SPAR POWER TECHNOLOGIES INC.

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Varitrol[®]600 Variable Frequency A.C. Drives

With integrated machine monitoring and protection system (U.S. Patent Pending file No. US 62/532,113)

Vector control (FOC)/Direct torque control (DTC) Made in Canada





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General description

VARITROL[®] is a high performance vector control/direct torque control (DTC) variable speed AC drive that uses multiprocessor state-of-the-art integrated digital technology.

Multi processor VARITROL[®] offers integrated state of the art machine monitoring and protection system by Centinue monitoring RTDs embed in the motor windings and machine bearings, for temperature and vibration sensors in X, Y and Z directions.

VARITROL[®] offers various communication protocol for real time data exchange of information on the plant network. (TCP/IP Ethernet, CAN, mod-bus and RS485 Communications).

Technical specifications

Power range

Input Power Supply:

3kW to 800kW

- up to 690 Vac; 3 phase, 50/60 Hz. Or DC 1,500V 250kW to 40,000kW
 - up to 6900 Vac, 3ph, 50/60 Hz

Power supply tolerances

- Voltage ±10%(Std.) ±15% (Option)
- Frequency $\pm 5\%$

Environmental conditions

- 0^0 to 45^0 C (32^0 to 113^0 F) ambient temperature
- -40^o to 70^oC (-40^o to 154^oF) storage temperature
- 0 to 90% relative humidity (non-condensing)
- Up to 1000m (3300ft) altitude above sea level

Switching Frequency (programmable)

• Up to 16KHz

Protections

- Over current
- Ground fault
- Under/Over voltage
- Over temperature
- Stall protection
- Thermal overload (I²t) protection
- Metal oxide varistors for transient voltage suppression

Optional services

Remote monitoring is available on all products

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System features

 4.3 Inch bilingual colour touch panel (7 and 12 inches optional) for programming and drive status and fault monitoring.



- 3 Independent accel/deccel ramps. (Linear V/Hz, square for fan application or S-curve)
- Programmable maximum frequency to 120Hz (600Hz optional)
- Five critical lockout frequencies
- IR compensation
- DC Injection braking
- Current limit 150% for 1 minute (200% optional)
- 8 Digital inputs I 8 Digital outputs(programmable)
- 2 Analog Inputs I 2 Analog Outputs (programmable)
- 4-20 mA/0-10 Volt process follower



Optional features

- NEMA 1 or NEMA 12 enclosure
- Incoming disconnect and fuses
- Automatic and Manual by-pass
- PID set point regulator
- Dynamic braking
- Active Front End (AFE)
- VECTOR Control (FOC)/Direct Torque Control (DTC)
- Machine condition monitoring and protection system
- Multilevel inverter for longer motor cables.
- Extra phase in the input and output power circuits for better fault tolerance

Note: Specifications may change without notice