

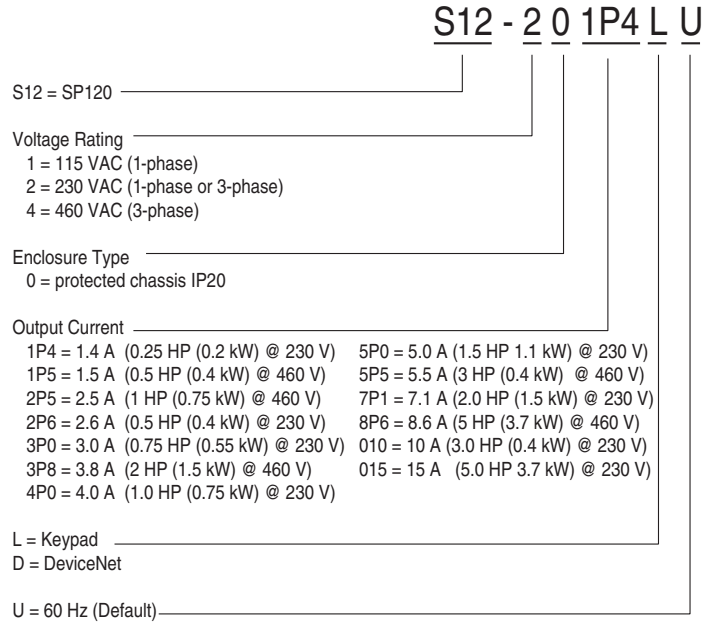
Reliance Electric AC Microdrive Selection Guide

(See reverse for how to select model numbers)

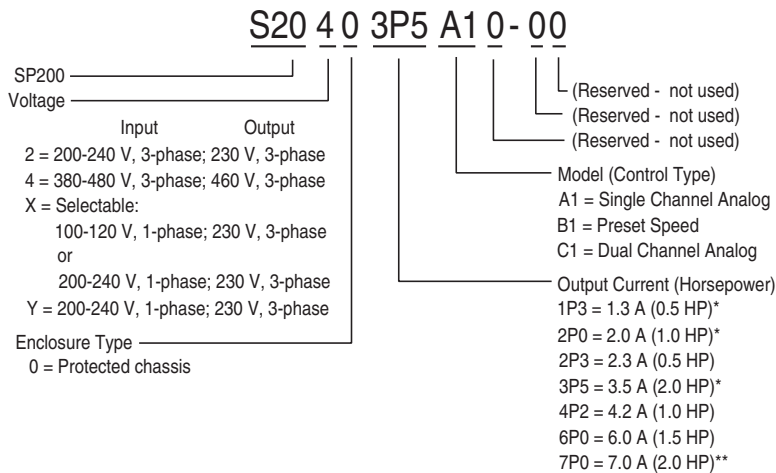
Attribute	SP120 AC Drive	SP200 AC Drive	Comments
Drive Type	V/Hz	V/Hz	V/Hz control is ideally suited for pump, fan, and unit handling machines.
Horsepower Rating			
HP / 115 V 1 Phase HP / 230 V 1 Phase HP / 230 V 3 Phase HP / 460 V 3 Phase	FHP to 1 HP FHP to 3 HP FHP to 5 HP FHP to 5 HP	FHP to 1.5 HP FHP to 2 HP FHP to 2 HP FHP to 2 HP	The SP120 has a wider HP range, up to 5 HP. (FHP = Fractional Horsepower)
Enclosure Type	IP20	IP20	Finger-safe enclosure. IP20 is not equivalent to NEMA 1 for cabinet mounting.
DIN Rail Mounting	No	Yes	Important feature for some OEMs. Installation on DIN rail is quicker.
Keypad Features			
Display Type	Onboard LED-standard with drive	Onboard LED-optional Remote LED-optional CopyCat LCD-optional	Both one-line displays. SP200 keypad is optional, saving the cost of the keypad when display interface is not required. NEMA 4 rated with larger one-line display and keys. Mounts flush on panel. Handheld unit with numeric keypad and two-line display. Uploads and downloads parameter configuration. Stores up to 15 parameter configurations.
Inputs and Outputs			
Digital Inputs	5	3	Used for start, stop, jog and preset speeds.
Digital Outputs	2	1	Used for fault, at speed and at current indication.
Relay Outputs	1 (Form C)	1 (Form C)	Used for fault and drive ready indication.
Analog Outputs	1	0	
Ambient Temp. Rating	-10°C to 40°C	0°C to 50°C	SP200 has a higher ambient rating.
Braking			
DC Injection	Yes	Yes	Both support fast injection braking, selectable via a parameter. Neither drive can regen to the AC line.
DB (Dynamic Braking)	Accessible terminals	No	External DC snubber braking for SP120 is available. *
Regulation Features			
Frequency Range	.5 to 360 Hz	0 to 240 Hz	SP120 has a wider frequency range.
Accel and Decel Rates	0.1 to 3000 sec	0 to 600 sec	SP200 has a much faster accel/decel rate, important in small centrifugal applications.
Overload Capacity	150% 1 min 220% 10 sec	150% 1 min 200% for 10 sec	SP200 will provide superior motor performance in high starting torque applications.
Carrier Frequency	0.5 to 16 kHz	2 to 8 kHz	SP120 is better suited to HVAC applications where a higher carrier frequency is required. Higher frequencies require derating.
Preset Speeds	15	8 (model B only)	Selectable speeds via terminal strip selection.
S-Curve	Yes	No	S-curve function softens starting/speed transitions.
PID Control	Yes	PI (model C only)	To maintain constant flow or pressure with a preset reference and a second trim reference.
Jog Function	External	External	SP200 Remote and CopyCat keypads have jog keys.
Protection Features			
Undervoltage Trip	Yes	Yes	
Overvoltage Trip	Yes	Yes	
DC Bus Protection	Std. MOV	Std. MOV	(MOV = Metal Oxide Varistor) Suppresses voltage transients from the AC line input to prevent drive damage.
Overload Trip	Yes	Yes	
IOC Trip	Yes @ 220%	Yes @ 300%	(% of continuous amps)
Overtemperature Trip	Yes	Yes	
Phase to Phase Fault Detection	No	Yes	
Phase to Ground Fault Detection	Yes	Yes	
Power Wiring	Bottom-feed	Feed-through top to bottom	SP200 power wiring arrangement is ideal for motor starter conversions since starters are wired with line connections on top and motor connections at the bottom.
Signal Wiring	Screw-type	Spring-loaded terminals	SP200 spring-loaded terminals tend to be quicker to connect.
Agency Approvals	UL, cUL, CE	UL, cUL, CE	Both drives have CE filter options available.

* Snubber braking kits are purchased separately.

SP120 Model Number Selection



SP200 Model Number Selection



* Available only with 460 V input

** Available only with 230 V input (single- or three-phase)

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Americas Headquarters, 1201 South Second Street, Milwaukee, WI 53204, USA, Tel: (1) 414 382 2000, Fax: (1) 414 382 4444
European Headquarters SA/NV, Boulevard du Souverain 36, 1170 Brussels, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640
Asia Pacific Headquarters, 27/F Citicorp Centre, 18 Whitfield Road, Causeway Bay, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846
Reliance Electric Standard Drives Business, 24800 Tungsten Road, Cleveland, Ohio 44117, USA, Tel: (1) 888 374 8370, Fax: (216) 266 7095



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