

Commercial Field Devices

Honeywell



**One Source For All Of Your
Field Device Needs**



Fan Coil Valves

VU Valve Family with VU Actuators

Cost effective two position spring return actuation

- Uses a field replaceable plug valve that closes against the flow
- Long service life with patented ball seal
- Corrosion proof construction due to stainless steel case, aluminum cover and optional nickel plated motors
- Wide Cv range and actuation to meet a variety of applications
- Easy to service valve or actuator without removing valve body from the pipe



Cartridge Cage Valves

VC Valve Family with VC Actuators

Good control in a small package

- High close-off on all models
- Gate valve operates in a linear fashion across the flow, not against it, which results in high and consistent close-off
- Easy to select due to constant close-off (60 psi)
- Engineered plastic actuator for corrosion and humidity resistance
- Easy and quick to service due to field-replaceable cartridge design and twist lock/quick connect actuator



Cartridge Globe Valves

V58 Valve Family with M64, 74, MP95 Actuators

High performance in a compact design

- Linear valve operation design provides high performance
- Brass body and stainless steel stem
- Plastic actuator construction doesn't transfer thermal heat and helps to prevent condensation, which leads to longer life
- Greater control with high turn-down ratio
- Easy to service due to field-replaceable seal and screw-on actuator

UNITARY VALVE SELECTION GUIDE

Name	Valve Family	Size/Medium	Cv	2-way/3-way	Actuation	Close-off (psi)
VU	Fan Coil	1/2" - 1" for chilled or hot water	1 to 8	2-way or 3-way	2 position spring return (SR)	10 - 50
VC	Cartridge Cage	1/2" - 1 1/4" for chilled or hot water	.7 to 9	2-way or 3-way	2-position floating, modulating, non-spring return (NSR) and fail-safe	60
V58	Cartridge Globe	1/2" and 3/4" in equal percentage, 1" - 1 1/2" in linear and pressure balanced	.19 to 25	2-way or 3-way	Floating, modulating, pneumatic, 2 position, NSR and SR	6.25 - 232

Air Handling Units



Globe Valves

V5011, V5013 Threaded Valve Family with ML79, 69, 74 Actuators

Precise control for any application

- ANSI 150 body class rating
- Excellent control
- 50:1 rangeability in equal percentage or linear flow characteristics
- Offers best in class size, Cv range and close-off pressure
- Available with brass or stainless steel trim



Control Ball Valves

VBN Threaded and VBF Flanged Valve Families

Great control in a small and affordable package

- Characterized insert is integral to the ball, not outside the ball: results in longer service life and higher operating differential pressure capabilities
- Parabolic flow insert provides equal percentage flow for better control
- Weather-proof enclosures available for outdoor rooftop applications
- Packless field-replaceable stem for easy service in pipe
- 5-year warranty



Pressure Independent Flow Control Valves

VRN Threaded and VRW Flanged Valve Families

Deliver high efficiency in less time

- Maintains flow under varying differential pressures; increases coil differential temperature which improves the efficiency of the system
- Integrated pressure control cartridge combines circuit balancing and control functions in one package, resulting in consistent temperature and comfort
- Field serviceable stem and pressure regulating cartridge allow for easy serviceability for reduced life cycle costs
- 5-year warranty

AIR HANDLING UNITS SELECTION GUIDE

Name	Valve Family	Size/Medium	Cv	2-way/3-way	Actuation	Close-off (psi)
V5011, V5013	Globe	1/2" - 2" for chilled, hot water and steam	.73 to 46.8	2-way or 3-way	Floating, 2 position and modulating actuation	16 - 230
VBN, VBF	Control Ball	Threaded 1/2" - 3", Flanged 4" - 6" for closed-loop chilled or hot water	0.4 to 202	2-way or 3-way	Floating, 2 position and modulating NSR and SR	0 - 130
VRN, VRW	Flow Control	1 1/2" - 6" for chilled or hot water	GPM	2-way	Floating, modulating and 2 position SR	100 - 580



