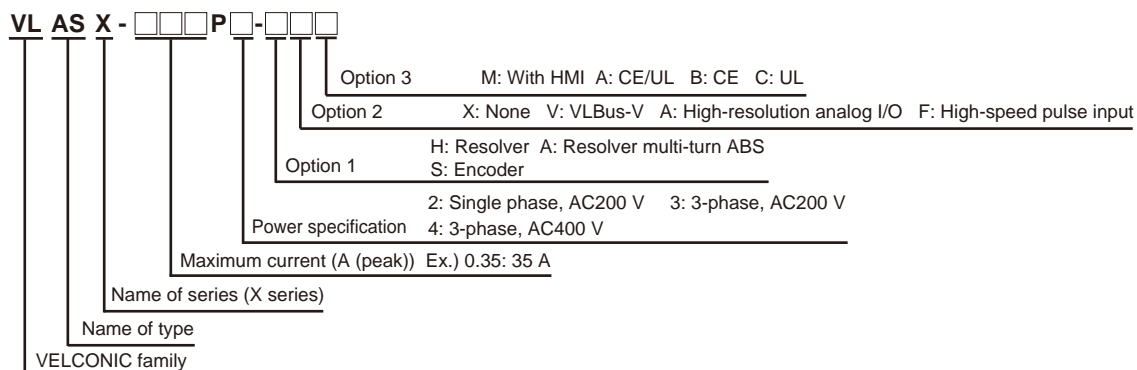


Amplifier Specifications Table

Type of X series standard amplifier



General specifications/Performance specifications

Type of amplifier	008P2	012P2	025P2	035P3	070P3	100P3	200P3	320P3	500P3	400P4	
Control system	PWM, 3-phase sine-wave										
Main circuit	Master power voltage	Single phase AC200 ~ 230V -15% ~ +10% 50/60 Hz			Three-phase AC200 ~ 230V -15% ~ +10% 50/60 Hz						Three-phase (neutral point grounding) AC380 ~ 460 V -15% ~ +10% 50/60 Hz
	Power capacity	500VA	1.2kVA	1.7kVA	2.6kVA	5.4kVA	8.0kVA	18kVA	35kVA	59kVA	83kVA
Control circuit	Master power voltage	Single phase AC200 ~ 230 V -15% ~ +10% 50/60 Hz			Single phase AC200 ~ 230 V -15% ~ +10% 50/60 Hz						
	Power capacity	50VA	50VA	50VA	65VA	80VA	80VA	100VA	150VA	150VA	350VA
Max. motor combination	200W	500W	1kW	1.5kW	3.4kW	5.0kW	11kW	20kW	33kW	55kW	
Continuous output current	2.2A(rms)	3.4A(rms)	5.7A(rms)	8.3A(rms)	18.4A(rms)	28.3A(rms)	56.6A(rms)	99A(rms)	166A(rms)	134 A(rms)	
Instantaneous max. current	5.7A(rms)	8.5A(rms)	17.7A(rms)	25.0A(rms)	49.5A(rms)	71.0A(rms)	141A(rms)	226A(rms)	353A(rms)	283 A(rms)	
Speed position sensor	Resolver or 17-bit serial encoder (Both resolver and encoder can have absolute specifications.)										
Range of speed control	1:5000 (Ratio of lower limit speed and rated speed, which allows output of motor rated current.)										
Speed fluctuation ratio	±0.02% or less under load of 0 ~ 100% or at power of -15 ~ 10%. ±0.2% or less at temperature of 0 ~ 55°C (The specified values are obtainable at rated speed.)										
Heat loss	Main circuit	15W	22W	39W	58W	98W	178W	310W	720W	1200W	1900W
	Control circuit	20W	20W	20W	26W	32W	32W	40W	50W	50W	140W
Reverse-current absorption resistor capacity (*1)	20W		20W	30W	60W	80W	100W	180W	Changes with external resistor capacity.		
Mass (standard)	1.3kg	1.3kg	2.3kg	2.4kg	4.5kg	7kg	12kg	31kg	63kg	120kg	
Outer dimensions (W*H*D)	65*170*150	65*170*150	110*170*180	110*170*180	110*250*180	130*307*197	220*410*230	350*500*315	585*500*353	670*710*410	
General-purpose input	DC24V, 6 mA, 8 numbers (For speed control: Operation, reset, MB check, forward rotation permit, reverse rotation permit, present value clear, home point stop and PON input) Both sink ("-" common) connection and source ("+" common) connection are possible.										
General-purpose output	DC24V, 50 mA, 5 numbers (For speed control: Servo normal, servo ready, stop detection, warning and MB output) Both sink ("-" common) connection and source ("+" common) connection are possible.										
Speed current control	Speed command	DC0 ~ ±10V; Maximum motor speed at ±10V (Setting of ratio is possible.) Input resistance 49 kΩ, AD resolution 12-bit (Speed limit in current control mode)									
	Current command	DC0 ~ ±10V; Maximum motor torque at ±10V (Setting of ratio is possible.) Input resistance 49 kΩ, AD resolution 12-bit (Current command in current control mode)									
