

VFD67 Series Variable Frequency Drives

Description

The VFD67 Series Variable Frequency Drives combine high performance and energy efficiency in one easy-to-install package. The integrated keypad on the front of the drive provides access to all of the parameters you need for typical three-phase motor applications, such as fan and pump control, rooftop units, air handlers, and cooling towers.

Standard features for the VFD67 Series Variable Frequency Drives include a built-in Electromagnetic Compatibility (EMC) filter, Modbus® communications, and eight pre-set speeds for greater application flexibility.

Features

- 0.33 to 20 Horsepower (hp) models — cover a variety of Heating, Ventilating, Air Conditioning, and Refrigeration (HVACR) applications
- built-in EMC filter — reduces electromagnetic interference
- RS485 Modbus Remote Terminal Unit (RTU) communications — provide connectivity through industry standard open network protocol
- selectable switching frequency (3, 6, 12, and 18 kHz) — meets specific application needs
- dynamic Volts/Hz mode — improves energy efficiency
- DIN rail or panel mounted models — provide for ease of installation



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Repair Information

If a size A, B, C, or D VFD67 Series Variable Frequency Drive fails to operate within its specifications, replace the unit. If a size E or F VFD67 Series Variable Frequency Drive fails to operate within its specifications, repair may be available. For a replacement VFD67 or repair, contact the nearest Johnson Controls® representative.

Selection Charts

Variable Frequency Drive Ordering Information (Part 1 of 2)

Code Number	Horsepower (hp)	Input	Output	Frame Size	Enclosure Size
VFD67AAA-1C	0.33 hp	1 Phase 100–120 V, 60 Hz, 7.5 A	3 Phase 0–240 V, 0–1,500 Hz, 1.7 A Continuous	A	154 x 75 x 145 mm (6-1/16 x 2-15/16 x 5-3/4 in.)
VFD67ABA-1C	0.50 hp	1 Phase 100–120 V, 60 Hz, 11 A	3 Phase 0–240 V, 0–1,500 Hz, 2.2 A Continuous	A	154 x 75 x 145 mm (6-1/16 x 2-15/16 x 5-3/4 in.)
