

Nidec

Drives



HVAC Drive H300

Efficiency and reliability in HVAC

Specialist Drive



CAUTION

HVAC Drive H300

The Specialist

HVAC Drive

From the drive specialists

The HVAC Drive H300 variable frequency AC drive (VFD) is the result of extensive research and builds on our vast experience of the HVAC market.

The HVAC Drive H300, part of the Specialist series of industry-specific drive technologies, builds on our company's five decades of drives expertise, delivering precise, dependable flow control.

The HVAC Drive H300 dimensions are among the smallest in its class at every power rating. This saves valuable building real estate, makes the drives easy to handle, and maximizes mounting flexibility.



5-year warranty as standard*

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

*Warranty terms and conditions apply.



The drive for building HVAC

The HVAC Drive H300 has been designed to meet the needs of:

Consultants and design engineers

- All the necessary features to meet your building HVAC project specification requirements.
- A highly reliable product and support service: Simply specify, install and forget.

Contractors

- Fast, easy and secure installation, commissioning and maintenance.

Owners of commercial buildings

- Achieves maximum building occupant comfort.
- Optimum energy saving and value with rapid ROI.

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 though 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.



Control Techniques in HVAC

The HVAC & Refrigeration market was identified as the largest single segment for growth within Motor Drive Markets in 2020*

As HVAC & Refrigeration global demands increase, so does the need for efficient operation and saving energy.

Drives are highly concentrated in the HVAC & Refrigeration market and play a key part in reducing energy consumption – Control Techniques' HVAC Drive H300 drives builds on decades of expertise to provide flexibility and reliability within this rapidly growing market.

Extreme operating conditions

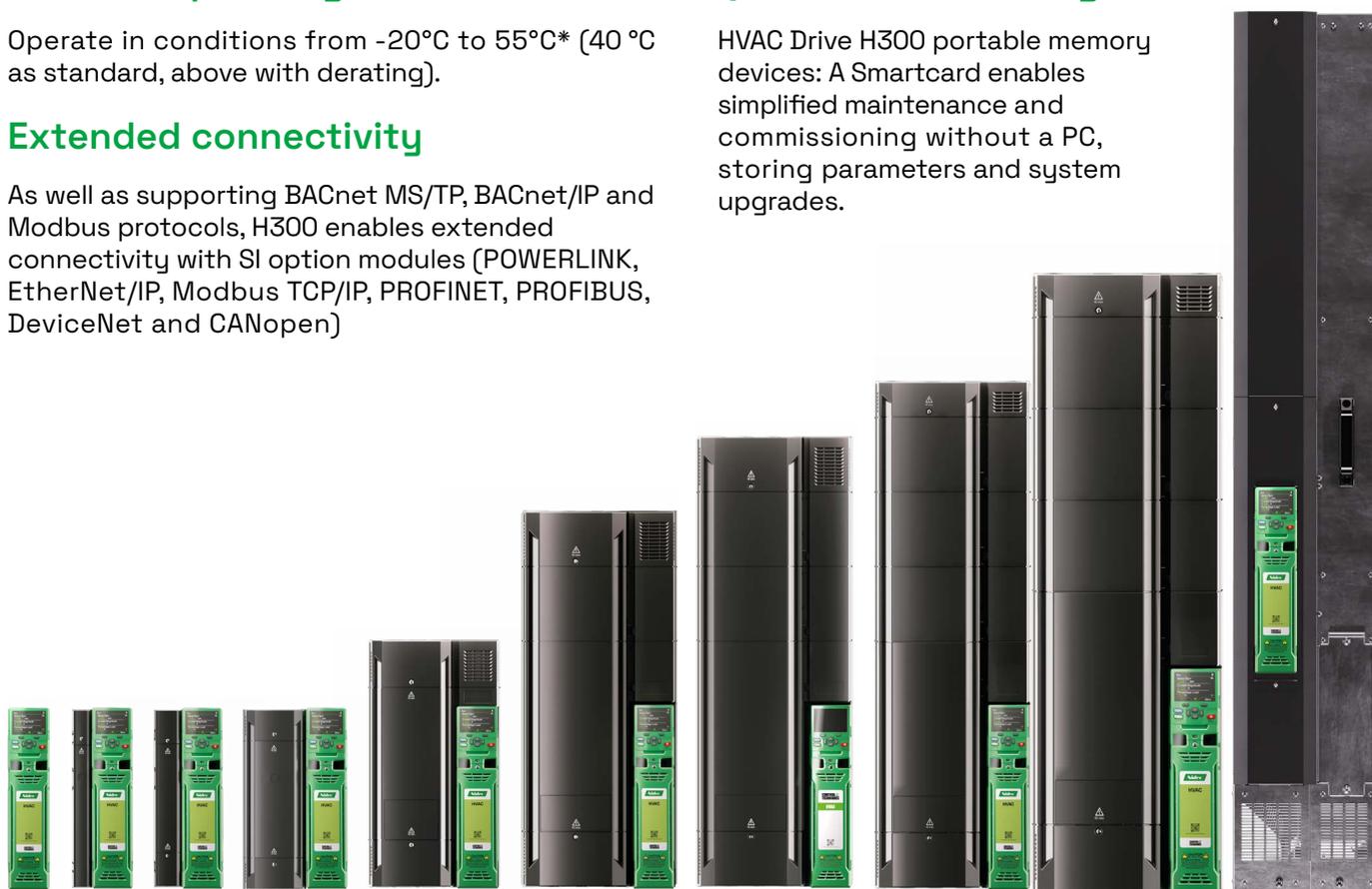
Operate in conditions from -20°C to 55°C* (40 °C as standard, above with derating).