Butterfly Valves

VFF Flanged Valve Family

Large capacity, small dimensions

- Manufactured with corrosion resistant materials and coatings, which leads to long life
- The resilient seat design and nylon disk coating protects metal valve parts from chemicals in the water for longer life
- Compact size makes the valve easier to handle and fit easily into smaller spaces
- High flow and high close-off allow the valve to handle high-capacity applications



Globe Valves

VGF Flanged Valve Family

Precise control for any application

- ANSI 125 and ANSI 250 designs
- Actuators available for a range of control types
- Offers best in class size, Cv range and close-off pressure
- Stainless steel trim
- Q5022 Tandem Actuator Linkage for higher close-off, reduced seat leakage and field-configurable fail-safe action



Q5022 Tandem Actuator Linkage

CENTRAL PLANT SELECTION GUIDE

Name	Valve Family	Size/Medium	Cv	2-way/3-way	Actuation	Close-off (psi)
VFF	Butterfly	2" - 20" for chilled, hot or fresh water	61 to 7144	2-way or 3-way	Electronic, pneumatic and SR	50 - 250
VGF	Globe	2½" - 6" for chilled, hot water and steam	70 to 370	2-way or 3-way	2 position, floating, modulating and SR and NSR	11 - 175

Honeywell Actuators



MVN Actuator

- Click-on assembly cuts installation time- no tools needed
- Position indicator shows the open or closed position of the stem or ball valve for easy commissioning
- Compact design saves space allowing installation in confined areas

**5-YEAR
LIMITED
WARRANTY**

Example: **VCN2A001.30PA+MVN613A0000+C1**

Control Ball Valve, Female NPT Thread, 2-way, 1/2", CV 1.00, Plated Brass, Standard Profile with MVN613A0000 Actuator, Fail in place, 1 meter cable.

VB	N	2	A	001.30	P	A	+	MVN613A0000	+	C1
Valve	Fitting	Body/ Flow Type	Size	CV	Trim	Profile		Actuator		Accessories
VB - Ball valve	N - Female NPT threaded	2 - 2-way 3 - 3-way	A - 1/2 (DN15) B - 3/4 (DN20) C - 1 (DN25) D - 1-1/4 (DN32) E - 1-1/2 (DN40) F - 2 (DN50) G - 2-1/2 (DN65) H - 3 (DN80)	xxx.xx - Cv Designator (VBN)	P - Plated Brass S - Stainless Steel	A - Standard Profile* L - Low Profile*		Fail In Place MVN613A0000 MVN613L0000 MVN643A0000 MVN643L0000 MVN713A0000 MVN713L0000 MN6105A1011 MN7505A2001 Fail Safe MS7505A2030 MS8105A1030	Fail Safe Position Fail in place FSO - Fail Safe Open FSC - Fail Safe Closed FSA - Fail A-AB Open FSB - Fail B-AB Open (Fail Safe Position only applies to MS actuators)	C1 - 1 meter cable (for use with MVN actuators) 3R - (for use with MN and MS actuators)

*Standard base provides clearance between valve and actuator for insulation.
**Low profile enables installation of valve and actuator in tight spaces.

MS, MN, ML Families

- Self centering shaft adaptor reduces installation time and provides greater clamping force
- Decreased material cost due to detachable access cover
- Reduce inventory and selection time with signal mode adaptor that adapts models to two position, floating and modulating applications



MS 75 10 A 2 2 XX

Fail Safe Mode

- **MS** Spring Return
- **MN** Non-Spring Return

Input Signal Type

- **41** Two-Position, 100-250 Vac
- **61** Floating, 24 Vac/dc
- **75** Modulating/Floating, 24 Vac/dc
- **81** Two-Position, 24 Vac/dc

Torque

- **03** Nm = 27 in-lb
- **05** Nm = 44 in-lb
- **10** Nm = 88 in-lb
- **20** Nm = 175 in-lb
- **34** Nm = 300 in-lb