VFD67ADB-1C	1.00 hp	1 Phase 100–120 V, 60 Hz, 19.6 A	3 Phase 0–240 V, 0–1,500 Hz, 4 A Continuous	B	205 x 85 x 156 mm (8-1/16 x 3-3/8 x 6-3/16 in.)
VFD67AEB-1C	1.50 hp	1 Phase 100–120 V, 60 Hz, 24 A	3 Phase 0–240 V, 0–1,500 Hz, 5.2 A Continuous	B	205 x 85 x 156 mm (8-1/16 x 3-3/8 x 6-3/16 in.)
VFD67BAA-1C	0.33 hp	1 Phase 200–240 V, 50/60 Hz, 4.3 A	3 Phase 0–240 V, 0–1,500 Hz, 1.7 A Continuous	A	154 x 75 x 145 mm (6-1/16 x 2-15/16 x 5-3/4 in.)
VFD67BBA-1C	0.50 hp	1 Phase 200–240 V, 50/60 Hz, 5.8 A	3 Phase 0–240 V, 0–1,500 Hz, 2.2 A Continuous	A	154 x 75 x 145 mm (6-1/16 x 2-15/16 x 5-3/4 in.)
VFD67BCA-1C	0.75 hp	1 Phase 200–240 V, 50/60 Hz, 8.1 A	3 Phase 0–240 V, 0–1,500 Hz, 3 A Continuous	A	154 x 75 x 145 mm (6-1/16 x 2-15/16 x 5-3/4 in.)
VFD67BDA-1C	1.00 hp	1 Phase 200–240 V, 50/60 Hz, 10.5 A	3 Phase 0–240 V, 0–1,500 Hz, 4 A Continuous	A	154 x 75 x 145 mm (6-1/16 x 2-15/16 x 5-3/4 in.)
VFD67BEB-1C	1.50 hp	1 or 3 Phase 200–240 V, 50/60 Hz, 14.2 A/6.7 A	3 Phase 0–240 V, 0–1,500 Hz, 5.2 A Continuous	B	205 x 85 x 156 mm (8-1/16 x 3-3/8 x 6-3/16 in.)
VFD67BFB-1C	2.00 hp	1 or 3 Phase 200–240 V, 50/60 Hz, 17.4 A/8.7 A	3 Phase 0–240 V, 0–1,500 Hz, 7 A Continuous	B	205 x 85 x 156 mm (8-1/16 x 3-3/8 x 6-3/16 in.)
VFD67BGC-1C	3.00 hp	1 or 3 Phase 200–240 V, 50/60 Hz, 23.2 A/11.9 A	3 Phase 0–240 V, 0–1,500 Hz, 9.6 A Continuous	C	258 x 100 x 173 mm (10-3/16 x 3-15/16 x 6-13/16 in.)
VFD67BJD-1C	5.00 hp	3 Phase 200–240 V, 50/60 Hz, 15.7 A	3 Phase 0–240 V, 0–1,500 Hz, 17 A Continuous	D	335 x 115 x 198 mm (13-3/16 x 4-9/16 x 7-13/16 in.)
VFD67BKE-1C	7.50 hp	3 Phase 200–240 V, 50/60 Hz, 18.2 A	3 Phase 0–240 V, 0–1,500 Hz, 22 A Continuous	E	391 x 155 x 219 mm (15-7/16 x 6-1/8 x 8-5/8 in.)
VFD67BME-1C	10.00 hp	3 Phase 200–240 V, 50/60 Hz, 24.2 A	3 Phase 0–240 V, 0–1,500 Hz, 28 A Continuous	E	391 x 155 x 219 mm (15-7/16 x 6-1/8 x 8-5/8 in.)
VFD67BNF-1C	15.00 hp	3 Phase 200–240 V, 50/60 Hz, 35.4 A	3 Phase 0–240 V, 0–1,500 Hz, 42 A Continuous	F	391 x 250 x 260 mm (15-7/16 x 9-7/8 x 10-1/4 in.)

