General Specifications

Item		WL200	WJ200
Control method		Sinusoidal Pulse Width Modulation (PWM) control	
Carrier frequency		2 kHz to 10 kHz (derating required depending on the model)	2 kHz to 15 kHz (derating required depending on the model)
Output frequency range		0.01 to 400 Hz	
Frequency accuracy		Digital command: ±0.01 % of the maximum frequency Analog command: ±0.2 % of the maximum frequency (25 °C ±10 °C)	
Frequency setting resolution		Digital: 0.01 Hz; Analog: max. frequency / 1000	
Volt. / Freq. characteristic		V / f control (constant torque, reduced torque, free-V / F): base freq. 30 Hz – 400 Hz adjustable.	V / f control (constant torque, reduced torque, free-V / F): base freq. 30 Hz – 400 Hz adjustable, Sensorless vector control, Closed loop control with motor encoder feedback (only V / f control).
Overload capacity		60 sec. @120 %, 12 sec. @140 %	Dual rating: CT (Heavy duty): 60 sec. @150 % VT (Normal duty): 60 sec. @120 %
Acceleration / deceleration time		0.00 to 3600 seconds, linear and S-curve accel. / decel., second accel. / decel. setting available	
DC braking		Variable operating frequency, time, and braking force	
Input signal	Digital	7 terminals, NO / NC switchable, sink / source changeable by a short bar	
	Analog	0 to 10 VDC (10 kΩ), 4 to 20 mA (100 Ω), 1 thermistor (PTC characteristic, common with intelligent terminal)	
	Pulse train	-	1 terminal, 24 VDC, 32 kHz 1 terminal, 24 VDC, 2 kHz (common with intelligent terminal)
Output signal	Digital	2 open-collector terminal, NO / NC switchable, sink / source logic	
	Analog	1 terminal, 0 to 10 VDC	
	Pulse train	1 terminal, 0 to 10 VDC, 32 kHz	
	Relay	1 terminal, NO / NC switchable	
Network	Standard	RS485 (Modbus RTU), USB mini-B port, RJ45 port	
	Option	EtherCAT, DeviceNet, PROFIBUS, PROFINET	
Other functions		-	Auto-tuning
		-	Simple position control
		-	Simple torque control
		-	Sensorless vector control
		-	PM motor control
		PID control	
		Programming function (EzSQ)	
		Peer-to-Peer communication (EzCOM)	
		Password function	
Functional safety		STO (ISO13849-1 Category 3 / IEC60204-1 Stop Category 0)	
Protective function		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, EzSQ command error, EzSQ nesting error, EzSQ execution error, EzSQ user trip, etc.	
Operating environment	Temperature	Operating (ambient): –10 to 40 °C / Storage: –20 to 65 °C	Operating (ambient): –10 to 50 °C / Storage: –20 to 65 °C
	Humidity	20 to 90 % humidity (non-condensing)	
	Vibration	5.9 m / s^2 (0.6 G), 10 to 55 Hz	
	Location	Altitude 1,000 m or less, indoors (no corrosive gases or dust)	
	Degree of protection	IP20	
Certification		RoHS, CE, UL, cUL, c-Tick, GOST	
Options		LCD operator, digital operator, braking unit, braking resistor, AC reactor, DC reactor, EMC filter	

Conformity to global standards
CE, UL, c-UL, c-Tick approvals

Sink / source logic is standard
Logic input and output terminals can be configured for sink or source logic

Wide input power voltage range
Input voltage 240 V for 200 V class and 480 V for 400 V class as standard

WL200 Standard Specifications

1-phase 200 V class

Models WL200-		002SFE	004SFE	007SFE	015SFE	022SFE
Applicable motor size	kW	0.2	0.4	0.75	1.5	2.2
Rated capacity (kVA)	200 V	0.4	1.2	1.5	2.8	4.1
	240 V	0.5	1.4	1.8	3.4	4.9
Input Rating	Rated input voltage (V)	1-phase: 200 V–15 % to 240 V +10 %, 50 / 60 Hz ±5 %				
Output Rating	Rated output voltage (V)	3-phase: 200 V to 240 V (proportional to input voltage)				
	Rated output current (A)	1.2	2.6	3.5	6.0	9.6
Minimum value of resistor (Ω)		100	100	100	50	50
Weight (kg)		1.0	1.1	1.1	1.6	1.8

