Honeywell

3G SmartVFD Disconnect Panel and NEMA 3R Drive Only Assemblies

INSTALLATION INSTRUCTIONS

APPLICATION

Disconnect Only

The 3G SmartVFD Disconnect Panel Assemblies channel electrical power through the variable frequency drive (VFD).

INSTALLATION

When Installing This Product

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in the instructions, Honeywell 3G SmartVFD Installation and User Guide manual, and on the product to make sure the product is suitable for your application.
3. Verify disconnect panel model is correct; no damage has been incurred; no screws, connections, terminations are loose.
4. Installer must be a trained, experienced service Technician, with VFD operation experience.
5. After installation is complete, check out product operation as provided in these instructions.

⚠ WARNING

Can Cause Serious Injury or Death.

1. Installation requires work with voltages that may cause serious injury or death.
2. This instruction manual is intended as a guide only. End user is responsible for proper application of this assembly, insuring proper conformance, directives, intended use and maintaining all safety practices as described in Honeywell 3G SmartVFD Installation and User Guide manual, local codes, and local safety authorities.
3. Disconnect power supply before installation,and before any servicing.

⚠ CAUTION

Equipment Damage Hazard.
Can short equipment circuitry.
Disconnect power supply before installation.

Location and Mounting

Locate the device in a clean, dry, well-ventilated area with an ambient temperature below 113°F (45°C).

Refer to Honeywell 3G SmartVFD manual Chapter 3 "MECHANICAL INSTALLATION" for free air space requirements above and to the sides of 3G SmartVFDs

WIRING

IMPORTANT

All wiring must agree with applicable codes, ordinances and regulations.
Variable frequency drive can store energy. Refer to VFD manual for safe work practices and appropriate wait times before servicing after equipment power has been De-energized.
All safety, warning and caution information located in Honeywell 3G SmartVFD Installation and User Guide manual must be read, understood and followed.
Before proceeding, make sure proper branch/short circuit protection has been provided (see Honeywell 3G SmartVFD manual).

1. Ensure that disconnect panel voltage corresponds with that of the power supply.
2. To access the disconnect panel wiring compartment:
   a. Ensure the main disconnect handle is in the OFF position.
   b. Open the cover.
   c. Test for power.
3. Refer to Honeywell 3G SmartVFD manual Chapter 4 " ELECTRICAL INSTALLATION " for proper power and control wire sizing information.
4. Terminate input three phase power wiring to line terminals:"L1", "L2", and "L3". Refer to disconnect panel schematic.
5. Terminate three phase motor wiring to motor terminals: "T1", "T2", and "T3". Refer to disconnect panel schematic.
6. Terminate all VFD control wiring to the proper terminals on VFD. Refer to disconnect panel schematic.

Refer to schematic for typical wiring.

IMPORTANT *Use only copper wire with 167 °F (75 °C) minimum.*

PRE-OPERATION CHECK

Refer to Honeywell 3G SmartVFD manual Chapter 5 " COMMISSIONING" before applying power.

UNINTENDED START

When the variable frequency drive is connected to AC line power, the motor may start at any time, causing the risk of death,serious injury, equipment, or property damage. The motor can start by means of an external switch, a serial bus command, an input reference signal from the LCP, or after a cleared fault condition.

1. Make sure disconnect panel and motor are properly grounded.
2. Make sure all connection points are tight; including all disconnect panel connection points.
3. Make sure all safeties (customer options) are connected and in working order.
4. Double check correct voltage is being applied and power and motor wiring are terminated in the correct place.
5. Verify motor FLA does not exceed VFD output amp rating.
6. Verify building automation system is ready for start, stop , and speed command . Verify all wires are terminated in the correct location.
7. Make sure all personnel, debris, etc are clear.

OPERATION

Refer to Honeywell 3G SmartVFD manual Chapter 5 "COMMISSIONING" Section 5.3 for local control panel usage instructions and programming operations.

Before applying power verify disconnect handle is in the “OFF” position.

1. Apply input power by turning disconnect handle to the "ON" position. Check three phase voltage on line side ("L1", "L2", "L3"). Refer to disconnect panel schematic.