System Controlled Numbers

Auxiliary Switches

- **0** No Internal Switches
- **2** Two Internal Switches

Feedback

- **1** No Feedback
- **2** Voltage Feedback

Application Type

- **A** Standard Model
- **H** Enhanced Model

ML 61 61 B 2 XXX

Fail Safe Mode

- **ML** Non-Spring Return

Input Signal Type

- **61** Floating, 24 Vac
- **71** Modulating, 24 Vac

Torque

- **61** (4 Nm) = 35 in-lb
- **74** (8 Nm) = 70 in-lb

System Controlled Numbers

Declutch

- **1** Standard
- **2** Includes Declutch Function

Feedback & Conduit

- **A** Feedback w/Accessory
- **B** Standard
- **C** Feedback w/Accessory and Cover w/Conduit Connections
- **D** Cover w/Conduit Connections

Standard Rectangular Dampers

Built stronger to last longer



D2

Durable construction details are the cornerstone of Honeywell D1, D2 and D3 Volume Control Dampers. They feature heavy-duty hat channel frames for dependable operation. All models have low-profile top and bottom frames, creating more free area while reducing pressure loss and reducing actuator torque.

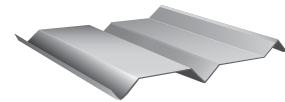
Blade Design

Airfoil Blades - D1 Dampers

The Honeywell D1 model is a ruggedly built ultra-low leakage damper designed to meet the highest standards of the commercial control damper industry. Meets Class 1 and Class 1A standards. The highly rigid airfoil blades are designed for use in medium to high pressure and velocity systems, and provide low resistance to airflow.

3-V Blades - D2 and D3 Dampers

Honeywell D2 and D3 dampers feature 3V blades, designed for use in low to medium pressure and velocity applications. The D2 model is a low leakage damper that meets both Class 1 and Class 1A leakage ratings. The D3 damper has no seals and is designed for indoor air volume control.



D1

STANDARD RECTANGULAR DAMPERS SELECTION GUIDE

	Leakage @ 1 in wg cfm/ft ²	Max Velocity fpm	Max Pressure in wg	Material		Frame Gauge		Blade Seals		Jamb Seals	Blade Axle Bearings		Axles		Linkage Material		Flange	
				Galvanized	Stainless	16	12	TPE	Silicone	Stainless	Synthetic	Bronze, Stainless	Galvanized	Stainless	Galvanized	Stainless	None	Single, Double, Reverse
D1 Ultra-Low Leakage	3	4000	10	S	O	S	O	S	O	S	S	O	S	O	S	O	S	O
D2 Ultra-Low Leakage	3	3000	5	S	O	S	O	S	O	S	S	O	S	O	S	O	S	O
D3 Control Damper	120	3000	5	S	O	S	O	n/a	n/a	n/a	S	O	S	O	S	O	S	O

S — Standard
O — Optional

Standard Round Dampers

Honeywell has a solution for all of your HVAC damper needs



D690

The 6" to 16" round dampers are used in zoning systems to control airflow in a round duct. These dampers come with neoprene and silicone seals for tight close-off and low leakage. The DM7600 includes an actuator that is already attached to the round damper.

The D690 round damper is used in conventional air handling systems to control airflow in a round duct.

