transfer, liquid crystal display assembly, disk handling and packaging small items such as cell phones. The following robot models are available with the NXC100 controller: HP3C, HP3JC, HP3XFC, HP3LC, HP5C and MHJN

The NXC100 easily handles multiple tasks, with unmatched ability to control up to four robots and I/O devices. Dynamic interference spheres protect the robot arm, providing collision avoidance/arm interference prevention. Advanced Robot Motion (ARM) control provides high-performance path accuracy and vibration control. In addition, the NXC100 features best-in-class path planning that dramatically reduces teaching time.

The revolutionary NXC100 controller features a Windows® CE programming pendant with color touch screen, high-speed processing, unmatched memory

(60,000 steps, 10,000 instructions), built-in Ethernet and a robust PC architecture.

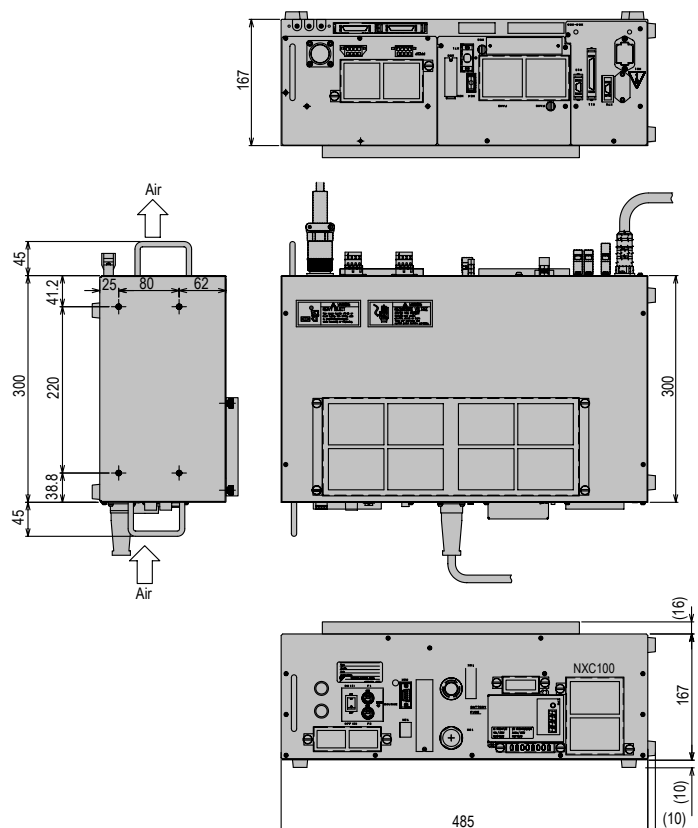
The programming pendant features a unique cross-shaped navigation cursor that reduces teaching time by 30 percent. It has full-color touch-screen display and a convenient compact flash slot for easy memory back-ups. All operator controls are located on the pendant, allowing the control cabinet to be mounted remotely.

Dual-channel safety features include enhanced E-Stop functionality and integrated speed monitoring.

The NXC100 also offers unmatched connectivity, highly flexible Fieldbus support and easy connection to an information infrastructure through standard network options for DeviceNet, ControlNet, Profibus-DP, EtherNet/IP and many others. An optional web server that allows remote monitoring and diagnosis is available.

By eliminating the need for a separate PLC, PC-based human machine interface (HMI), and by providing a standard Ethernet port, the NXC100 delivers significant cost savings at the system level, while also decreasing system complexity and improving overall system reliability.

NXC100 Robot Controller



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

I/O Expansion

The NXC100 supports I/O expansion via:

- Remote I/O
- Profibus-DP
- Analog output
- DeviceNet
- EtherNet/IP
- ControlNet
- Remote I/O
- Discrete I/O, NPN or PNP
- Other networks available

NXC100 ROBOT CONTROLLER SPECIFICATIONS

CONTROLLER	Dimensions	485(w) x 183(h) x 300(d) mm (19.1" x 7.2" x 11.8")
	Dimensions with optional I/O enclosure	485 x 233 x 300 mm (19.1" x 9.2" x 11.8")
	Approximate Mass	15 kg (33.1 lbs.)
	Ambient Temperature	During operation: 0° C (32° F) to 40° C (104° F) During transport and storage: -10° C (14° F) to +60° C (140° F)
	Relative Humidity	90% max. non-condensing
	Primary Power Requirements	Single-phase, 200/220 VAC at 50/60 Hz
	Digital I/O	Standard inputs: 10 system inputs + 5 dedicated inputs + 7 user inputs Standard outputs: 8 dedicated outputs + 6 user outputs Expandable to 1,024 inputs/1,024 outputs
	Position Feedback	Absolute encoder
	Program Memory	60,000 steps and 10,000 instructions
	Concurrent I/O	10,000 lines
Communication	Multiple Robot Control	Dual, triple, and quad

SAFETY FEATURES	Safety Specs	Dual-channel Emergency Stop Pushbuttons, 3-position enable switch built into pendant Meets ANSI/RIA R15.06-1999 safety standard
	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
E-Stop		Category 1 Controlled Stop

PENDANT	Pendant Dimensions	190 x 338 x 60 mm (7.5" x 13.3" x 2.4")
	Pendant Display	6.5 inch full-color touch screen, 640 x 480 (VGA)
	Pendant Languages	English, German, Japanese, Spanish, Chinese
	Pendant Weight	1.34 kg (2.96 lbs.)
	Coordinate System	Joint, rectangular, cylindrical, tool, 24 user-coordinate frames
	Windows® Menu Driven Interface	User-selectable touch screen
	Pendant O/S	Compact flash slot for backup
	Protection Rating	Windows CE
	Controller Start, Hold	IP65
	Emergency Stop	Illuminated Push Buttons
Mode Select – Teach, Play, Remote		Red mushroom type - Push lock/Turn Reset

PROGRAMMING	Programming Language	INFORM III, icon-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
	I/O Instructions	Discrete I/O, 4-bit and 8-bit manipulation, analog output, analog input
	Operation	Up to 5 levels of undo/re-do
Multi-tasking		8 Concurrent jobs

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

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