VFD CORE and Bypass

Honeywell



Solution for Energy Savings in Minutes. MAXIMUM ENERGY SAVINGS VFD CORE keeps fans and pumps from running at unneeded speeds.





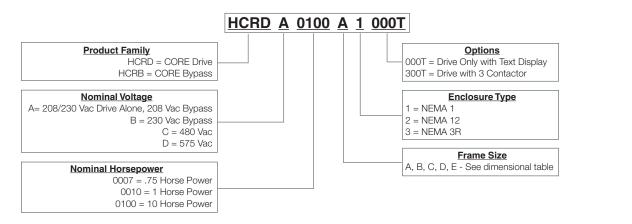
TIME SAVINGS. ENERGY SAVINGS.

They're at the Core of VFD CORE.

Think of the time you'll save per job if you have a variable frequency drive (VFD) that covers nearly all of your commercial heating, ventilation and air conditioning (HVAC) applications, is a breeze to install, takes minutes to program, and is backed by Honeywell dependability. You'd increase your profitability, and your customers would enjoy a lower installed cost and years of energy savings.

Get it all with VFD CORE.

Commissioning in a matter of minutes!



VFD CORE Drive Alone

| Voltage | Variable Torque Loads ¹ AMPS | Constant Torque Loads ² AMPS | Nominal HP ³ | Frame | Part Name | Product Model Description | Weight | W (in) | H (in) | D (in) |
|------------|--|--|----------------------------|-------|-------------------|------------------------------------|--------|--------|--------|--------|
| 208-230Vac | 5 | 4.6 | 1 | A | HCRDA0010A1000T/U | Core VFD, 230v, 1hp, Nema 1, FrA | 6.2 | 5.12 | 9.84 | 6.69 |
| | 7.5 | 5 | 2 | A | HCRDA0020A1000T/U | Core VFD, 230v, 2hp, Nema 1, FrA | 6.2 | 5.12 | 9.84 | 6.69 |
| | 10 | 8 | 3 | A | HCRDA0030A1000T/U | Core VFD, 230v, 3hp, Nema 1, FrA | 6.2 | 5.12 | 9.84 | 6.69 |
| | 15 | 11 | 5 | A | HCRDA0050A1000T/U | Core VFD, 230v, 5hp, Nema 1, FrA | 6.2 | 5.12 | 9.84 | 6.69 |
| | 21 | 17 | 7.5 | A | HCRDA0075A1000T/U | Core VFD, 230v, 7.5hp, Nema 1, FrA | 6.2 | 5.12 | 9.84 | 6.69 |
| | 31 | 25 | 10 | В | HCRDA0100B1000T/U | Core VFD, 230v, 10hp, Nema 1, FrB | 10.1 | 7.5 | 12.6 | 7.5 |
| | 46 | 33 | 15 | В | HCRDA0150B1000T/U | Core VFD, 230v, 15hp, Nema 1, FrB | 10.1 | 7.5 | 12.6 | 7.5 |
| | 61 | 49 | 20 | В | HCRDA0200B1000T/U | Core VFD, 230v, 20hp, Nema 1, FrB | 12.3 | 7.5 | 12.6 | 7.5 |
| | 75 | 65 | 25 | С | HCRDA0250C1000T/U | Core VFD, 230v, 25hp, Nema 1, FrC | 23.1 | 9.8 | 15.8 | 8.3 |
| | 90 | 75 | 30 | С | HCRDA0300C1000T/U | Core VFD, 230v, 30hp, Nema 1, FrC | 23.1 | 9.8 | 15.8 | 8.3 |
| | 105 | 90 | 40 | С | HCRDA0400C1000T/U | Core VFD, 230v, 40hp, Nema 1, FrC | 23.1 | 9.8 | 15.8 | 8.3 |
| | 146 | 120 | 50 | D | HCRDA0500D1000T/U | Core VFD, 230v, 50hp, Nema 1, FrD | 78.1 | 13 | 27.1 | 10.9 |
| | 180 | 146 | 60 | D | HCRDA0600D1000T/U | Core VFD, 230v, 60hp, Nema 1, FrD | 78.1 | 13 | 27.1 | 10.9 |