Extended connectivity

As well as supporting BACnet MS/TP, BACnet/IP and Modbus protocols, H300 enables extended connectivity with SI option modules (POWERLINK, EtherNet/IP, Modbus TCP/IP, PROFINET, PROFIBUS, DeviceNet and CANopen)

Quick commissioning

HVAC Drive H300 portable memory devices: A Smartcard enables simplified maintenance and commissioning without a PC, storing parameters and system upgrades.



*Interact Analysis - Low Voltage AC Motor Drives Report 2020

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

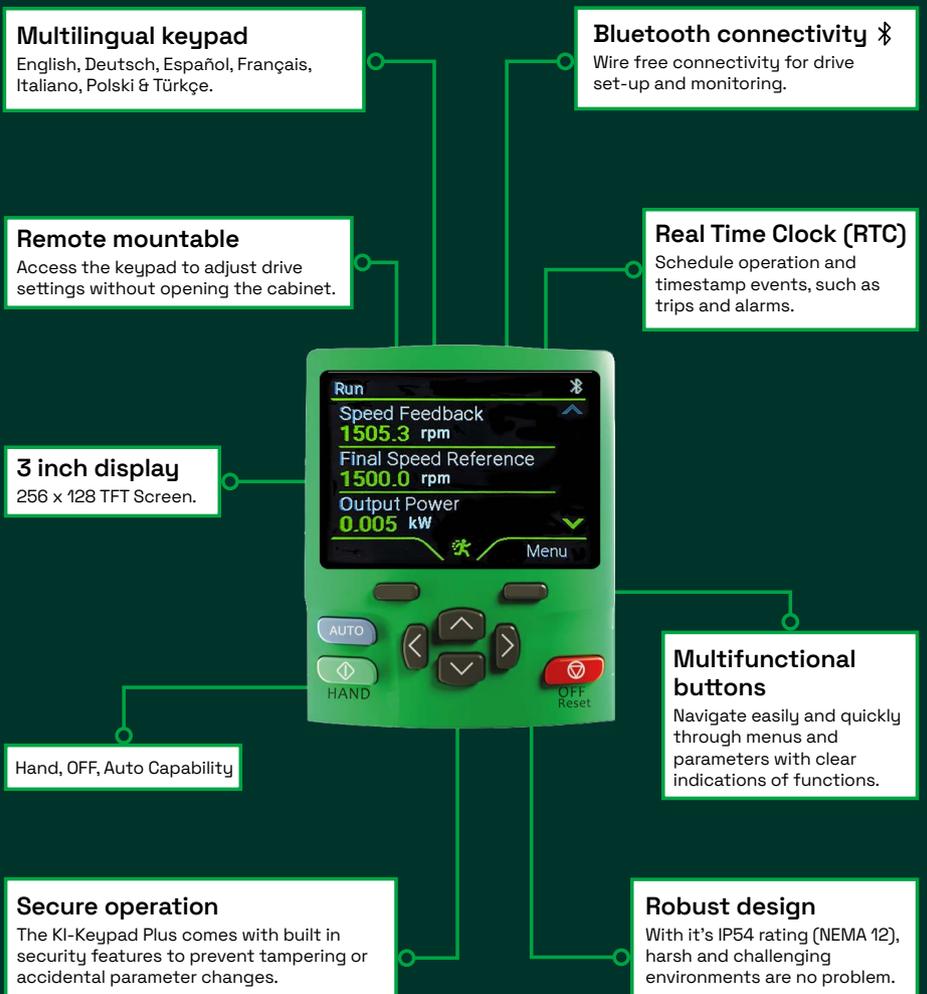
The bigger, brighter display of the KI-Keypad Plus enables you to easily access the key drive features needed to maximise the productivity of your machines. Enjoy the added convenience of having parameter descriptions readily available on-screen, providing helpful tips and guidance right at your fingertips.