- Neoprene seal for tight closing and low leakage
- Oilite bearings for long life
- 90° damper travel for a variety of applications
- Single blade round dampers for use with ML6161 and ML7161 or W7751 VAV Controller
- Maximum approach velocity 2,500 ft/min
- Temperature range 32°F to 130°F (0°C to 54°C)



DM7600

D690 ROUND DAMPERS SELECTION GUIDE

Product Number	Damper Diameter	
	(inch)	(mm)
D690A1002	6	152
D690A1010	8	203
D690A1028	10	254
D690A1036	12	305
D690A1044	14	356
D690A1051	16	406

DM7600 ROUND DAMPERS SELECTION GUIDE

Product Number	Damper Diameter		Input Signal	Timing (sec, min.)
	(inch)	(mm)		
DM7600A1005	6	152	2 to 10 Vdc or 4 to 20 mA	90 sec
DM7600A1013	8	203	2 to 10 Vdc or 4 to 20 mA	90 sec
DM7600A1021	10	254	2 to 10 Vdc or 4 to 20 mA	90 sec
DM7600A1039	12	305	2 to 10 Vdc or 4 to 20 mA	90 sec
DM7600A1047	14	356	2 to 10 Vdc or 4 to 20 mA	90 sec
DM7600A1054	16	406	2 to 10 Vdc or 4 to 20 mA	90 sec
DM7600B1004	6	152	2-position SPDT or Floating	90 sec
DM7600B1012	8	203	2-position SPDT or Floating	90 sec
DM7600B1020	10	254	2-position SPDT or Floating	90 sec
DM7600B1038	12	305	2-position SPDT or Floating	90 sec
DM7600B1046	14	356	2-position SPDT or Floating	90 sec
DM7600B1053	16	406	2-position SPDT or Floating	90 sec

Custom Dampers

CUSTOM RECTANGULAR DAMPERS*

Number	Description
VCD34	Galvanized Insulated Airfoil Damper
VCD40	Aluminum Narrow Frame Airfoil Damper
VCD42	Aluminum Airfoil Damper (Galvanized Frame)
VCD43	Aluminum Airfoil Damper
ICD-45	Aluminum thermally broken insulated Damper

CUSTOM ROUND DAMPERS*

Number	Description
VCDR53	Galvanized Round Damper – to 24 inches
VCDRM53	Galvanized Round Multi-Blade Damper – to 36 inches

* Contact Take-Off Service for quotes at 1-888-664-4092

SmartVFD HVAC

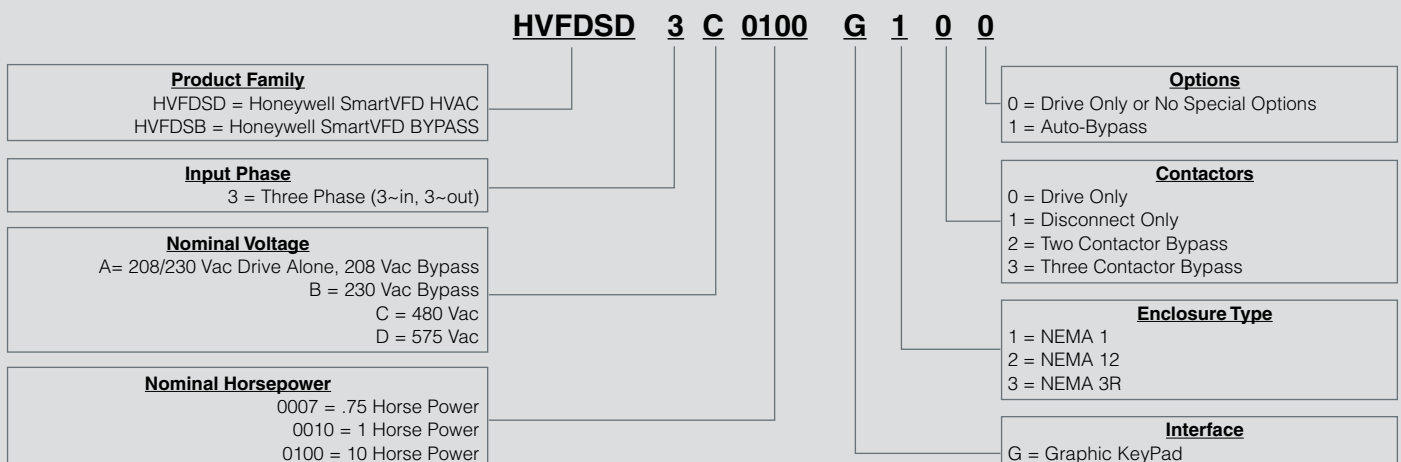
The Honeywell SmartVFD HVAC makes installation and commissioning easy, all while providing great energy savings!