| | 215 | 180 | 75 | E | HCRDA0750E1000T/U | Core VFD, 230v, 75hp, Nema 1, FrE | 100.54 | 14.6 | 28.2 | 11.8 |
| | 276 | 215 | 100 | E | HCRDA1000E1000T/U | Core VFD, 230v, 100hp, Nema 1, FrE | 101.64 | 14.6 | 28.2 | 11.8 |
| | 322 | 255 | 125 | E | HCRDA1250E1000T/U | Core VFD, 230v, 125hp, Nema 1, FrE | 120.34 | 14.6 | 28.2 | 11.8 |
| | 3 | 2.8 | 1 | A | HCRDC0010A1000T/U | Core VFD, 460v, 1hp, Nema 1, FrA | 6.2 | 5.12 | 9.84 | 6.69 |
| | 3.7 | 3 | 2 | A | HCRDC0020A1000T/U | Core VFD, 460v, 2hp, Nema 1, FrA | 6.2 | 5.12 | 9.84 | 6.69 |
| | 5 | 4 | 3 | A | HCRDC0030A1000T/U | Core VFD, 460v, 3hp, Nema 1, FrA | 6.2 | 5.12 | 9.84 | 6.69 |
| | 7.5 | 6 | 5 | A | HCRDC0050A1000T/U | Core VFD, 460v, 5hp, Nema 1, FrA | 6.2 | 5.12 | 9.84 | 6.69 |
| | 12 | 10.5 | 7.5 | A | HCRDC0075A1000T/U | Core VFD, 460v, 7.5hp, Nema 1, FrA | 6.2 | 5.12 | 9.84 | 6.69 |
| | 14 | 12 | 10 | A | HCRDC0100A1000T/U | Core VFD, 460v, 10hp, Nema 1, FrA | 6.2 | 5.12 | 9.84 | 6.69 |
| | 22.5 | 18 | 15 | В | HCRDC0150B1000T/U | Core VFD, 460v, 15hp, Nema 1, FrB | 10.1 | 7.5 | 12.6 | 7.5 |
| 460Vac | 30 | 24 | 20 | В | HCRDC0200B1000T/U | Core VFD, 460v, 20hp, Nema 1, FrB | 12.3 | 7.5 | 12.6 | 7.5 |
| 400440 | 36 | 32 | 25 | В | HCRDC0250B1000T/U | Core VFD, 460v, 25hp, Nema 1, FrB | 12.3 | 7.5 | 12.6 | 7.5 |
| | 45 | 38 | 30 | С | HCRDC0300C1000T/U | Core VFD, 460v, 30hp, Nema 1, FrC | 19.14 | 9.8 | 15.8 | 8.3 |
| | 56 | 45 | 40 | С | HCRDC0400C1000T/U | Core VFD, 460v, 40hp, Nema 1, FrC | 19.14 | 9.8 | 15.8 | 8.3 |
| | 72 | 60 | 50 | С | HCRDC0500C1000T/U | Core VFD, 460v, 50hp, Nema 1, FrC | 20.68 | 9.8 | 15.8 | 8.3 |
| | 91 | 73 | 60 | D | HCRDC0600D1000T/U | Core VFD, 460v, 60hp, Nema 1, FrD | 78.1 | 13 | 27.1 | 10.9 |
| | 110 | 91 | 75 | D | HCRDC0750D1000T/U | Core VFD, 460v, 75hp, Nema 1, FrD | 78.1 | 13 | 27.1 | 10.9 |
| | 144 | 110 | 100 | D | HCRDC1000D1000T/U | Core VFD, 460v, 100hp, Nema 1, FrD | 89.1 | 13 | 27.1 | 10.9 |
| | 180 | 150 | 125 | D | HCRDC1250D1000T/U | Core VFD, 460v, 125hp, Nema 1, FrD | 88.88 | 13 | 27.1 | 10.9 |





¹Variable Torque loads are loads that drive a variable speed motor where the torque descreases as the speed decreases, i.e. centrifugal pumps, fans. ²Constant Torque loads are loads where as the speed changes the torque remains constant, i.e. conveyors, positive displacement pumps. ³Drives should be selected so that the rated output current in Amps of the drive meets or exceeds the full load amps (FLA) of the motor and not based on the motor horsepower.