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.



Simple commissioning

For hassle-free, efficient installation

Install and go. Application-focused design means optimum performance can be achieved straight out of the box, with minimal set-up.

Guided commissioning tool

Gain complete control of your drive with Control Techniques' Connect PC Software. The dynamic drive logic diagrams allow the visualisation and control of the drive in real time. The parameter browser enables viewing, editing and saving of parameters as well as importing parameter files.



Guided setup screen within the Connect PC software

Single setup menu

Setup using only the keypad couldn't be easier. There's no need to waste time looking for all the parameters - we've grouped them all together for you in one, streamlined menu.

All relevant parameters are literally at your fingertips to easily configure and monitor your application.

All additional parameters are still accessible through the advanced menus, for un-precedented control and finetuning.

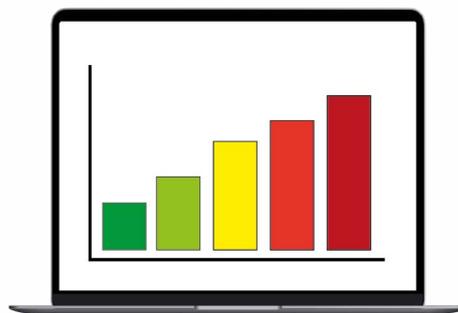
Control Techniques

PC Tools

Energy savings estimation

Control Techniques' energy optimisation software helps you analyse energy usage for flow applications and quantify the cost savings of using your Control Techniques drive.

- Estimation of energy usage using Control Techniques variable frequency drives for HVAC applications
- Identify the payback period through the energy savings from using a HVAC Drive H300 over conventional control methods



Free
download

Diagnostic Tool

The Diagnostic Tool App is a fast and simple tool, which allows users to quickly solve any error codes that the drive may show. Built within the app are easy to locate wiring diagrams for first time setup and fault finding with links to the relevant comprehensive manuals.

The app also has full contact details of the technical support teams around the world to aid you with technical assistance.

Available for iOS, Android and Windows™, download the app for free at:

www.controltechniques.com/mobile-applications



*For Microsoft users, please note that this mobile app operates with Windows 10 only.

