

Economical and Efficient Fan & Pump Controls



Based on years of experience designing field-proven VFD/AC drives, these highly reliable Nidec Control Techniques fan and pump controller packages feature a two-contactor bypass control, full-color LCD touchscreen that provides an easy to use interface for Hand/Off/Automatic controls, setup wizard, visual diagnostics, and more. Damper control and automatic transfer to bypass on variable frequency drive (VFD) fault provide the flexibility to meet the most demanding installations without adding expensive options.



HMI Bypass for HVAC Drive H300



All of the controls on the HMI bypass utilize the full-color LCD touchscreen interface for ease of changing operational states on site with no VFD parameter knowledge necessary. Automatic reset after loss of power ensures the panel will resume operation when the power is restored.

Nidec Control Techniques bypass packages are equipped with features most commonly listed in engineering specifications:

Full-color LCD touchscreen — provides an easy, intuitive interface for operation, diagnostics, and VFD bypass setup wizard

Standard Hand/Off/Automatic — selection allows for ease in switching control modes between Hand (Local) and Auto (Remote)

Fireman's Override — Provides life saving functionality for fire personnel in conjunction with Fire Mode to provide the ultimate in flexibility for handling emergency fire conditions

Automatic transfer to bypass on VFD fault — in the unlikely event of a VFD trip, the panel switches to bypass control for critical applications

Damper control — delays the start of the VFD or Bypass until confirmation of damper being fully open is received by the HMI Bypass control

Motor Overload Protection — provides protection for the motor in bypass or VFD mode even if the VFD is removed for service

UL 508A  Listed

CONTROL TECHNIQUES™

HMI Bypass for HVAC Drive H300

Available in NEMA 1, NEMA12, and NEMA3R enclosures, the HMI Bypass package is supplied with either an input circuit breaker or a fused disconnect with package ratings up to 100 KAIC.

Key Features

- Catch a spinning motor and broken belt detection functions
- 2-contactor HMI bypass with optional VFD Service Switch
- VFD/AC Drive featuring dynamic and quadratic motor flux V/Hz mode (default) or open loop vector and advanced Rotor Flux Control modes
- Flexible speed reference inputs, 0 to 10 Vdc, 0 to 20 mA, 4 to 20 mA
- Linear and S-type accel and decel ramps reduce motor/fan starting noise
- Whisper-quiet switching frequencies up to 16 kHz
- 1 to 150 HP (208 - 230 Vac), 1 to 600 HP (460 Vac)
- Onboard communications for Modbus RTU, BACnet, and METASYS; SI-Ethernet, is standard and provides EtherNet/IP and Modbus TCP communication
- Real-Time Clock for power metering, trip alarm timestamps, or scheduling operations such as filter change
- Built-in EMC/RFI filter for electrical noise reduction
- Build-in reactors 5 HP and above for harmonics reduction
- Complimentary PC tools, mobile Diagnostic Tool app, and online/phone support
- Intelligent, controllable 10-speed drive cooling fan minimizes noise while keeping the VFD cool
- Built to UL 508A listed, ISO 9001:2015 standards

Options

- Input circuit breaker (ratings up to 100 KAIC)
- Fused disconnect (ratings up to 100 KAIC)
- AC input reactor 3% or 5%
- Soft start bypass
- Wide range of industry standard communications including Siemens FLN, and more
- NEMA 12 and NEMA 3R (consult factory for NEMA 4X)
- Manual Bypass control
- Active Front End (AFE) packages available for advanced harmonics reduction
- Manual motor protection for up to 6 motors (consult factory for protection for more motors)



Manual Bypass controls



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