

Specifications and Features for VS mini

The VS mini drive provides maximum performance in a microsize design. This significant size reduction has been accomplished without sacrificing the essential programming features of our larger drives, allowing the VS mini drive to be used in a wide range of applications.

The VS mini drive is used for material handling, packaging, mixing, pumping, commercial wash machines, recreation equipment (tread mills), overhead doors and general industrial applications. This drive is the perfect choice for the design engineer, available in standard protected chassis and optional Din rail designs.

The microsize design features application-specific intelligent power module (ASIPM) devices and circuitry, a 16-bit microprocessor, and surface mounted devices for reliability and strength.

The VS mini is available in 1/8 through 1 HP models, 115 VAC single-phase, 50/60 Hz ranges.

Performance Features

- Ratings: 1/8 to 1 HP at 115 VAC
- Constant torque overload rating: 150% for 1 min. (200% peak)
- DC injection braking, ramp to stop
- Electronic reversing
- Adjustable accel/decel: 0.1 to 999 sec
- Controlled speed range: 40:1
- Drive efficiency: 95%
- Displacement power factor: 0.98
- Output frequency: 0.1 to 400 Hz
- Frequency resolution: 0.1 Hz with digital reference
0.06 /60 Hz with analog reference

Design Features

- 16-bit microprocessor logic
- Digital keypad operator
- Programmable form C contact for customer use: 1A at 250 VAC or 30 VDC
- 24 VDC control logic
- Carrier frequency: 2.5-10 kHz
- 8 Multi-speed settings
- Remote speed reference: 0-10 VDC (20K ohms) or 4-20 mA (250 ohms)
- Signal follower: bias and gain
- Analog monitor output: 0-10 VDC proportional to output frequency or current

Performance Features

- Frequency accuracy (-10° to 50°C): 0.01% with digital command
0.1% with analog command
- Volts / hertz ratio: infinitely adjustable pattern
- DC injection braking: adjustable amplitude, duration, and current limit

Design Features

- Over 70 programmable functions
- Fully EMC compliant when optional RFI filter connected
- MTBF: exceeds 28 years

- Torque boost: full range, auto
- Power loss ride-thru: 1 sec. min
- Speed search
- Auto restart
- 3 Critical frequency rejection settings
- Slip Compensation

Standards

- UL listed
- cUL
- IEEE STD 444 (ANSI-C343)
- IEC: 146A

Protective Features

- Current limited stall prevention during accel, decel and run
- DC bus CHARGE indicator
- Isolated operator controls
- Phase-to-phase / phase-to-neutral short circuit protection
- Ground fault protection
- UL 508C programmable electronic motor overload

Service Conditions

- Ambient service temperature: -10°C to 50°C (14° to 122°F)
- Ambient storage temperature: -20° to 60°C (-4° to 140°F)
- Humidity: to 90% non-condensing
- Altitude: to 3300 ft; higher by derating
- Service factor: 1.0
- Input voltage: single phase 115V, ±10%
- Input frequency: 50/60 Hz, ± 5%