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

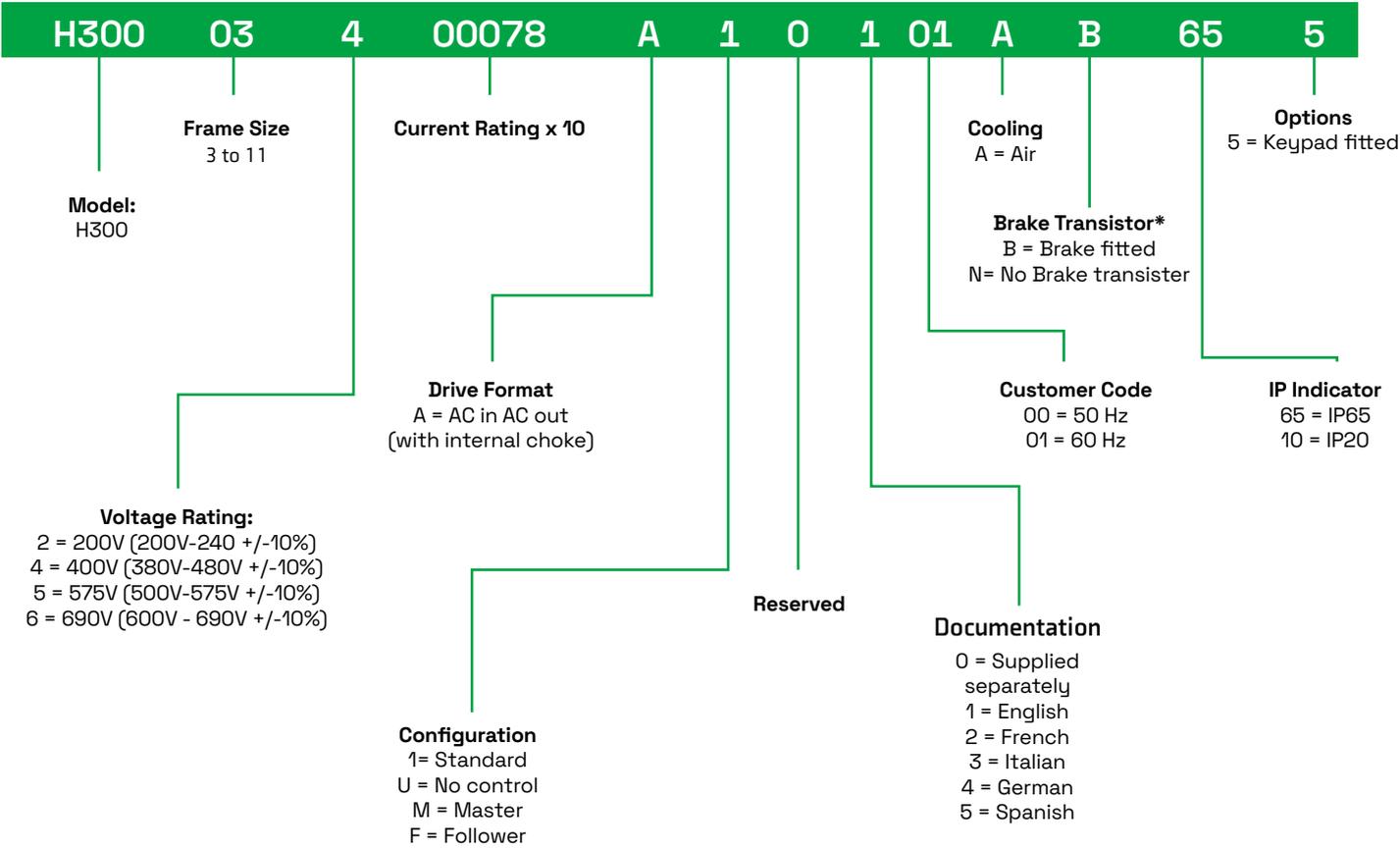
The fan can also be replaced by the user after installation

Robust cable management system

Grounding point for shielded control and power cables

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

Product code structure



*B only for frames 3 – 8. N only for frames 9 – 11.

Manuals

H300 is supplied with a Step-by-Step Setup Guide to assist with fast, efficient commissioning. A detailed user guide is also available to download online, or can be requested from Control Techniques Drive Centres and Partners.



HVAC Drive H300

Model number and ratings

3 Phase 200/240 Vac ±10%

Product Code	Normal Duty				
	Frame Size	IP20 Max continuous current (A)*	Motor shaft power (kW)	Motor shaft power (hp)	IP65 Max continuous current (A)**
H300-03200066A	3	6.6	1.1	1.5	6.6
H300-03200080A	3	8	1.5	2	8
H300-03200110A	3	11	2.2	3	11
H300-03200127A	3	12.7	3	3	12.7
H300-04200180A	4	18	4	5	18
H300-04200250A	4	25	5.5	7.5	22
H300-05200300A	5	30	7.5	10	30
H300-06200500A	6	50	11	15	50
H300-06200580A	6	58	15	20	
H300-07200750A	7	75	18.5	25	
H300-07200940A	7	94	22	30	
H300-07201170A	7	117	30	40	
H300-08201490A	8	149	37	50	
H300-08201800A	8	180	45	60	
H300-09202160A	9	216	55	75	
H300-09202660A	9	266	75	100	
H300-09202160E	9	216	55	75	
H300-09202660E	9	266	75	100	
H300-10203250E	10	325	90	125	
H300-10203600E	10	360	110	150	

* Continuous currents at 2 kHz switching frequency for IP20 models with product codes: H300 (...) 103

