

Fact Sheet

Danfoss packaged solutions

Panel Assemblies



Traditional Bypass



Vertical Bypass



Drive/Disconnect

Danfoss HVAC panels are known for their product quality and premium design standards. With this quality comes a wide array of choices among our standard base products. Multiple enclosure ratings, bypass control styles, and physical arrangements insure you can have your Danfoss drive panel your way.

Standard Product Features

- NEMA 1, NEMA 12, and NEMA 3R enclosures
- Through 60hp @ 208v, 350hp @ 460/600v
- Built-in DC link reactor
- Both 2- and 3- contactor bypass designs with
- Fused disconnect or circuit breaker
- 24V control power
- Class 20 Overload
- UL/CUL certification
- Electromechanical and Electronic bypass designs
- Traditional side-by-side and vertical designs
- IBC and OSHPD Seismic certifications

- Imbedded controls protocols
- Field-installable in any commercial environment
- A wide range of standard products for HVAC applications
- Inherent phase loss/imbalance and brown-out protection to prevent product damage and downtime in adverse power quality installations
- Electrical standards compliance on every product
- Both market-preferred bypass controls from your preferred supplier
- Maximum geometric flexibility to meet the installation constraints
- Standard products pre-certified for critical installations
- BACnet inherent in every drive

Common Non-Standard Product Options

- Dual motor operation
- dV/dt output filters
- 100kA SCCR protection
- A/B motor selection
- AC line reactors
- Custom designs and larger horsepower sizes available

24 volt power supply insures maximum uptime

The engine driving the Danfoss panel dependability is the 24VDC switch mode power supply, greatly improving on the outdated CPT power design.

The Danfoss panel switch mode power supply—available below 100hp—provides steady, dependable control power even when the line voltage drops more than 30%, virtually eliminating contactor malfunction due to ‘brown out’ conditions or phase loss.

Danfoss panels are available with the traditional electromechanical bypass control or an enhanced, solid-state controlled bypass for even greater operational flexibility:

Electro-Mechanical Bypass (EMB2)

The traditional Electro-Mechanical Bypass utilizes contactors and relays to direct line power through the driver or the starter, wired in parallel. This design includes the standard Danfoss performance and features:

- Automatic bypass operation selectable and programmable, including adjustable time delay
- Common start/stop selectable operation in drive and bypass mode, regardless of the command source
- Coordinated Run Permissive in both drive and bypass. A command to start the motor (regardless of operating mode) does not start the motor, but instead activates a relay used to actuate another device. Confirmation from this device then starts the motor.
- Firefighter’s Override Mode runs the motor in bypass, ignoring stop commands

The Electromechanical bypass includes the following door-mounted operators:

- Drive-Off-Bypass selector
- Bypass pilot light indication
- Test selection added with three-contactor bypass units

Electronically Controlled Bypass (ECB)

Danfoss ECB is Electronically Controlled Bypass done right. With the highest level of performance and protection, and the easiest operator interface on the market, our ECB offers the best solution for even the most critical applications. The ECB offers the same features as the Electromechanical bypass:

- Serial and BAS control of drive and bypass operation provides complete oversight of the package’s operation, with no loss of command or communication even in bypass mode.
- Advanced Firefighter’s Override with enhanced options
- Bypass run-time hour meter
- Password protection prevents unauthorized bypass operation
- Manual bypass override ensures operation
- Bypass control through the Smart Logic Controller
- Real-Time clock
- Bypass fault logging and time stamping
- Bypass-specific keypad provides one-touch access to bypass operation and single keypad controls both drive and bypass

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Tel. +1 (888) DANFOSS | www.danfossdrives.com | E-mail: salesinformation@danfoss.com

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