

High performance robot controller

# FD Controller



Teach pendant display



Multi-window display assists easy operation

## Fast Processing Capacity

High-speed CPU brings huge improvement to cycle time, tracking operations, and internal processing time performance.

## Teach pendant is compact and highly functional

Compact and light weight with re-tooled keys and improved ergonomics.

Standard touch screen with HMI display makes operations simple and intuitive.

## Improved maintainability

Minimized controller components to maximize maintainability.

Quick parts replacement.

## Outstanding functionality

Excellent software functions carried over from AX controller.

Easily adapts to various applications.

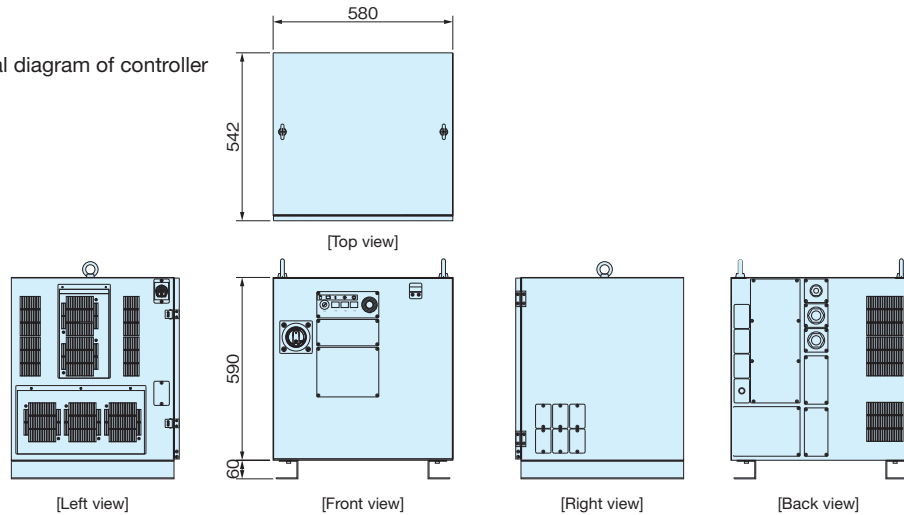
## Full lineup of safety functions

Compliant with category 3 safety standards in US and Europe as standard.



# FD Controller

## ◆ External diagram of controller



## ◆ Controller basic specifications (Domestic specifications: FD11-0000)

Item	Specifications
Controlled axes	Simultaneous 6 axes (maximum 8 axes as option)
Servo motors	AC servo motors
Positioning	Absolute encoder
Programming system	Teaching, playback
Program number	9,999 programs
Memory capacity	256 MB (equivalent to 2,560,000 steps)
Memory format	Flash memory
External memory	USB memory supported (USB memory not included)
Operation panel	Mode switch (teaching/playback) Emergency stop button, operation setup button, start button, stop button
Safety functions	PLd (category 3 compliant)
Harness to robot controller	5 m (controller cable specifications)
User interface	User panels: On front, side, and inside door (Some panels may not be usable if hardware options are added)
Serial interface	RS232C 1ch
Construction	Fully enclosed cabinet
Protection	IP54 equivalent
Cooling method	Indirect cooling (heat exchanger)
Primary power supply specifications	200 VAC to 220 VAC $\pm 10\%$ (3 phase, 50/60 Hz) D type ground Breaker capacity 40 A, maximum current leakage 100 mA
Standby power *1	0.13 kVA (cooling fan on), 0.08 kVA (cooling fan off)
Ambient temperature	0 to 45°C (50/60 Hz)
Ambient humidity	20 to 85% (without condensation)
Exterior dimensions	W 580xD 542xH 590 (mm) (not including 60 mm height of feet)
Weight	Approx. 62 kg
Color	Munsell 10GY9/1

\*1: The standby power consumption is when in energy-saving mode. In energy-saving mode the brakes are locked, power to servo motors is turned off, and the robot holds its position. Refer to the basic specification sheet of a robot for the electric power requirements.

## ◆ Option specifications

Item	Specifications
Overseas compliance	North American specifications FD11-1101: ANSI/RIA compliant European specifications FD11-2101: CE mark compliant
Primary power voltage conversion (external dimensions of controller)	380/400/420/440/460/480 VAC $\pm 10\%$ (3 phase, 50/60 Hz) D type ground Breaker capacity 30 A, maximum current leakage 100 mA W 580xD 542xH 1,180 (mm) (not including 60 mm height of foot)
Harness to robot controller	Extension (total): 10 m, 15 m, 20 m, 25 m (controller cable specifications)
Additional axes	Gun axis, traverse axis, tool axis, hand axis
External memory	USB memory (1 GB)
Fieldbus	Device-Net, Profibus, FL-net, CC-Link and others supported Maximum 4 channels can be installed
Additional input/output signals	Input 32 points/output 32 points or input 64 points/output 64 points
Output signal relay contact specifications	32 or 64 points (I/O signals added and set to use)
Analog input/output	Input 2 channels, output 4 channels
Visual sensor function	Built-in visual sensor NV-Pro
Conveyor synchronizing function	Conveyor tracking control
Palletize function	Palletize and de-palletize support functions
Robot language	JIS SLIM language compliant
PLC function	Software PLC IEC 1131-3 compliant

## ◆ Teach pendent display specifications

Item	Specifications
Display	5.7 inch color LCD (640 × 480 pixels, with backlight, 65,536 colors) Touch panel
Language specifications (Option)	Japanese English/Chinese/Korean
Enable SW	One-handed deadman switch, three positions (left hand side)
Operation functions	Axis operation key, value input key, selection/function key, operation setup ON key, emergency stop button
External memory interface	USB port
Cable length (Option)	8 m (controller cable specifications) Extension (total): 15 m, 25 m (controller cable specifications)
Protection	IP65 compliant
Exterior dimensions	W 170 × H 300 × D 65 (mm) (excluding hook and corner guard)
Weight	0.96 kg (excluding cable)

● The specifications are subject to changes without notice.

● In case that an end user uses this product for military purpose or production of weapon, this product may be liable for the subject of export restriction stipulated in the Foreign Exchange and Foreign Trade Control Law. Please go through careful investigation and necessary formalities for export.

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