VFD CORE Accessories

| Part Number | Description | | | | | | |
|----------------|--|--|--|--|--|--|--|
| HCRDMOUNTKIT/U | /FD CORE Keypad Mounting Kit | | | | | | |
| HCRDKEYPAD/U | FD CORE Replacement Keypad | | | | | | |
| HCRDFANFRA1H/U | VFD CORE Replacement Fan Frame A (Heat Sink Cooling Fan for 3-7.5 HP 208/230 V and 5-10 HP 460 V) | | | | | | |
| HCRDFANFRB1B/U | VFD CORE Replacement Fan Frame B (Board Cooling Fan for 10-20 HP 208/230 V and 15-25 HP 460 V) | | | | | | |
| HCRDFANFRB1H/U | VFD CORE Replacement Fan Frame B (Heat Sink Cooling Fan for 10 HP 208/230 V and 15 HP 460 V) | | | | | | |
| HCRDFANFRB2H/U | VFD CORE Replacement Fan Frame B (Heat Sink Cooling Fan for 15-20 HP 208/230 V and 20-25 HP 460V) | | | | | | |
| HCRDFANFRC1B/U | VFD CORE Replacement Fan Frame C (Board Cooling Fan for 25-40 HP 208/230 V) | | | | | | |
| HCRDFANFRC2B/U | VFD CORE Replacement Fan Frame C (Board Cooling Fan for 30-50 HP 460 V) | | | | | | |
| HCRDFANFRD1B/U | VFD CORE Replacement Fan Frame D (Board Cooling Fan for 50-60 HP 208/230 V and 60-125 HP 460V) | | | | | | |
| HCRDFANFRD1H/U | VFD CORE Replacement Fan Frame D (Heat Sink Cooling Fan for 50-60 HP 208/230 V and 60-125 HP 460V) | | | | | | |
| HCRDFANFRE1B/U | VFD CORE Replacement Fan Frame E (Board Cooling Fan for 75-125 HP 208/230V) | | | | | | |
| HCRDFANFRE1H/U | VFD CORE Replacement Fan Frame E (Heat Sink Cooling Fan for 75-100 HP 208/230 V) | | | | | | |
| HCRDFANFRE2H/U | VFD CORE Replacement Fan Frame E (Heat Sink Cooling Fan for 125 HP 208/230 V) | | | | | | |
| HCRDTRAINER/U | VFD CORE Demonstration Kit | | | | | | |







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VFD CORE BYPASS

The VFD CORE Bypass allows continuous motor operation during VFD testing, service or maintenance.

The VFD CORE Bypass is available in NEMA1, 3-contactor configuration with a fused disconnect. With 3 contactors, the VFD can be isolated from power with the motor running in the Bypass mode. The test position powers the VFD without energizing the motor.