Features

- **Start-up Wizards** — All you have to do is tell the VFD whether you have a pump or a fan, enter nominal motor information, and you are up and running
- **Graphic Interface** — The easy-to-use keypad and interface deliver menu-driven programming and monitoring for fast, uniform commissioning. Plus, a manual is built into the keypad for easy access when needed
- **Built-In Communications** — With BACnet®, N2 and Modbus built in, you get a lower total installed cost and reliable communication with the building management system
- **PC Software Wizards** — Commissioning, programming and troubleshooting are all a snap thanks to these guided Startup and PID wizards
- **Built-In PLC** — Eliminates the need for an expensive external controller
- **DC Choke** — For harmonic protection
- **Standard RFI Filter** — Ensures that EMC/RFI requirements are met
- **Real-Time Clock** — Battery included
- **Fire Mode** — For safe operation
- **Motor Switch Ride-Through** — Easy, fault-free maintenance
- 3 phase, 208/230 Vac, 0.75 to 125 nominal HP
- 3 phase, 480 Vac, 1.5 to 250 nominal HP

SmartVFD HVAC/SmartVFD BYPASS NAMING STRUCTURE



SmartVFD BYPASS

The SmartVFD BYPASS is easy to specify, select, install and commission and is the perfect complement to the advanced capabilities of the SmartVFD family.



Disconnect and/or Bypass Features

Our five configurations make it easy to select the right bypass to complete your drive package. All bundles are available in NEMA 1, NEMA 12 and ventilated NEMA 3R.

SmartVFD Disconnect Option

- Adds a fused disconnect to the VFD

SmartVFD 2-Contactor Bypass Option

Provides an economical means of bypassing the VFD.

- No Main Disconnect
- Freeze/Fire/Smoke Interlock

SmartVFD 3-Contactor Bypass Option

During commissioning, the TEST position enables power-up of the VFD without sending power to the motor.

- In Bypass mode, the VFD is isolated from the power supply
- Fused Disconnect
- Freeze/Fire/Smoke Interlock

SmartVFD 3-Contactor Auto-Bypass Option

All the features of the 3-Contactor bypass plus:

- Any VFD fault will automatically send the bypass to bypass mode
- A contact closure sends the bypass to bypass mode
- Dry contacts indicate when the bypass is in bypass

SmartVFD COMPACT

SmartVFD COMPACT VFDs aren't overloaded with features you won't use. Nor are you limited to just a few. Instead, they provide the perfect balance, with essential features like a standard PI Controller and the ability to program without the need for line voltage.



Features

Choose the options you need to meet your application, which eliminates waste and saves money.

These options include:

- Interface
- Filter
- Enclosure
- Inputs
- Outputs

Easy commissioning

- Intuitive User Interface
- PID controller included
- Program without the need for a main power supply