** Continuous currents at 2 kHz switching frequency for IP65 models with product codes: H300 (...) 653

3 Phase 380/480 Vac ±10%

Product Code	Normal Duty				
	Frame Size	IP20 Max continuous current (A)*	Motor shaft power (kW)	Motor shaft power (hp)	IP65 Max continuous current (A)**
H300-03400034A	3	3.4	1.1	1.5	3.4
H300-03400045A	3	4.5	1.5	2	4.5
H300-03400062A	3	6.2	2.2	3	6.2
H300-03400077A	3	7.7	3	5	7.7
H300-03400104A	3	10.4	4	5	10.4
H300-03400123A	3	12.3	5.5	7.5	11
H300-04400185A	4	18.5	7.5	10	18.5
H300-04400240A	4	24	11	15	21
H300-05400300A	5	30	15	20	29
H300-06400380A	6	38	18.5	25	38
H300-06400480A	6	48	22	30	48
H300-06400630A	6	63	30	40	
H300-07400790A	7	79	37	50	
H300-07400940A	7	94	45	60	
H300-07401120A	7	112	55	75	
H300-08401550A	8	155	75	100	
H300-08401840A	8	184	90	125	
H300-09402210A	9	221	110	150	
H300-09402660A	9	266	132	200	
H300-09402210E	9	221	110	150	
H300-09402660E	9	266	132	200	
H300-10403200E	10	320	160	250	
H300-10403610E	10	361	200	300	
H300-11404370E	11	437	225	350	
H300-11404870E	11	487	250	400	
H300-11405070E	11	507	280	450	

* Continuous currents at 2 kHz switching frequency for IP20 models with product codes: H300 (...) 103

** Continuous currents at 2 kHz switching frequency for IP65 models with product codes: H300 (...) 653

3 Phase 500/575 Vac $\pm 10\%$

Product Code	Normal Duty				
	Frame Size	IP20 Max continuous current (A)*	Motor shaft power (kW)	Motor shaft power (hp)	IP65 Max continuous current (A)**
H300-05500039A	5	3.9	2.2	3	3.9
H300-05500061A	5	6.1	4	5	6.1
H300-05500100A	5	10	5.5	7.5	10
H300-06500120A	6	12	7.5	10	12
H300-06500170A	6	17	11	15	17
H300-06500220A	6	22	15	20	22
H300-06500270A	6	27	18.5	25	27
H300-06500340A	6	34	22	30	34
H300-06500430A	6	43	30	40	
H300-07500530A	7	53	37	50	
H300-07500730A	7	73	45	60	
H300-08500860A	8	86	55	75	
H300-08501080A	8	108	75	100	
H300-09501250A	9	125	90	125	
H300-09501550A	9	155	110	150	
H300-09501250E	9	125	90	125	
H300-09501500Evv	9	150	110	150	
H300-10502000E	10	200	130	200	
H300-11502480E	11	248	175	250	
H300-11502880E	11	288	225	300	
H300-11503150E	11	315	250	350	

* Continuous currents at 2 kHz switching frequency for IP20 models with product codes: H300 (...) 103

** Continuous currents at 2 kHz switching frequency for IP65 models with product codes: H300 (...) 653

3 Phase 500/690 Vac $\pm 10\%$

Product Code	Normal Duty				
	Frame Size	IP20 Max continuous current (A)*	Motor shaft power (kW)	Motor shaft power (hp)	IP65 Max continuous current (A)**
H300-07600230A	7	23	18.5	25	
H300-07600300A	7	30	22	30	
H300-07600360A	7	36	30	40	
H300-07600460A	7	46	37	50	
H300-07600520A	7	52	45	60	
H300-07600730A	7	73	55	75	
H300-08600860A	8	86	75	100	
H300-08601080A	8	108	90	125	
H300-09601250A	9	125	110	150	
H300-09601500A	9	150	132	175	
H300-09601250E	9	125	110	150	
H300-09601550E	9	155	132	175	
H300-10601720E	10	172	160	200	
H300-10601970E	10	197	185	250	
H300-11602250E	11	225	200	250	
H300-11602750E	11	275	250	300	
H300-11603050E	11	305	280	400	

* Continuous currents at 2 kHz switching frequency for IP20 models with product codes: H300 (...) 103