3-phase 400 V class

Models WL200-		004HFE	007HFE	015HFE	022HFE	030HFE	040HFE	055HFE	075HFE	110HFE	150HFE	185HFE
Applicable motor size	kW	0.4	0.75	1.5	2.2	3.0	4.0	5.5	7.5	11	15	18.5
Rated capacity (kVA)	380 V	1.4	1.4	2.9	3.9	5.4	6.2	8.8	13.2	15.8	25.1	29
	480 V	1.7	1.8	3.6	5.0	6.8	7.9	11.1	16.7	20.0	31.6	36.6
Input Rating	Rated input voltage (V)	3-phase: 380 V–15 % to 480 V +10 %, 50 / 60 Hz ±5 %										
Output Rating	Rated output voltage (V)	3-phase: 380 V to 480 V (proportional to input voltage)										
	Rated output current (A)	1.5	2.1	4.1	5.4	6.9	8.8	11.1	17.5	23.0	31.0	38.0
Minimum value of resistor (Ω)		180	180	180	180	100	100	100	70	70	70	35
Weight (kg)		1.5	1.5	1.6	1.8	1.9	1.9	2.1	3.5	3.5	4.7	5.2

WJ200 Standard Specifications

1-phase 200 V class

Models WJ200-			002SF	004SF	007SF	015SF	022SF
Applicable motor size	kW	VT	0.4	0.55	1.1	2.2	3.0
		CT	0.2	0.4	0.75	1.5	2.2
Rated capacity (kVA)	200 V	VT	0.6	1.2	2.0	3.3	4.1
		CT	0.5	1.0	1.7	2.7	3.8
	240 V	VT	0.7	1.4	2.4	3.9	4.9
		CT	0.6	1.2	2.0	3.3	4.5
Input Rating	Rated input voltage (V)		1-phase: 200 V–15 % to 240 V +10 %, 50 / 60 Hz ±5 %				
Output Rating	Rated output voltage (V)		3-phase: 200 V to 240 V (proportional to input voltage)				
	Rated output current (A)	VT	1.9	3.5	6.0	9.6	12.0
		CT	1.6	3.0	5.0	8.0	11.0
Minimum value of resistor (Ω)			100	100	50	50	35
Weight (kg)			1.0	1.1	1.6	1.8	1.8

3-phase 400 V class

Models WJ200-			004HF	007HF	015HF	022HF	030HF	040HF	055HF	075HF	110HF	150HF
Applicable motor size	kW	VT	0.75	1.5	2.2	3.0	4.0	5.5	7.5	11	15	18.5
		CT	0.4	0.75	1.5	2.2	3.0	4.0	5.5	7.5	11	15
Rated capacity (kVA)	200 V	VT	1.3	2.6	3.5	4.5	5.7	7.3	11.5	15.1	20.4	25.0
		CT	1.1	2.2	3.1	3.6	4.7	6.0	9.7	11.8	15.7	20.4
	240 V	VT	1.7	3.4	4.4	5.7	7.3	9.2	14.5	19.1	25.7	31.5
		CT	1.4	2.8	3.9	4.5	5.9	7.6	12.3	14.9	19.9	25.7
Input Rating	Rated input voltage (V)		3-phase: 380 V–15 % to 480 V +10 %, 50 / 60 Hz ±5 %									
Output Rating	Rated output voltage (V)		3-phase: 380 V to 480 V (proportional to input voltage)									
	Rated output current (A)	VT	2.1	4.1	5.4	6.9	8.8	11.1	17.5	23.0	31.0	38.0
		CT	1.8	3.4	4.8	5.5	7.2	9.2	14.8	18.0	24.0	31.0
Minimum value of resistor (Ω)			180	180	180	100	100	100	70	70	70	35
Weight (kg)			1.5	1.6	1.8	1.9	1.9	2.1	3.5	3.5	4.7	5.2

VT normal duty / CT heavy duty
3-phase 200 V class versions are also available

Information in this brochure is subject to change without notice.