VFD CORE Bypass

| Voltage | Variable Torque Loads ¹ AMPS | Constant Torque Loads ² AMPS | Nominal HP ³ | Frame | Part Name | Product Model Description -3 contactor Bypass with Fused Disconnect | Width (in) | Height (in) | Depth (in) |
|---------|--|--|----------------------------|-------|-------------------|--|------------|-------------|------------|
| 208 Vac | 5 | 4.6 | 1 | A | HCRBA0010A1300T/U | Core VFD 208v, 1hp, Nema 1, FrA | 8.9 | 34 | 10.6 |
| | 7.5 | 5 | 2 | A | HCRBA0020A1300T/U | Core VFD 208v, 2hp, Nema 1, FrA | 8.9 | 34 | 10.6 |
| | 10 | 8 | 3 | A | HCRBA0030A1300T/U | Core VFD 208v, 3hp, Nema 1, FrA | 8.9 | 34 | 10.6 |
| | 15 | 11 | 5 | A | HCRBA0050A1300T/U | Core VFD 208v, 5hp, Nema 1, FrA | 8.9 | 34 | 10.6 |
| | 21 | 17 | 7.5 | A | HCRBA0075A1300T/U | Core VFD 208v, 7.5hp, Nema 1, FrA | 8.9 | 34 | 10.6 |
| | 31 | 25 | 10 | В | HCRBA0100B1300T/U | Core VFD 208v, 10hp, Nema 1, FrB | 12.4 | 48 | 11.5 |
| | 46 | 33 | 15 | В | HCRBA0150B1300T/U | Core VFD 208v, 15hp, Nema 1, FrB | 12.4 | 48 | 11.5 |
| | 61 | 49 | 20 | В | HCRBA0200B1300T/U | Core VFD 208v, 20hp, Nema 1, FrB | 12.4 | 48 | 11.5 |
| | 75 | 65 | 25 | С | HCRBA0250C1300T/U | Core VFD 208v, 25hp, Nema 1, FrC | 12.4 | 48 | 11.5 |
| | 90 | 75 | 30 | С | HCRBA0300C1300T/U | Core VFD 208v, 30hp, Nema 1, FrC | 12.4 | 48 | 11.5 |
| | 105 | 90 | 40 | С | HCRBA0400C1300T/U | Core VFD 208v, 40hp, Nema 1, FrC | 12.4 | 48 | 11.5 |
| | 146 | 120 | 50 | D | HCRBA0500D1300T/U | Core VFD 208v, 50hp, Nema 1, FrD | 21 | 53.5 | 13.3 |
| | 180 | 146 | 60 | D | HCRBA0600D1300T/U | Core VFD 208v, 60hp, Nema 1, FrD | 21 | 53.5 | 13.3 |
| | 215 | 180 | 75 | E | HCRBA0750E1300T/U | Core VFD 208v, 75hp, Nema 1, FrE | 25 | 66.5 | 16.2 |
| | 276 | 215 | 100 | E | HCRBA1000E1300T/U | Core VFD 208v, 100hp, Nema 1, FrE | 25 | 66.5 | 16.2 |
| | 322 | 255 | 125 | E | HCRBA1250E1300T/U | Core VFD 208v, 125hp, Nema 1, FrE | 25 | 66.5 | 16.2 |
| 230 Vac | 5 | 4.6 | 1 | A | HCRBB0010A1300T/U | Core VFD 230v, 1hp, Nema 1, FrA | 8.9 | 34 | 10.6 |
| | 7.5 | 5 | 2 | A | HCRBB0020A1300T/U | Core VFD 230v, 2hp, Nema 1, FrA | 8.9 | 34 | 10.6 |
| | 10 | 8 | 3 | A | HCRBB0030A1300T/U | Core VFD 230v, 3hp, Nema 1, FrA | 8.9 | 34 | 10.6 |
| | 15 | 11 | 5 | A | HCRBB0050A1300T/U | Core VFD 230v, 5hp, Nema 1, FrA | 8.9 | 34 | 10.6 |
| | 21 | 17 | 7.5 | A | HCRBB0075A1300T/U | Core VFD 230v, 7.5hp, Nema 1, FrA | 8.9 | 34 | 10.6 |
| | 31 | 25 | 10 | В | HCRBB0100B1300T/U | Core VFD 230v, 10hp, Nema 1, FrB | 12.4 | 48 | 11.5 |
| | 46 | 33 | 15 | В | HCRBB0150B1300T/U | Core VFD 230v, 15hp, Nema 1, FrB | 12.4 | 48 | 11.5 |
| | 61 | 49 | 20 | В | HCRBB0200B1300T/U | Core VFD 230v, 20hp, Nema 1, FrB | 12.4 | 48 | 11.5 |
| | 75 | 65 | 25 | С | HCRBB0250C1300T/U | Core VFD 230v, 25hp, Nema 1, FrC | 12.4 | 48 | 11.5 |
| | 90 | 75 | 30 | С | HCRBB0300C1300T/U | Core VFD 230v, 30hp, Nema 1, FrC | 12.4 | 48 | 11.5 |
| | 105 | 90 | 40 | С | | Core VFD 230v, 40hp, Nema 1, FrC | 12.4 | 48 | 11.5 |
| | 146 | 120 | 50 | D | | Core VFD 230v, 50hp, Nema 1, FrD | 21 | 53.5 | 13.3 |
| | 180 | 146 | 60 | D | | Core VFD 230v, 60hp, Nema 1, FrD | 21 | 53.5 | 13.3 |
| | 215 | 180 | 75 | E | | Core VFD 230v, 75hp, Nema 1, FrE | 25 | 66.5 | 16.2 |
| | 276 | 215 | 100 | E | | Core VFD 230v, 100hp, Nema 1, FrE | 25 | 66.5 | 16.2 |
| | 322 | 255 | 125 | E | | Core VFD 230v, 125hp, Nema 1, FrE | 25 | 66.5 | 16.2 |
| | 3 | 2.8 | 1 | A | | Core VFD 460v, 1hp, Nema 1, FrA | 8.9 | 34 | 10.6 |
| | 3.7 | 3 | 2 | A | HCRBC0020A1300T/U | Core VFD 460v, 2hp, Nema 1, FrA | 8.9 | 34 | 10.6 |
| | 5 | 4 | 3 | A | 1 | Core VFD 460v, 3hp, Nema 1, FrA | 8.9 | 34 | 10.6 |
| 460 Vac | 7.5 | 6 | 5 | A | HCRBC0050A1300T/U | Core VFD 460v, 5hp, Nema 1, FrA | 8.9 | 34 | 10.6 |
| | 12 | 10.5 | 7.5 | A | HCRBC0075A1300T/U | Core VFD 460v, 7.5hp, Nema 1, FrA | 8.9 | 34 | 10.6 |
| | 14 | 12 | 10 | A | | Core VFD 460v, 10hp, Nema 1, FrA | 8.9 | 34 | 10.6 |
| | 22.5 | 18 | 15 | В | HCRBC0150B1300T/U | Core VFD 460v, 15hp, Nema 1, FrB | 12.4 | 48 | 11.5 |
| | 30 | 24 | 20 | B | | Core VFD 460v, 20hp, Nema 1, FrB | 12.4 | 48 | 11.5 |
| | 36 | 32 | 25 | B | | Core VFD 460v, 25hp, Nema 1, FrB | 12.4 | 48 | 11.5 |
| | 45 | 38 | 30 | C | | Core VFD 460v, 30hp, Nema 1, FrC | 12.4 | 48 | 11.5 |
| | 56 | 45 | 40 | С | | Core VFD 460v, 40hp, Nema 1, FrC | 12.4 | 48 | 11.5 |
| | 72 | 60 | 50 | С | | Core VFD 460v, 50hp, Nema 1, FrC | 12.4 | 48 | 11.5 |
| | 91 | 73 | 60 | D | | Core VFD 460v, 60hp, Nema 1, FrD | 21 | 53.5 | 13.3 |
| | 110 | 91 | 75 | D | 1 | Core VFD 460v, 75hp, Nema 1, FrD | 21 | 53.5 | 13.3 |
| | 144 | 110 | 100 | D | | Core VFD 460v, 100hp, Nema 1, FrD | 21 | 53.5 | 13.3 |
| | | | | | 1 | | | 1 | |

