

Cool solutions to thermal problems.

Rocky
Research

COMMERCIAL | INDUSTRIAL | DEFENSE

VSD3010

Key Features

- Energy Efficient Motor Control
- 30hp Power Rating
- Provides Servo-Like Operation from Induction Motor
- 480 VAC, 42 Amp – Voltage and Current Rating
- Local or Remote Control
- Four Control Schemes – V/f, Open Loop, Closed Loop, and Flux Vector
- Designed to Operate in Navy Shipboard Environments
- *ICE™ Technology*

Rocky Research 30hp Variable Speed Drive



The Rocky Research 30hp Variable Speed Drive is designed to operate efficiently and effectively in the harsh environments found aboard Navy ships – high temperature, shock, vibration, EMI, and high humidity.

Rocky Research's **VSD3010** contains some of the most advanced, state-of-the-art electronics available on the open market today. The unit's mechanical design incorporates Rocky Research *ICE™* thermal management technology and expertise in ruggedization of high-density electronics.

The system has the speed and torque response necessary to provide servo-like performance from an induction motor in speed, torque, or position control applications. The unit utilizes IGBT technology for greater efficiency, and has the world's first 480V 3-level inverter architecture for providing total system protection. There are four configurable control schemes – V/f, open loop, closed loop, and flux vector. The system features an LCD keypad display for control at the enclosure, and it is equipped with an Ethernet Card that provides remote control capability, as well as dry contacts and 4-40 mA control lines for external PLC or microcontroller based control.

System Specifications

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| System Electronic Technology: | G7 AC Variable Speed Drive |
| Power Rating: | 30 HP |
| Input Voltage Rating: | 480 VAC / 60 Hz / 3 Phase / 3 Wire |
| Current Rating: | 42 Amps |
| Configurable Control Schemes: | V/f, Open Loop, Closed Loop, and Flux Vector |
| LCD Keypad Display: | Digital Interface 5 Lines x 16 Characters, Backlit, 7 Languages, Copy Function |
| Programming: | Quick Start and Modified Parameter Groups Remote or Local Control and Programming of Motor Operation |
| Microprocessor Logic: | 32-bit |
| Memory Type: | Flash Memory for Easy Updates, Custom Software Applications, and Non-Volatile Program Retention |
| Stopping Methods: | Ramp Stop, Coast Stop, Fast Stop, or High-Slip Breaking |
| Torque Load Operation: | Variable Torque, Constant Torque, or Constant Horsepower |
| DC Injection Braking: | Adjustable Level and Time |
| Overload Capacity: | Heavy Duty, 150% for One Minute, 200% Peak |
| Starting Torque: | 150% at Frequency – 1.0Hz (V/f), 0.5Hz (open loop vector), 0.0Hz (closed loop vector) |
| Output Frequency: | 0.01 to 400 Hz |
| Speed Control Range: | 40:1 (V/f), 200:1 (open loop vector), 1000:1 (closed loop vector) |
| Speed Regulation: | 1.0% (V/f), 0.2% (open loop vector), 0.01% (closed loop vector) |
| Stall Prevention: | Acceleration / Deceleration / Running |

Physical Specifications

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|--------------|-----------------------------|
| Form Factor: | Wall-Mount |
| Dimensions: | 24" (W) X 30" (H) X 16" (D) |
| Weight: | 330 lbs |

Environmental Specifications

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|-----------------------------|--|
| Shock: | MIL-STD-901D, Grade A, Class I, Type A Certified |
| Vibration: | MIL-STD-167-1A, Type I Certified |
| EMI: | MIL-STD-461E, Surface Ships Certified |
| Electrical Power Interface: | MIL-STD-1399-300, Type I, Certified |
| Temperature / Humidity: | 0° to 50° C / 5% to 95% non-condensing |
| Enclosure Protection: | MIL-E-2036, Drip-Proof up to 15 degrees |