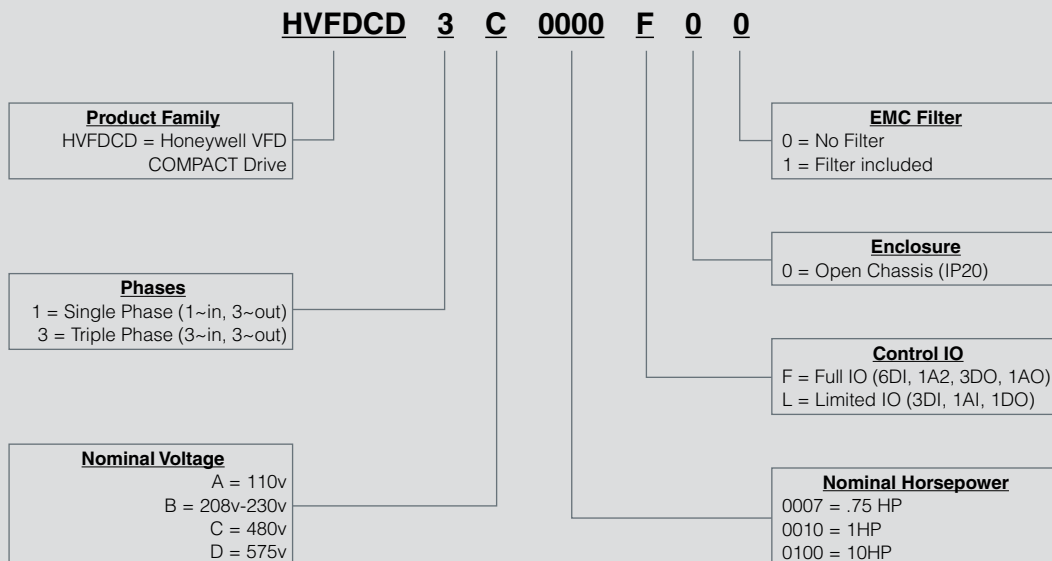
Easy installation

- Among the smallest and most streamlined VFDs on the market
- DIN rail or screw mounting
- Side-by-side mounting

Easy communication

- Up to seven programming control inputs
- Up to three programmable control outputs
- Modbus standard

SmartVFD COMPACT NAMING STRUCTURE



VFD CORE

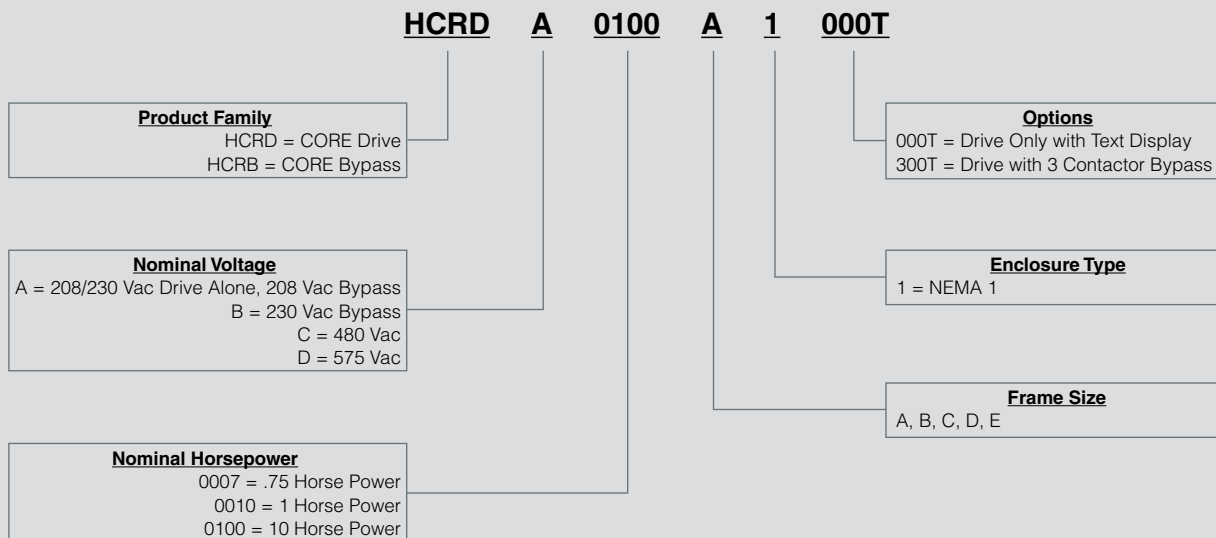
The Honeywell VFD Core drives are dual rated for both Normal and Heavy Duty use and can be applied in both variable speed and constant torque applications.



