# NEMA 4X VARIABLE FREQUENCY DRIVE

HITACHI Inspire the Next

## **Beyond Boundaries**

Hitachi's powerful and flexible WJ200 now features an available integrated enclosure that meets NEMA type 4X use requirements, and is designed to conform to IP66 rating of IEC 529. This enclosure provides the necessary protection required in tough wash-down environments, like those found in food and beverage processing. The resilient PVC enclosure is resistant to impact and deformation. A fanless heat sink design reduces both maintenance, concern about fan conditions and noise without compromising performance.















Dust

Wate

Indoor/Outdoor

Corrosion

ice

**Risk Reduction** 



## Think Inside the Box

The NEMA 4X version of the WJ200, with its highly customizable features and programmability, is the perfect choice for industrial standalone packaging and conveyor equipment. The integrated WJ200 provides the benefits of PLC-like functionality through EzSQ and Master-less communications, such as coordinated speed control using EzCOM. With its new NEMA 4X enclosure, the WJ200 continues to extend its flexibility while retaining the reliability, simplicity, and performance that has made it an industry favorite.



#### **Built in Functions**

» All logic is performed via integrated keypad



#### Coordinated Trips

 Reduce production disturbances



#### Easy to Clean

 Easy to clean enclosure is food friendly too



### Simple Pairing

» Easily synchronize speeds within 1/100<sup>th</sup> hertz



## **Fanless Design**

» No fan to clean and less noise



# **Torque Control**

» High starting torque and speed regulation at low-speed









Series			WJ 200
Power Source	Rated Input Voltage	1-phase (100V)	100 – 120V +/- 10%, 50/60Hz +/- 5%
		1-phase (200V)	200 – 240V +10%/-15%, 50/60Hz +/- 5%
		3-phase (200V)	200 – 240V+10%/-15%, 50/60Hz +/- 5%
		3-phase (400V)	380 – 480V +10%/-15%, 50/60Hz +/- 5%
Applicable Motor			0.1 – 2.2kW
Output Frequency Range			0.1 – 400Hz
Starting Torque *2			200% or greater (at 0.5Hz) (Sensorless vector control)
Braking Torque	Dynamic Brak	ke (capacitor feedback)	10 – 50%
		DC Brake	Variable operating frequency, time, and braking force
Overload Capacity		ty	Dual rating: CT (Heavy duty) : 150%, 60sec. VT (Normal duty): 120%, 60sec.
Acceleration/Deceleration Time			0.01 - 3,600sec.
Multispeed Operation			Max. 16-stage
Analog Input for Frequency Control			0 – 10VDC, 4 – 20mA
Protective Functions			Over-current, over-voltage, under-voltage, overload, brake resistor overload, CPU error, memory error, external trip, USP error, ground fault detection at power on, temperature error, internal communication error, driver error, thermistor error, brake error, safe stop, overload at low speed, modbus communication error, option error, encoder disconnection, speed excessive, EzSQ command error, EzSQ nesting error, EzSQ execution error, EzSQ user trip
Other Functions			Free V/f setting (7 breakpoints), PM motor control (corresponds more than Ver.2.0), Simple positioning control, Easy sequence programming function, Safe stop, Password, Peer-to-Peer communication, frequency upper/lower limit, jump (center) frequency, manual torque boost level/breakpoint, energy-saving operation, analog meter adjustment, Minimum time deceleration, Over-current Suppress, electronic thermal function (available also for free setting), external start/end frequency/frequency rate, restart after instantaneous power failure, Controlled deceleration on power loss, auto-tuning
Environmental Conditions	Ambient Op	erating Temperature	-10 to 40 degrees C*1
		Humidity	20 to 90%RH (No condensation)
		Location	Less than 1,000m of Altitude, Indoors (No corrosive gas nor dust)

<sup>\*1 :</sup> See derating data and carrier frequency adjustment in instruction manual when ambient operating temperature is 40 degrees C or over.

Information in this brochure is subject to change without notice.

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<sup>\*2 :</sup> The characteristic is different according to the motor combination.