



## Routine VFD Preventive Maintenance Checklist

### 1. Visual Inspection (Monthly / Quarterly)

- Look for dust, dirt, oil mist, or corrosion
- Check for discoloration or burn marks (overheating red flag)
- Inspect cooling fans for damage or blockage
- Verify enclosure seals and door gaskets
- Ensure no moisture or condensation

### 2. Cleaning (Quarterly / Annually)

- Blow out dust using dry, low-pressure compressed air
- Vacuum vents and heat sinks (ESD-safe vacuum)
- Clean air filters or replace if clogged

### 3. Cooling System Checks

- Confirm fans are running smoothly (no grinding noise)
- Replace fans proactively, typically every 3 to 5 years, as needed at an additional charge
- Verify proper airflow direction
- Check ambient temperature vs. drive rating

### 4. Electrical Connections (Annually)

- Torque check power, motor, and ground terminals
- Inspect for:
  - Loose connections
  - Discolored lugs
  - Insulation damage
- Verify proper grounding

### 5. Capacitor Health

- Inspect DC bus capacitors for:
  - Bulging
  - Leaking
  - Cracks
- Measure DC bus voltage and ripple if possible
- Replace electrolytic capacitors per the manufacturer's recommended interval, typically every 5 to 7 years, as needed at an additional charge



## Routine VFD Preventive Maintenance Checklist

### 6. Operational & Performance Checks

- Review fault and alarm history, if supported by the VFD
- Verify acceleration/deceleration times
- Confirm speed reference and feedback accuracy
- Check motor current vs nameplate
- Listen for abnormal motor noise or vibration
- Download Parameters, if supported by the VFD

### 7. Environmental Conditions

- Confirm:
  - Proper enclosure rating (NEMA / IP)
  - Adequate clearance around the drive
  - No nearby vibration sources
  - No corrosive gases or conductive dust

### 8. Firmware & Parameter Backup, if supported by the VFD

- Backup drive parameters regularly
- Check for firmware updates (only update if justified)
- Keep a printed or digital copy of critical settings

### 9. Insulation & Motor Checks (As Needed)

- Insulation resistance test on motor cables
- Check for reflected wave issues on long motor leads
- Verify output filters (dv/dt or sine wave) if installed

### 10. Documentation

- Log:
  - PM date
  - Findings
  - Corrective actions
  - Parts replaced
- Track trends (temperature, faults, fan replacements)