2. Press “Main Menu” button multiple times as necessary to return to main menu screen (look for " Main Menu" title in upper left of screen). Refer to Honeywell 3G SmartVFD Installation and User Guide Chapter 5 " COMMISSIONING" Section 5.3 to program correct parameters using local keypad control.

3. Check motor rotation. If motor is rotating backwards in VFD mode, shut down power, lock out power source, wait until VFD stored energy has dissipated, switch incoming motor wires on the “T1 ” and “T2” terminals located on terminal block "TB", or motor wires “T1” and “T2” in the motor junction box. Re-energize power and check rotation again.

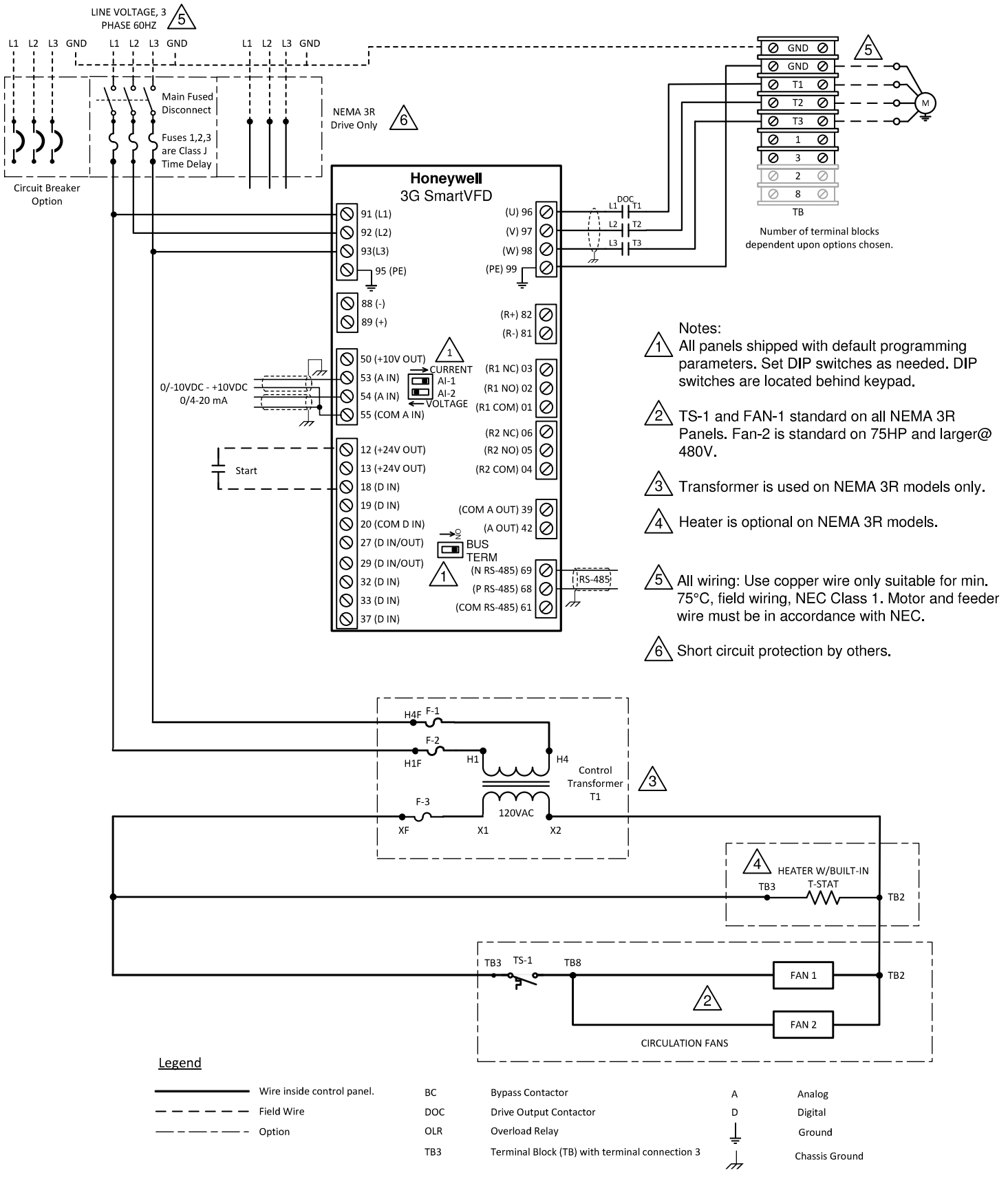


Fig. 1.0 Fused Disconnect Wiring Diagram.

