Variable Torque 600 Volt

Fan/Pump Drive

GPD 506/P5 AC Drive 2 - 200 HP, 600 Volt

GPD 506/P5. This cost effective ac drive provides specific features that add significant "more-for-less" benefits.

- *Variable torque ratings.*
- *V/Hz Control Mode.*
- *Alpha/numeric operator*...Full function LCD english language operator and keypad with easy-to-read 16 character two-line format display. Easy input and monitoring of operating parameters.
- *Built-in PID control*...Eliminates cost of external device. Full featured scalable PID feedback with display and an inverse signal function.
- *Energy savings control*...Automatic output voltage adjustment in response to actual motor loading. Real-time energy savings based on motor algorithms. Increases motor efficiency by several percent.
- *Built-in power consumption monitoring*...Built-in kW hour and kW display eliminates the need for external signal conditioner.
- *Network Communications links to DeviceNet or ModBus RTU.*
- *Under torque detection*...Alerts the operator to conditions such as loss of load or broken belts.

The GPD 506/P5 is designed specifically for applications where overload and starting torque requirements are well known. Common applications of this type include fans and centrifugal pumps.

The design specifications for the GPD 506/P5 were selected to provide additional benefits such as NEMA type 1/4/12/3R enclosure choices, current harmonic reduction choices, and the right collection of I/O signals and interface controls.

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P5/600 Volt

Performance Features

- Ratings: 2 to 200 HP at 600 VAC
- Overload capacity: 120% for 60 sec (180% peak)
- Starting torque: 150%
- DC injection braking: ramp or coast to stop, adjustable, current limited
- Electronic reversing
- Adjustable accel/decel: 0.1 to 3600 sec (2 each)
- Controlled speed range: 40:1
- Critical frequency rejection: 2 selectable, adjustable bands
- Torque limiting circuit: 30 to 180%
- Drive efficiency: 96 to 98%
- Energy $aving control: improves motor efficiency
- Displacement power factor: 0.98
- Output frequency: 0.1 to 400 Hz
- Frequency resolution: 0.1 Hz with digital reference, 0.06 Hz with analog reference
- Frequency regulation: 0.01% digital (-10° to 40°C), 0.1% analog (15° to 35°C)
- Torque boost: full range, auto
- Jog forward and reverse
- Power loss ride-thru: 2 sec
- Inertia ride-thru
- Selectable auto restart after momentary power loss
- Programmable auto restart (0 to 10 attempts) after resettable fault
- Slip Compensation

Design Features

- 32-bit microprocessor logic
- Surface mount devices
- Carrier frequency: selectable to 15 kHz
- Keypad operator controls
- LCD display: English/French alpha/numeric sixteen character two lines
- 24 VDC control logic
- Programmable contacts, one form C and one NO
- Timer function: contact-initiated
- RS-232 communications port
- Volts/hertz ratio: Programmable custom V/Hz patterns
- Multi-speed settings: 6 available
- Remote speed reference: 0 to 10 VDC or 4 to 20 mA
- Setpoint (PID) control with inverse input and Sleep function
- Signal follower: bias and gain
- Analog monitor output: 0 to 10 VDC
- NEMA 1 enclosed or protected chassis
- UL, cUL and ce listed; IEC 146;
- MTBF: exceeds 28 years

Protective Features

- Current limited stall prevention
- Synchronized start into rotating motor via speed search
- DC bus CHARGE indicator
- Optically-Isolated controls
- Phase-to-phase / phase-to-neutral short circuit protection
- Ground fault protection
- Electronic motor overload
- Current and torque limit
- Fault circuit: overcurrent, overvoltage, and overtemperature
- Over torque protection
- Under torque protection

Service Conditions

- Ambient service temperature: -10°C to 40°C (104°F) NEMA 1, to 45°C (113°F) protected chassis
- Humidity: non-condensing to 95%
- Altitude: to 3300 ft; higher by derating
- Input voltage: +10%/-15%, 500 to 600 VAC
- Input frequency: 50/60 Hz ± 5%
- 3-phase, 3-wire, phase sequence insensitive

Options

- Remote operator station
- Dual analog output card
- Input circuit breaker/disconnect
- Many control interface devices
- NEMA type 4, 12, and 3R enclosures
- Communication cards: RS-232C to RS-485, DeviceNet and ModBus RTU (standard)
- Other integrally mounted options

Other Products

J7 General purpose, V/Hz, microsize, 1/8 - 5 HP.
Bulletin FL.J7.01

V7 General purpose, V/Hz, or open loop vector, microsize, 1/8 - 10 HP.
Bulletin FL.V7.01

P7 Drive Industrial Fan/Pump, V/f, Normal Duty, 5 - 500 HP.
Flyer FL.P7.01

F7 Drive Industrial Workhorse, Normal and Heavy Duty, 1/2 - 500 HP.
Flyer FL.F7.01

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