

PC7 Mini Vector AC Drive

Ratings:

- 0.13 to 10 HP at 230 Vac
- 0.50 to 10 HP at 460 Vac



The PC7 is our newest "Power Cube" inverter. It offers both sensorless vector and V/Hz control modes. The small footprint, RS-485 port, and programmable I/O make this product ideal for new and retrofit applications. The package is NEMA 1 as standard, but high volume OEM's can also order chassis, flat-panel heatsink or units without speed pot.

Approvals:

- UL, cUL, CE (73 / 23 / EEC)

Design:

- Analog monitor output (programmable)
- Auto tune to motor characteristics
- Energy saving control
- Form A output relay (programmable)
- MTBF: exceeds 83 years
- NEMA 1 enclosure (chassis by removing conduit box)
- Overload capacity: 150% / 1 min.
- Peak current rating: 250%
- Pulse train input reference capability
- Quick start keypad with speed potentiometer
- RS-485 port (Modbus) on terminal strip
- Set point PID control
- Up to 10 kHz carrier for low noise
- 2 open-collector outputs (programmable)
- 7 programmable digital inputs
- 16 preset speeds

Operating Conditions:

- Altitude: to 3280 ft (1000 m); higher by derating
- Ambient service temperature:
-10°C to 50°C (122°F) Chassis
-10°C to 40°C (104°F) NEMA 1
- Ambient storage temperature:
-20° to 60°C (-4° to 140°F)
- Humidity: to 95% non-condensing
- Input voltage: +10% / -15%
200 to 230 Vac, 3-Phase
380 to 460 Vac, 3-Phase
- Single-phase input with 30% derate
- Service factor: 1.0

Options:

- DIN rail kit
- DB resistors
- Flat heatsink design
- Open chassis design
- Rapidpak (future)
- Remote operator (JVOP-146)
- Saflink
- NEMA-4

Performance:

- Adjustable accel/decel:
0.1 to 6000 sec
- Braking torque:
Average decel torque:
50% to 2 HP
30% 3-10 HP
Cont. regen torque:
20% - no DB Resistor
150% - DB Resistor
(transistor built-in)
- Controlled speed range
40:1 Volts/Hertz
100:1 Sensorless vector
- Displacement power factor: 0.98
- Drive efficiency: 96 to 98%
- Output frequency: 0.1 to 400 Hz

Protection:

- DC bus CHARGE indicator
- Electronic motor overload (UL approved)
- Fault circuit: overcurrent, inverter overload, overvoltage, undervoltage, overtemperature and fan fault.
- Ground fault protection
- Optically isolated inputs
- Phase-to-phase / phase-to-neutral short circuit protection
- Stall prevention to prevent nuisance trips

Sensorless Vector:

- Speed regulation: (15° to 35°C)
0.2% with digital reference
- Speed resolution:
Digital 0.01 Hz to 100 Hz
0.1 Hz above 100 Hz
Analog 1/1000 or Fmax
- 150% starting torque @ 1 Hz

V/Hz Mode:

- Speed regulation: (15° to 35°C)
0.5 to 1% with slip compensation
- Speed resolution:
Digital 0.01 Hz to 100 Hz
0.1 Hz above 100 Hz
Analog 1/1000 or Fmax
- 150% starting torque @ 3 Hz