** Continuous currents at 2 kHz switching frequency for IP65 models with product codes: H300 (...) 653

Frame 12

Product Code	Frame Size	Heavy Duty			Normal Duty		
		Rated Current (A)	Motor Shaft Power		Rated Current (A)	Motor Shaft Power	
			(kW)	(HP)		(kW)	(HP)
380 - 480 V							
M000-12404800	12	480	250	400	608	315	500
M000-12405660	12	566	315	450	660	355	550
M000-12406600	12	660 ¹	355	550	755	400	650
M000-12407200	12	720 ²	400	600	865 ³	500	700
500 - 575 V							
M000-12503150	12	315	250	350	376	250	350
M000-12503600	12	360	250	350	428	300	400
M000-12504100	12	410	300	400	480	330	450
M000-12504600	12	460	330	450	532	370	500
500 - 690 V							
M000-12603150	12	315	280	400	376	355	450
M000-12603600	12	360	355	450	428	400	500
M000-12604100	12	410	400	500	480	450	600
M000-12604600	12	460	450	600	532	500	650

¹ 140% Overload at 35°C and below and 125% above that.
² 140% Overload at 30°C and below and 125% above that.
³ 110% Overload at 30°C and below and No Overload above that.

Notes:

Frame 12 is Control Techniques high-power drive format from 250kW to 500kW (350 to 700 hp) (2MW (2,800 hp) with parallel modules), offering roll-in, roll-out functionality for the fastest and simplest installation and servicing.

For more information on these features and the rest of the capabilities of this module, please see the latest issue of the Modular Power Brochure or scan the QR code to visit our website.



HVAC drive H300

Ordering guide



Frame size	Dimensions		Weight
	mm (HxWxD)	in (HxWxD)	
3	382 x 83 x 200	15.0 x 3.3 x 7.9	4.5 (9.9)
4	391 x 124 x 200	15.4 x 4.9 x 7.9	6.5 (14.3)
5	391 x 143 x 200	15.4 x 5.6 x 7.6	7.4 (16.3)
6	391 x 210 x 227	15.4 x 8.3 x 8.9	14 (30.9)
7	557 x 270 x 280	21.9 x 10.6 x 11.0	28 (61.7)
8	803 x 310 x 290	31.6 x 12.2 x 11.4	50 (110.2)
9A	1108 x 310 x 290	43.6 x 12.2 x 11.4	66.5 (146.6)
9E/10E	1069 x 310 x 290	42.1 x 12.2 x 11.4	46 (101.4)
9D/10D	Rectifier 355 x 310 x 290	Rectifier 15.8 x 12.2 x 11.4	12 (26.5)
	Inverter 773 x 310 x 290	Inverter 30.4 x 12.2 x 11.4	34 (75)
11E	1242 x 310 x 312	48.9 x 12.2 x 12.3	63 (138.9)
12	1750 x 295 x 526	68.9 x 11.6 x 20.7	D: 113 (249) T: 130 (287)

High IP	Dimensions		Weight
	mm (HxWxD)	in (HxWxD)	
Frame 03	570 x 256 x 225	22.5 x 10.1 x 8.7	7.5 (16.5)
Frame 04	572 x 256 x 221	22.3 x 10.1 x 8.7	9.3 (20.5)
Frame 05	572 x 256 x 221	22.5 x 10.1 x 8.7	10.0 (22.0)
Frame 06	575 x 317 x 248	22.7 x 12.5 x 9.8	16.9 (37.3)

Normal duty operation

Suitable for HVAC applications, with a current overload requirement of 110% for 60 s*.

Conformance

- IP20 / NEMA1 / UL TYPE 1 *UL open class as standard, additional kit needed to achieve Type 1
- IP65 / NEMA4 / UL TYPE 12 rating is achieved on the rear of the drive when through panel mounted
- *Frame size 9D, 9E, 10D and 10E achieve IP55 / NEMA 4 / UL Type 12
- Ambient temperature -20 °C to 40 °C (-4 °F to 104 °F) as standard. Up to 55 °C (131 °F) with derating
- Humidity 95 % maximum (non-condensing) at 40 °C (104 °F)
- Altitude: 0 to 3000 m (9900 ft), derate 1 % per 100 m (330 ft) between 1000 m (3300 ft) and 3000 m (9900 ft)
- Random Vibration Tested in accordance with IEC 60068-2-64
- Bump Tested in accordance with IEC 60068-2-29
- Sinusoidal Vibration Tested in accordance with IEC 60068-2-6
- Mechanical Shock Tested in accordance with IEC 60068-2-29
- Storage temperature -40 °C to 55 °C (-40 °F to 131 °F) or up to 70 °C (158 °F) for short-term storage
- Electromagnetic Immunity complies with EN 61800-3 and EN 61000-6-2
- With onboard EMC filter, emissions comply with EN 61800-3 (category C3)
- EN 61000-6-3 and EN 61000-6-4 with optional footprint EMC filter
- IEC 60146-1-1 Supply conditions (category C1 or C2 depending on rating)
- IEC 61800-5-1 (Electrical Safety)
- IEC 61131-2 I/O
- EN 61000-3-12 with optional line reactor
- UL 508C (Electrical Safety)

*For more detailed information please see technical documents.

