

Nidec

Drives



HVAC Drive H300

Efficiency and reliability in HVAC

Specialist Drive



A complete HVAC Building automation solution

The HVAC Drive H300 is optimised for fan/compressor control in HVAC applications and has all the features you would expect from a dedicated HVAC drive and more:

Easy integration building automation systems

- Seamless integration with Building Automation Systems with your choice of communications protocols:
 - BACnet MS/TP Supported Onboard, BACnet Testing Laboratories (BTL) Certified Conformance.
 - Modbus RTU communications.
 - BACnet/IP supported through add on communications option module, BACnet Testing Laboratories (BTL) Certified Conformance.
 - Connect with a wide range of other devices using Fieldbus and industrial Ethernet networks through add on option modules.



Custom software

- Flexibility without a Building Management System with optional modules for running custom application software.

Fire mode

- The HVAC Drive H300 has onboard Fire mode which allows the drive to continue running uninterrupted in the event of a fire. It can allow the safe extraction of smoke while the drive's other functions are maintained.

High efficiency operating modes

- Quiet operation with Rotor Flux Control modes, high switching frequencies (up to 16 kHz).
- Intelligent 10 speed drive cooling fan with minimum noise operation.
- Activating the Low Load Power Saving Function dynamically reduces the voltage applied to the motor to optimize energy efficiency at every speed and operating point.





Conformal coated PCB

- High product reliability with conformally coated PCBs as standard.

Compact dimensions

- Among the most compact VFD in its class at every frame size, maximizing mounting flexibility.

Dual PID

Built-in dual process PID loops that can operate independently or be combined to provide more complex functionality.

Energy efficiency as standard

- Exponential energy savings through fitting a Control Techniques Variable Frequency Drive into the application.
- HVAC Drive H300 provides high energy efficiency, up to 98% where very little energy is lost in the conversion.
- Motor control of super high efficiency sensor-less permanent magnet motors.
- Dynamic Volts/Hertz energy optimization minimises power loss under low load conditions.

Energy savings

- Energy savings features promise a low total cost ownership:
 - Sleep, Wake & VFD standby modes ensure minimal wasted energy.
 - Onboard power metering includes a cost per kWh function to track operating costs.
 - Energy savings verified with CT Energy Efficiency Calculator tool.

Thermistor monitoring

- A temperature sensor input is available which can directly provide an analog input without a transducer for control of fans and compressors.

Dust and water resistant HVAC Drive H300 High IP variant

The HVAC Drive H300 offers a full IP65 solution with exactly the same dedicated HVAC features & capabilities as the standard models.

IP65 provides protection from total dust ingress and low pressure water jets from any direction, making it a simple choice for harsh environments and the outdoors*. The HVAC Drive H300 is now one of the most protected drives on the market, maximising uptime and productivity, while cutting maintenance costs.

Standard and High IP drives

The High IP drive will already be familiar to users of the HVAC Drive H300, with all the same features that make commissioning effortless. The Hand-Off-Auto keypad with the built-in real-time clock is still available, sealed, and the protective casing has been designed with easy servicing and usability in mind.

This new variant enables customers to use both standard and high IP drives for the same project, so there is no longer any headache with mixing-and-matching vendors or product feature sets, making project qualification straightforward.

Save on installation

The HVAC Drive H300 High IP drive is enclosed in a sturdy, protective yet light casing, providing a compact solution. This not only allows easy integration in harsh environments but wall mounting close to the motor reduces installation costs, through:

- No cabinet required
- Shorter cable lengths
- Less labour time/cost to install drive

5-year warranty as standard*

Our HVAC Drive High IP is so reliable we are confident enough to supply it with a five-year warranty as standard.

Now you can buy with the same confidence.

*Warranty terms and conditions apply.
Shading from direct sunlight is required.



Unlock the power of your HVAC drive with **KI-Keypad Plus**

As part of our commitment to continued drive development, the KI-Keypad Plus is our most technically advanced drive user interface to date, designed to help you maximise productivity and performance.

Enhanced display

The bigger, brighter display of the KI-Keypad Plus enables you to easily access the key drive features needed to maximise the productivity of your machines. Enjoy the added convenience of having parameter descriptions readily available on-screen, providing helpful tips and guidance right at your fingertips.

Flexible and simple system monitoring

The keypad can show up to 10 user-selectable parameters on the status screen, giving you real-time information and feedback of your system. All parameters can be scaled individually and given custom units to best suit your application.

Easy troubleshooting

Using the troubleshooting help feature, errors can be identified quickly with in depth error code definitions, possible causes and suggested actions.

Multilingual keypad

English, Deutsch, Español, Français, Italiano, Polski & Türkçe.

Bluetooth connectivity

Wire free connectivity for drive set-up and monitoring.

Remote mountable

Access the keypad to adjust drive settings without opening the cabinet.

Real Time Clock (RTC)

Schedule operation and timestamp events, such as trips and alarms.

3 inch display

256 x 128 TFT Screen.



Multifunctional buttons

Navigate easily and quickly through menus and parameters with clear indications of functions.

Hand, OFF, Auto Capability

Secure operation

The KI-Keypad Plus comes with built in security features to prevent tampering or accidental parameter changes.

Robust design

With its IP54 rating (NEMA 12), harsh and challenging environments are no problem.

Slot for Smartcard/SD card for parameter storage and cloning

Easy click-in keypad connector

Multi-language LCD keypad

With Hand, Off and Auto controls and built-in real-time clock for run time scheduling

3x System Integration (SI) module slots for communications and I/O**

Onboard I/O

2 x analog inputs

3 x configurable digital I/O

2 x analog outputs

2 x form C relay outputs

3 x digital inputs

1 x Safe Torque Off (STO) input

**SI-I/O option provides additional 4 x digital I/O, 3 x analog inputs (default)/digital inputs, 1 x analog output (default)/digital input, 2 x relays

User-friendly pluggable control connections



*Features and their locations vary on some drive sizes



Onboard EMC filter*

Conformal coating as standard

Aluminium chassis

Allows flexible mounting, with high performance extruded heatsink.

User-friendly power connections

With removable terminals*.

Adaptive multi-speed fan control

The fan can also be replaced by the user after installation

Robust cable management system

Grounding point for shielded control and power cables

3-pin RS485 Modbus/BACnet MS/TP communications as standard



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