Position control	Split count	Resolver 24,000 P/rev, encoder 131,072 P/rev (Travel distance per pulse can be set by 65535/65535.)									
	Command type	Forward/reverse rotation pulse (Phase A/phase B pulse and forward/reverse rotation signal/feed pulse are also permitted.) DC3.5 V ~ 5.5 V, 11 mA photo coupler input, frequency 500 kHz (max.)									
Pulse output	Split count	Resolver 24,000 P/rev, encoder 131,072 P/rev (Travel distance per pulse can be set by 65535/65535.)									
	Output type	Phase A/phase B pulse (forward/reverse pulse), Vout: 3 V (typ) 20 mA (max.), output equivalent to AM26LS31, frequency 500 kHz (max.)									
Acceleration/deceleration	Soft start	Acceleration/deceleration time can be set separately for the speed command. Linear acceleration/deceleration in the range of 0.000 ~ 65.535 s in increments of 0.001 s.									
	S-type acceleration/deceleration	Acceleration/deceleration time can be specified for speed command or pulse command. S-type acceleration/deceleration in the range of 0.000 ~ 65.535 s in increments of 0.001 s.									
Monitor function	Monitor output	Speed or current monitor, 0 ~ ±10 V, output resistance 330 Ω (protection against short-circuit), DA resolution 12-bit (option).									
	Display	LED 5-digit (Various monitor display, check, adjustment and parameter setting are possible.) (Without HMI: Option)									
	External display	DPA-80 (extra price) can be connected. (Monitor of speed, current, present value, electronic thermal, etc., is possible.)									
Auto tuning function	Auto gain setting by repeated tuning operation.										
Protection function	Overcurrent, overvoltage, voltage drop, motor overload (electronic thermal, instant thermal), fin overheat, reverse-current resistor overload, resolver breakage, encoder breakage, etc.										
General specifications	Operating environment	Temperature: 0 ~ 55°C (non-freezing), humidity: 10 ~ 90%RH (non-condensing) Atmosphere: Neither dust, metal chip or corrosive gas is included. Altitude for installation: 1,000 m or less									
	Vibration resistance (*2)	Pursuant to IEC60068-2-6. Frequency: 10 ~ 57 Hz, single amplitude: 0.075 m Frequency: 57 ~ 150 Hz, acceleration 9.8 m/s ²							-		
	Storing environment	Temperature: -10 ~ 70°C (non-freezing), humidity: 35 ~ 90%RH (non-condensing) Atmosphere: Neither dust, metal chip or corrosive gas is included.									
	Protective structure	IP10									
	Division of overvoltage	Overvoltage category II									
Protective insulation	Protective insulation is done for all interfaces (CN1, CN2, CN5, CN9) from the primary power supply.										

*1: The reverse-current absorption resistor capacity is the absorption capacity of the resistor incorporated in the servo amplifier. It is possible to increase the capacity by adding an external resistor.

*2: Normal amplifier operation is already verified under these conditions.