

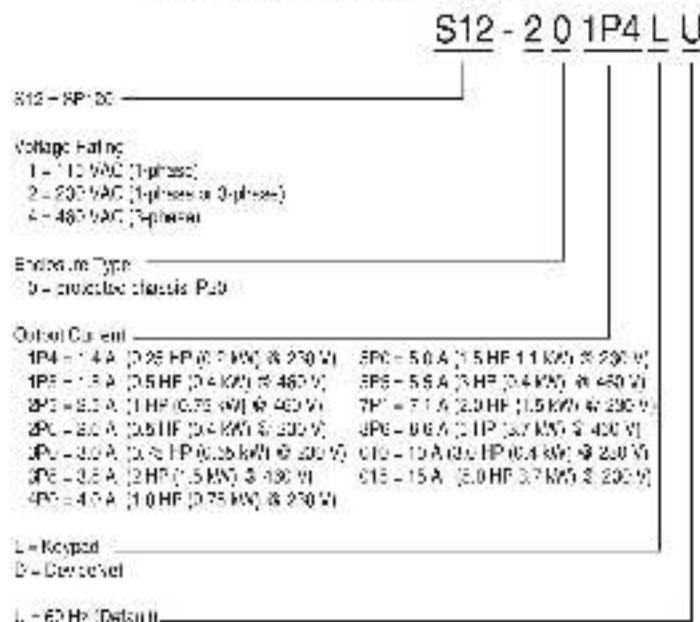
Reliance Electric AC Microdrive Selection Guide

(See reverse for flow to select model numbers)

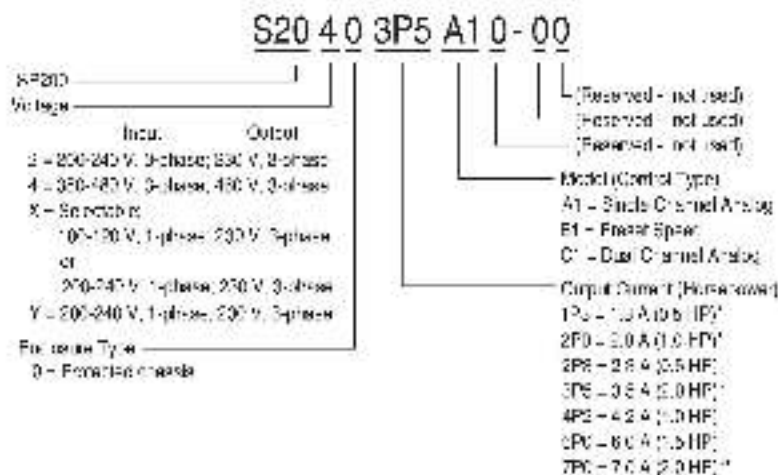
| Attribute | SP120 AC Drive | SP200 AC Drive | Comments |
|--|--|---|---|
| Drive Type | V/F | V/F | V/F control is ideally suited for pump, fan, and unit handling machines. |
| Horsepower Rating | | | |
| HP / 115 V 1 Phase HP / 230 V 1 Phase HP / 230 V 3 Phase HP / 460 V 3 Phase | 1/10 to 1 HP 1/10 to 5 HP 1/10 to 5 HP 1/10 to 5 HP | 1 HP to 1.5 HP 1 HP to 2 HP 1 HP to 2 HP 1 HP to 2 HP | The SP120 has a wider 1 Phase, 115V V/F range. [HP = fractional horsepower] |
| Enclosure Type | IP20 | IP20 | 1-gang-side 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 crucial. |
| Keypad Features | | | |
| Display Type | On-line LCD display with 4 lines | On-line LCD not used Remote LCD options CopyCat LCD options | On-line displays. SP200 keypad is optional, saving space, if the keypad when display initial use is not required. NEMA 1 rated with on-line display and keys. Mounts flush on panel. Hand-held unit with numeric keypad and two-line display. Uploads and downloads parameter configurations. Stores up to 15 parameter configurations. |
| Inputs and Outputs | | | |
| Digital Inputs | 5 | 6 | used for start, stop, jog, and preset speeds. |
| Digital Outputs | 2 | | used for fault, speed error, alarm, and indication. |
| Relay Outputs | 1 (from C) | 1 (from C) | used for fault and/or speed 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 DC injection braking, selectable via parameter. Neither drive can return to the AC line. |
| DB (Dynamic Braking) | Accessible to 110V | No | Internal DC rubber brake for SP 200 is available.* |
| Regulation Features | | | |
| Frequency Range | 0.5 to 360 Hz | 0 to 270 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 200% 10 sec | 50% 1 min 200% 10 sec | SP200 will provide superior motor performance in high starting current applications. |
| Carrier Frequency | 0.5 to 13 kHz | 0 to 0.4 Hz | SP120 is better suited for HVAC applications where a higher carrier frequency is required. Higher frequencies require derating. |
| Preset Speeds | 15 | 0 (none) to 14 | Selectable speeds via terminal or I/O selection. |
| S-Curve | Yes | No | S-curve function softens starting/stop transitions. |
| PID Control | Yes | 1 (from C only) | Control with constant flow or pressure with a pressure reference and a second flow reference. |
| Jog Function | External | External | SP200 Remote and CopyCat keypads have jog lever. |
| 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 AC line inrush to drive (drive damage). |
| Overload Trip | Yes | Yes | |
| IOC Trip | Yes @ 200% | Yes @ 300% | [% of continuous amp] |
| Overtemperature Trip | Yes | Yes | |
| Phase to Phase Fault Detection | No | Yes | |
| Phase to Ground Fault Detection | Yes | Yes | |
| Power Wiring | Bottom-feed | Feed-in only up to 100V | SP200 power wiring arrangement is ideal for four-wire motor conversions since starters are wired with four terminals on opposite motor connections (see diagram). |
| Signal Wiring | Standard | Surface-mounted terminals | SP200 standard terminals be drilled for universal connection. |
| Agency Approvals | UL, cUL, CE | UL, cUL, CE | Both drives have CE filter not on available. |

* Standard braking kits are purchased separately.

SP120 Model Number Selection



SP200 Model Number Selection



* Available only with 480 V input

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

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