



*US DRIVES, INC.*  
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## Phoenix EX AC Drives

- **Microprocessor Based Digital Control Circuitry**
- **Latest Generation IGBT Power Devices and Surface Mount Printed Circuit Boards**
- **Open Loop or Closed Loop AC Vector Control**
  - 100 to 1 Speed Range, 0.1% Speed Regulation - Open Loop Control (Standard)
  - 1000 to 1 Speed Range, 0.01% Speed Regulation - Closed Loop Control (with Encoder Feedback Card)
  - Speed Control, Torque Control, Speed Control with Torque Limit, Torque Control with Speed Limit
- **Full Torque at Zero Speed – Hold Position / Hold Zero Speed**
  - High Overload Capacity Drives produce 150% Rated Current (150% Rated Torque) for 1 Minute
  - Normal Overload Capacity Drives produce 120% Rated Current (120% Rated Torque) for 1 Minute
- **Continuous Automatic Tuning – Provides Optimal Performance Under All Conditions**
  - No Need to Perform Auto-tune Routine or Disconnect the Motor from the Load or During Drive Start-Up
  - Easily Switch Between Open/Closed Loop Control without Changing or Entering New Drive Parameters
- **Operator Keypad with Back-Lit English Language Display – 2 Line, 32 Character**
  - Easily Display any parameter including Motor Speed, Motor Current, Motor Voltage, Kw, and kWh
  - User Programmable Parameter Scaling and Formatting – Display “Real World” Values – GPM, CFM, PSI
  - Includes Speed Increase/Decrease Keys, Start/Stop, Forward/Reverse, and Fault Reset Keys
  - LED’s for “ Current Limit”, “Fwd/Rev”, “Run”, and “Fault.”
- **50°C Ambient Temperature Rating (Nema 1 Enclosed Drives)**
- **Ground Fault and Line to Line Short Circuit Protection**
- **Tolerates High Input AC Line Voltages – 250/500/600 VAC +10% (240/480/575 VAC Input)**
- **Line Voltage Surge Protection - Transients to 6000V - Meets IEEE C62.41-1991 Cat B**
- **High Electrical Noise Immunity – Meets EN50082-1,2 – Showering Arc, 2000 V Peak**
- **Programmable Motor Overload Protection – Meets NEC Article 430, Class 10/20/30**
- **Built In Radio Frequency Noise (RFI) Filter**
- **High Performance PID Control Loop (Full Setpoint Control or Trim Control)**
- **8 Preset Speeds with Individually Adjustable Accel/Decel Rates for Each Speed**
- **Speed Increase / Decrease (MOP) Function**
- **Bi-Directional Flycatcher (Start Into a Rotating Motor) – No Inertia Limits**
- **Power Dip Ride-Through Capability – Up to 2 Seconds – Depending on Load**
- **Built In Kw / kWh Metering and Total Cost of Power Calculator**
- **Linear or S Curve Accel/Decel Control with up to 16 Different Accel/Decel Ramp Rates**
- **Programmable Time Based Function Generator and Programmable Threshold Detectors**
- **Two Customer Adjustable Maintenance Timers with Alarms plus Run Time Totalizer**
- **Critical Speed Rejection, 3 Bands – Individually Programmable Bandwidth**
- **User Programmable Auto-Restart Function**
- **Metal Enclosure (Reduces EMI) – Nema Type 1 as Standard, Nema 12/4/4X Optional**
- **Autologging Fault History - Last 10 Faults Saved in Order of Occurrence**
- **8 Digital Inputs, 24 VDC (7 Programmable Inputs and 1 Fixed Stop/Enable Input)**
- **2 Programmable Digital Outputs – Two Form C Dry Contacts rated 5 Amps at 115VAC**
- **2 Programmable Analog Input Signals, -10 VDC to +10 VDC or 4 to 20 ma**
- **2 Programmable Analog Output Signals, -10 VDC to +10 VDC**
- **DC Braking, Custom Volts Per Hz Programming, Fixed or Variable Carrier Frequency**



▪ **3 Year Warranty**

**Made In USA**