Features

- **Start-up Wizard** — Easy setup for any HVAC fan or pump application using the fan and pump wizard
- **Keypad Interface** — The easy-to-use keypad and interface deliver menu-driven programming and monitoring for fast, uniform commissioning. Able to display in 5 languages: English, Spanish, Portuguese, French or Chinese. Store up to 4 parameter sets
- **Built-In Communications** — With Modbus RTU built in, you get a lower total installed cost and reliable communication with the building management system
- **Rugged Compact Design** — Plenum rated, conformal coated boards, automatic fault reset, PID with sleep mode, Built-in safe stop and brake unit control
- **Built-In PLC** — Eliminates the need for an expensive external controller
- **DC Choke on large sizes** — 3% DC Choke on Frame D and E only
- **Hand-off-Auto** — Control built into the keypad local/remote buttons
- 3 phase, 208/230 Vac, 1 to 125 nominal HP
- 3 phase, 480 Vac, 1 to 125 nominal HP

VFD CORE/VFD CORE BYPASS NAMING STRUCTURE



VFD CORE BYPASS

VFD CORE BYPASS is easy to install and commission and is the perfect complement to the advanced capabilities of the VFD CORE family.



Features

Our most popular bypass option is available for all VFD CORE drives in a NEMA 1 enclosure.

VFD CORE 3-contactor

Commission and test the VFD and bypass without affecting the operation of the motor.

- Fused Disconnect
- Freeze/Fire/Smoke Interlock
- TEST position powers the VFD without sending power to the motor

NXS/NXP Series

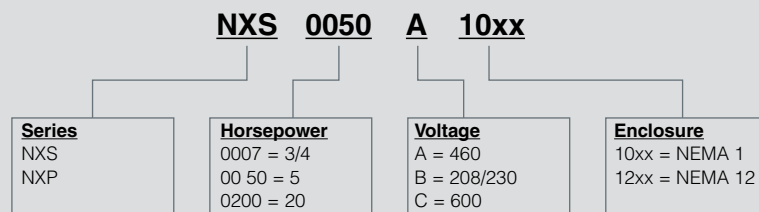
The Honeywell NXS/NXP Series drives are flexible, general purpose, dual rated drives designed to meet your toughest HVAC and constant torque requirements.



Features

- **Start-up Wizard** — All you have to do is tell the VFD whether you have a pump or a fan, enter nominal motor information, and you are up and running
- **Keypad Interface** — Multi-line, alphanumeric keypad can store up to 2 parameter sets and is removable for parameter transfer to a similar drive
- **Optional communications** — BACnet®, LonWorks®, Modbus, Profibus and DeviceNet for communications to whatever higher level system is desired
- **NC Drive Software** — Turns your computer into a full screen, realtime, control monitor and diagnostic tool
- **Built-In PLC** — Eliminates the need for an expensive external controller
- **Robust Protection** — 3% AC choke on input on all models for harmonic protection
- **EMI/RFI Filter** — Ensures that EMC/RFI requirements are met
- **Real-Time Clock** — Battery included
- **Prepackaged Applications** — Basic, local/remote, multi-step, PID Control, multi-purpose, multiple fan and pump
- **Compliance** — Ensures that EMC/RFI requirements are met
- **EMI/RFI Filter** — EMC immunity at default settings, easy, fault-free maintenance
- 3 phase, 208/230 Vac, 1.5 to 125 nominal HP
- 3 phase, 480 Vac, 1.5 to 450 nominal HP
- 3 phase, 600 Vac, 3 to 200 nominal HP

NXS/NXP Series NAMING STRUCTURE



NXS/NXP Series BYPASS

The NXS/NXP Series BYPASS drives are available with a diverse offering of bypass options to complement the NXS/NXP Series family.



Features

Our five configurations make it easy to select the right bypass to complete your drive package. All bundles are available in NEMA 1, NEMA 12 and ventilated NEMA 3R.