Accessories ordering guide

Comprehensive options for flexibility

Keypad type		Order Code	Description
KI-HOA Keypad RTC - Green (Supplied as standard)		82400000018500	The KI-HOA Keypad RTC provides Hand-Off-Auto control. The display presents up to four lines of real text with multi-language translation, enhancing clarity and increasing ease of use. A battery operated real-time clock allows scheduling of run and off periods and adds accurate time stamping to diagnostics to aid rapid fault resolution
KI - Keypad Plus For Remote Mounting		82400000022800	<p>KI-Keypad Plus's large and clear colour display makes the drive status information and parameter descriptions easy to read and readily accessible. It enables easy access to key drive features for enhanced machine performance, with the helpful wizard quickly guiding the user through configuration.</p> <p>Bluetooth allows remote and flexible connectivity for PC tool commissioning and programming, without needing to open the cabinet, for smarter and safer working. 10 user selectable parameters can be shown on the status screen, with real-time information, plus all parameters can be scaled and their units customised.</p>
KI-485 Adaptor		82400000016100	This adaptor can be fitted in place of the drive keypad and provides additional ports to communicate via RS485. The adaptor is commonly used for programming the drive.
Communication and Control			
SI-BACnet IP		82400000022600	The SI-BACnet IP module provides high speed Ethernet connectivity to building automation systems
SI-PROFINET		82500000018200	SI-PROFINET allows H300 to communicate and interface with PROFINET PLCs and networks.
SI-PROFIBUS		82400000017500	PROFIBUS interface module PROFIBUS-DP (Decentralized Peripheral) interface module enables follower connectivity. It is possible to use more than one SI-PROFIBUS or a combination of SI-PROFIBUS and other option modules to add additional functionality such as extended I/O, gateway functionality, or additional PLC features
SI-DeviceNet		82400000017700	DeviceNet networking system interface module enables follower connectivity. It is possible to use more than one SI-DeviceNet or a combination of SI-DeviceNet and other option modules to provide additional functionality such as extended I/O, gateway functionality, or additional PLC features
SI-CANopen		82400000017600	CANopen interface module supporting various profiles, including several drive profiles
SI-POWERLINK		82400000021600	POWERLINK interface module supporting all AC drive families and conforming to the latest POWERLINK standard.
SI-Ethernet		82400000017900	External Ethernet module that supports EtherNet/IP and Modbus TCP/IP and has an integrated web server that can generate emails. The module can be used to provide high speed drive access, global connectivity and integration with IT network technologies, such as wireless networking.
MCi200		82400000017000	Second processor, providing advanced customisation using standard IEC61131-3 programming languages. This allows the drive to act as a micro controller for small HVACR systems.
MCi210		82400000016700	Extended advanced machine control using industry standard IEC61131-3 programming languages with simultaneous Connectivity to 2 separate Ethernet networks
Additional I/O and NV media cards			
SI-I/O		82400000017800	Extended I/O interface module to increase the number of I/O points on a drive. Provides additional: 4 x Digital I/O, 3 x Analog inputs (default)/Digital inputs, 1 x Analog output (default)/Digital input, 2 x Relays
Smartcard		2214-0010	The optional Smartcard memory device can be used to back-up parameter sets, as well as copying them from one drive to another
SD Card Adaptor		3470-0047	Conversion device that allows an SD card to be inserted into the Smartcard slot, for parameter cloning and application programs

Accessories ordering guide

Retrofit brackets

To allow an H300 to be fitted in existing Unidrive SP and Affinity drives surface mount installations.