¹Variable Torque loads are loads that drive a variable speed motor where the torque descreases as the speed decreases, i.e. centrifugal pumps, fans. ²Constant Torque loads are loads where as the speed changes the torque remains constant, i.e. conveyors, positive displacement pumps.

³Drives should be selected so that the rated output current in Amps of the drive meets or exceeds the full load amps (FLA) of the motor and not based on the motor horsepower.



GAIN A COMPETITIVE ADVANTAGE!

Training is available to help you realize VFD CORE's full capabilities. Please contact your local distributor or Honeywell Sales Representative to learn more about training opportunities.

Save Time

The streamlined design of VFD CORE and VFD CORE Bypass saves you selection time before you even get to the jobsite because it has all the features you'll need for most applications. And once you're at the jobsite, you'll speed through the easy installation.

- The "Quick Startup" guide and "Startup Wizard" ask critical commissioning questions to intuitively guide you through installation and programming in minutes.
- Memory in the five-language-option, four-line-text keypad allows for four parameter sets to be stored in one keypad for quick upload and downloading.
- Enjoy maximum application flexibility with the three analog inputs, 10 digital inputs, two analog outputs, and three relay outputs.
- Other labor saving and control features include plenum rating, JOG mode, and 15 preset speeds.
- Integrated Modbus communication protocols for compatibility with almost every building management system.

Save Energy

Energy savings are at the heart of all Honeywell VFDs, and the same is true for VFD CORE. Nearly half of the energy consumed by buildings is used to circulate air and water. By modulating the speed of fans and pumps, VFD CORE maximizes energy savings day in and day out.

- Three programmable operating values on the display make VFD CORE easy for building managers to use and monitor.
- Easy status monitoring with LED lights.
- Hand and Auto control options for ease of use and manual override.

Save Headaches

Reliability is essential for both you and your customers, and the Honeywell VFD CORE drive delivers the performance and long service life that bring peace of mind. International quality and manufacturing standards have been combined to provide the highest quality drive possible.

Plus, built-in features help ensure maximum uptime:

- Maximize uptime/runtime by utilizing the built-in auto-restart and power-loss ride-through capabilities.
- Harmonic protection with a three percent direct-current (DC) choke on the largest sized drives, Frame D and E.
- Conformal-coated boards for added durability.
- Six faults in memory with a time and date stamp for easy troubleshooting.

FROM THE BRAND YOU TRUST

No one knows HVAC, building management and energy savings like Honeywell. And no one supports you with a more complete network of knowledgeable distributors and technical support teams. For added peace of mind, a three-year warranty from date of purchase is standard.

In short, you can count on the VFD CORE to serve your customers for years to come.

FAST INSTALLATION. FAST STARTUP. FAST SAVINGS.

Count on VFD CORE:

- Meet application needs in 95 percent of commercial HVAC systems
- Reduced startup and commissioning time
- Low total-installed cost
- Outstanding energy savings for your customers
- Quality performance backed by a strong warranty and technical support

Automation and Control Solutions Honeywell Electrical Distribution Channel 850 Town Center Drive Langhorne, PA 19047

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Honeywell