NXS/NXP Disconnect Option

- Adds a fused disconnect to the VFD

NXS/NXP 2-Contactor Bypass Option

Provides an economical means of bypassing the VFD.

- No Main Disconnect
- Freeze/Fire/Smoke Interlock

NXS/NXP 3-Contactor Bypass Option

During commissioning, the TEST position enables power-up of the VFD without sending power to the motor.

- In Bypass mode, the VFD is isolated from the power supply
- Fused Disconnect
- Freeze/Fire/Smoke Interlock

NXS/NXP 3-Contactor Auto-Bypass Option

All the features of the 3-Contactor bypass plus:

- Any VFD fault will automatically send the bypass to bypass mode
- A contact closure sends the bypass to bypass mode
- Dry contacts indicate when the bypass is in bypass mode, alerting the building management system mode, alerting the building management system

Damper, Valve and VFD Pricing/ Job Estimating Tools

These tools can be used for the selection and pricing of dampers, valves and VFDs. Click on the “Commercial Components Estimating Tools” link at customer.honeywell.com.

Product Selection Tool

Available for sizing and estimating of valves, dampers and actuators. Click on the “Product Selection Tool” link at customer.honeywell.com.

Fast Track Program

Reduce the amount of time. The easy-to-use project management and product configuration tool can help you turn estimates into orders while reducing application engineering, delivery and installation time.



- The Fast Track project management and specification tool simplifies valve/actuator assembly selection
- Estimates can be easily compiled and shared or saved for additional editing
- Project data flows into your submittal documentation or transferred to other users

Specification Take-Off Service

The Honeywell Take-Off Service can create product schedules from:

- Product specifications
- Existing schedules
- Drawings
- Obsolete or competitive schedules

Our goal is to help provide you with the best possible solution for each job.



Products Supported by the Take-Off Service

- Commercial Water and Steam Valves
- Valve Actuators (Electric or Pneumatic)
- Commercial Control Dampers
- Custom Dampers
- Damper Actuators (Electric or Pneumatic)
- Variable Frequency Drives

1. Submit your information in one of the following ways:
 - a) Email to takeoff.service@honeywell.com (preferred)
 - b) Fax toll-free to 1-877-880-3386
2. Include your desired turn-around time.
3. Take-Off Service staff will send you a confirmation that your email or fax was received. We always attempt to have your request finished as soon as possible. Please note, however, that the quality of the submitted information largely determines the turn-around time. We will work closely with you to ensure that we have enough information to move forward as quickly as possible.
4. A final product schedule document will be returned to you following take-off completion.

Included In the Final Take-Off Document

We send a comprehensive spreadsheet, which contains:

- A complete product schedule
- Base price
- Directions on how to order Honeywell products
- Links to product submittals
- Quote identification number

Questions

If you have questions about the Honeywell Take-Off Service, please call the dedicated Take-Off Service phone number at 1.888.664.4092 or email us at takeoff.service@honeywell.com.

Contact Information and Websites

Main Customer Web Site

customer.honeywell.com

Commercial Components Technical Hotline

763-954-6464 or 888-516-9347

techmail@honeywell.com

Product Drop Ship (PDS) Team (Dampers)

763-954-4140

ECC-ProductDropShip@honeywell.com

Literature Ordering

literature.honeywell.com

Honeywell Promotional Materials

honeywell.promocollection.com

Submittal Literature

Log in to customer.honeywell.com and go to the Welcome Box and select the "Submittal Literature" link.

Online and Face to Face Training - Buildings University

customer.honeywell.com/buildingsuniversity

Global Field Devices Application and Selection Guide

#63-9271 at literature.honeywell.com

Specification Take-Off Service

1.888.664.4092, takeoff.service@honeywell.com

Fast Track Program

customer.honeywell.com/go/fasttrack



Learn More

For more information on Honeywell VBN Control Ball Valves, call **1-800-466-3993** or visit buildingcontrols.honeywell.com.

Automation and Control Solutions

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