Frame size	Order code
4	3470-0062
5	3470-0066
6	3470-0074
7	3470-0078
8	3470-0087
9A, 9E, & 10	3470-0118

Through-hole IP65 kits

Frame size	Order code
3	3470-0053
4	3470-0056
5	3470-0067
6	3470-0055
7	3470-0079
8	3470-0083

Through-hole IP55 kits

Frame size	Order code
9A	3470-0119
9E/10E	3470-0105
10 Inverter	3470-0108
10 Rectifier	3470-0106
11E & 11T	3470-0126
11D Inverter	3470-0130
11 Rectifier	3470-0123

Tile mount kit

Frame size	Order code
3	3470-0049
4	3470-0060
5	3470-0073

General kit items

Item	Order code
Frame size 3 & 4 power connector split kit	3470-0064

DC bus paralleling kits

Frame size	Order code
3	3470-0048
4	3470-0061
5	3470-0068
6	3470-0063
6 (connect to frame 3,4 & 5)	3470-0111

Accessories ordering guide

Optional external EMC filters

The H300's built-in EMC filter complies with EN 61800-3*.

Frame size	Voltage	Order code
3	200 V	4200-3230
	400 V	4200-3480
4	200 V	4200-0272
	400 V	4200-0252
5	200 V	4200-0312
	400 V	4200-0402
	575 V	4200-0122
6	200 V	4200-2300
	400 V	4200-4800
	575 V	4200-3690
7	200 V	4200-1132
	400 V	4200-1132
	575 V	4200-0672
8	690 V	4200-0672
	200 V	4200-1972
	400 V	4200-1972
	575 V	4200-1662
9A	690 V	4200-1662
	200 V	4200-3021
	400 V	4200-3021
	575 V	4200-1660
9E & 10E	690 V	4200-1660
	200 V	4200-4460
	400 V	4200-4460
11	575 V	4200-2210
	690 V	4200-2210
	400 V	4200-0400
	575 V & 690 V	4200-0690

Line reactors

Frame size	Order code
9E 200 V/400 V	4401-0181
9E 575 V/690 V	4401-0183
10E 200 V/400 V	4401-0182
10E 575 V/690 V	4401-0184

UL type 1 conduit kits

Frame size	Order code
3&4	6521-0071
5	3470-0069
6	3470-0059
7	3470-0080
8 & 9A	6500-0106
9E & 10E	3470-0115
11	3470-0136

For more detailed information please see technical documents.

Always the right drive for your application



Commander C300PM for value, simplicity and efficiency

Commander C300PM is built upon the bedrock of Control Techniques general purpose Commander drive range, now with HVACR features and permanent magnet, open loop motor control modes.

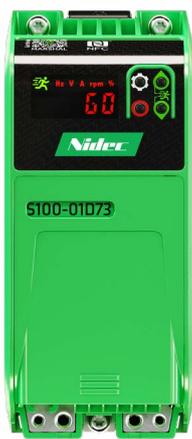
100, 200, 400, 575 & 690 V

0.25kW – 110kW (0.33 - 150 hp)



H300 for High Power HVACR Systems

The H300 Range scales from fractional power ratings to MW ratings, discover more about Control Techniques high-power solutions, both in Modular format and our pre-built ready to connect cabinets with Drive Free Standing (DFS).



Commander S – Making simple applications simple

Commander S is the first drive to come with NFC and an app interface as a standard feature. The Marshal app is our revolutionary way to interface with the drive covering commissioning, monitoring, diagnostics and support.

100, 200 & 400 V

0.25kW – 11kW (0.33 - 15 hp)



F600 for Optimised Pump Control

Applications involving the flow of water demand extreme reliability and low energy consumption. Available in IP20 and IP65 packages, Control Techniques' F600 drive, part of the newly introduced Specialist series of industry-specific drive technologies, builds on our company's five decades of drives expertise, delivering precise, dependable flow control.



Nidec

Autom

Innovati
environn
comfort

The world's leading global manufacturer of electric motors and controls

Nidec, the world's largest motor brand.

Nidec is in everything, everywhere.

If you drive a car, wash your clothes, watch movies or talk on a smartphone, you're using Nidec technology. Almost anything that spins and moves, no matter how big or small, does so thanks to a Nidec product.

Our shared values of passion, enthusiasm and tenacity guide us on our collective journey to be the best.



Appliance, commercial & industrial motors

Energy efficient motor and drive technology for commercial, industrial, and home appliances

Automotive

Working to help improve safety, environmental protection and performance required for automobiles



Small precision motors

DC motors for all industries and applications



Motion & Energy

High-performance motors, drives, generators & energy management solutions for renewables, automation, infrastructure, and electric vehicles

Machinery

Machines, factory automation equipment, measuring, and testing devices



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