PRODUCT NOMENCLATURE

HVFD3D 3 C 0100 G 1 0 0 B

Product Family Note 1

HVFD3D	**Honeywell 3G SmartVFD**
HVFD3B	**Honeywell 3G SmartVFD BYPASS**
HVFDSD	Honeywell SmartVFD HVAC
HVFDSB	Honeywell SmartVFD BYPASS

Input Phase

3	Three Phase

Nominal Voltage Note 2

A	208/230
C	460
D	600 Vac

Nominal Horsepower Note 3

0015	1.5 HP
0020	2 HP
0030	3 HP
0050	5 HP
0075	7.5 HP
0100	10 HP
0150	15 HP
0200	20 HP
0250	25 HP
0300	30 HP
0400	40 HP
0500	50 HP
0600	60 HP
0750	75 HP
1000	100 HP
1250	125 HP
1500	150 HP
2000	200 HP
2500	250 HP

Application Note 4

B	Denotes Model number for Bypass Assembly with VFD
C	Denotes Drive only, new 3G version

Options

0	No Special Options
1	Manual Bypass
2	Manual Bypass with Soft Start Option
3	Auto Bypass Option
4	Auto Bypass and Soft Start Option

Contactors Note 5

0	Drive Only
1	Fused Disconnect Only
2	Two Contactor Bypass with Fused Disconnect
3	Three Contactor Bypass with Fused Disconnect
4	Circuit Breaker Disconnect Only
5	Two Contactor Bypass w/ Circuit Breaker Disconnect
6	Three Contactor Bypass w/ Circuit Breaker Disconnect

Enclosure Type

1	NEMA 1
2	NEMA 12
3	NEMA 3R
4	NEMA 3R with Heater

Interface

G	Graphical Keypad

NOTES

1. HVFDSD/HVFDSB denote 2G drives no longer manufactured. Shown for reference only.
2. 600 Vac Drives with bypasses are Special Order. Call for assistance and Pricing.
3. 1.5HP – 150HP are included in price list. Call for special quote on 200HP and above.
4. Model numbers for Bypass application end in "B". VFD only will end in "C". If "Contactors" choice is "0" and "Options" choice is "0" then "Application" must be "C".
5. If "Contactors" choice is 0 (Drive only), 1 (Fused Disconnect), or 4 (Circuit Breaker Disconnect) then "Options" choice must be "0". If "Contactors" choice is 2 or 5 (2 Contactor bypass) then "Options" choice must be "1". 2-Contactor bypass is available as manual bypass only.

APPLICABLE TECHNICAL LITERATURE

TABLE	REFERENCE
Honeywell 3G SmartVFD Installation and User Guide	31-00559-01

ACCESSORIES

TABLE	PART NUMBER
Honeywell 3G SmartVFD Lon Card	HVFD3DOPTLON
Honeywell 3G SmartVFD Graphic Keypad	HVFD3DKEYPAD
Honeywell 3G SmartVFD Real Time Clock Card	HVFD3DOPTRTC
Honeywell 3G SmartVFD Ethernet IP Card	HVFD3DOPTETHIP
Honeywell 3G SmartVFD BACnet IP Card	HVFD3DOPTBACIP
Honeywell 3G SmartVFD Modbus TC/IP Card	HVFD3DOPTMODIP
Honeywell 3G SmartVFD Mounting Kit for Keypad on Door	HVFD3DDOORMOUNT
Honeywell 3G SmartVFD 3 meter Cable for Door Kit	HVFD3DREMOTE3M

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62-0439-05 Rev. 03-2023
Printed in United States

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