VFD67 Series Variable Frequency Drives (Continued)

Variable Frequency Drive Ordering Information (Part 2 of 2)

Code Number	Horsepower (hp)	Input	Output	Frame Size	Enclosure Size
VFD67BPF-1C	20.00 hp	3 Phase 200–240 V, 50/60 Hz, 46.8 A	3 Phase 0–240 V, 0–1,500 Hz, 54 A Continuous	F	391 x 250 x 260 mm (15-7/16 x 9-7/8 x 10-1/4 in.)
VFD67CBB-1C	0.50 hp	3 Phase 380–480 V, 50/60 Hz, 1.7 A	3 Phase 0–480 V, 0–1,500 Hz, 1.3 A Continuous	B	205 x 85 x 156 mm (8-1/16 x 3-3/8 x 6-3/16 in.)
VFD67CCB-1C	0.75 hp	3 Phase 380–480 V, 50/60 Hz, 2.5 A	3 Phase 0–480 V, 0–1,500 Hz, 1.7 A Continuous	B	205 x 85 x 156 mm (8-1/16 x 3-3/8 x 6-3/16 in.)
VFD67CDB-1C	1.00 hp	3 Phase 380–480 V, 50/60 Hz, 3.1 A	3 Phase 0–480 V, 0–1,500 Hz, 2.1 A Continuous	B	205 x 85 x 156 mm (8-1/16 x 3-3/8 x 6-3/16 in.)
VFD67CEB-1C	1.50 hp	3 Phase 380–480 V, 50/60 Hz, 4.0 A	3 Phase 0–480 V, 0–1,500 Hz, 2.8 A Continuous	B	205 x 85 x 156 mm (8-1/16 x 3-3/8 x 6-3/16 in.)
VFD67CFB-1C	2.00 hp	3 Phase 380–480 V, 50/60 Hz, 5.2 A	3 Phase 0–480 V, 0–1,500 Hz, 3.8 A Continuous	B	205 x 85 x 156 mm (8-1/16 x 3-3/8 x 6-3/16 in.)
VFD67CGC-1C	3.00 hp	3 Phase 380–480 V, 50/60 Hz, 7.3 A	3 Phase 0–480 V, 0–1,500 Hz, 5.1 A Continuous	C	258 x 100 x 173 mm (10-3/16 x 3-15/16 x 6-13/16 in.)
VFD67CHC-1C	4.00 hp	3 Phase 380–480 V, 50/60 Hz, 9.5 A	3 Phase 0–480 V, 0–1,500 Hz, 7.2 A Continuous	C	258 x 100 x 173 mm (10-3/16 x 3-15/16 x 6-13/16 in.)
VFD67CJC-1C	5.00 hp	3 Phase 380–480 V, 50/60 Hz, 11.9 A	3 Phase 0–480 V, 0–1,500 Hz, 9.0 A Continuous	C	258 x 100 x 173 mm (10-3/16 x 3-15/16 x 6-13/16 in.)
VFD67CKD-1C	7.50 hp	3 Phase 380–480 V, 50/60 Hz, 12.4 A	3 Phase 0–480 V, 0–1,500 Hz, 13.0 A Continuous	D	335 x 115 x 198 mm (13-3/16 x 4-9/16 x 7-13/16 in.)
VFD67CMD-1C	10.00 hp	3 Phase 380–480 V, 50/60 Hz, 15.6 A	3 Phase 0–480 V, 0–1,500 Hz, 16.5 A Continuous	D	335 x 115 x 198 mm (13-3/16 x 4-9/16 x 7-13/16 in.)
VFD67CNE-1C	15.00 hp	3 Phase 380–480 V, 50/60 Hz, 20.2 A	3 Phase 0–480 V, 0–1,500 Hz, 21.0 A Continuous	E	391 x 155 x 219 mm (15-7/16 x 6-1/8 x 8-5/8 in.)
VFD67CPE-1C	20.00 hp	3 Phase 380–480 V, 50/60 Hz, 26.6 A	3 Phase 0–480 V, 0–1,500 Hz, 29.0 A Continuous	E	391 x 155 x 219 mm (15-7/16 x 6-1/8 x 8-5/8 in.)
VFD67DJF-1C	5.00 hp	3 Phase 575 V, 50/60 Hz, 5.0 A	3 Phase 0–575, 0–1,500 Hz, 5.4 A Continuous	F	391 x 250 x 260 mm (15-7/16 x 9-7/8 x 10-1/4 in.)
VFD67DKF-1C	7.50 hp	3 Phase 575 V, 50/60 Hz, 7.8 A	3 Phase 0–575, 0–1,500 Hz, 8.4 A Continuous	F	391 x 250 x 260 mm (15-7/16 x 9-7/8 x 10-1/4 in.)
VFD67DMF-1C	10.00 hp	3 Phase 575 V, 50/60 Hz, 9.9 A	3 Phase 0–575, 0–1,500 Hz, 11 A Continuous	F	391 x 250 x 260 mm (15-7/16 x 9-7/8 x 10-1/4 in.)
VFD67DNF-1C	15.00 hp	3 Phase 575 V, 50/60 Hz, 13.8 A	3 Phase 0–575, 0–1,500 Hz, 16 A Continuous	F	391 x 250 x 260 mm (15-7/16 x 9-7/8 x 10-1/4 in.)
VFD67DPF-1C	20.00 hp	3 Phase 575 V, 50/60 Hz, 18.2 A	3 Phase 0–575, 0–1,500 Hz, 22 A Continuous	F	391 x 250 x 260 mm (15-7/16 x 9-7/8 x 10-1/4 in.)

Accessories

Code Number	Description
VFD67-A-NEMA1K	Size A NEMA1 Kit: IP20 to NEMA1 Conversion Kit
VFD67-B-NEMA1K	Size B NEMA1 Kit: IP20 to NEMA1 Conversion Kit
VFD67-C-NEMA1K	Size C NEMA1 Kit: IP20 to NEMA1 Conversion Kit
VFD67-D-NEMA1K	Size D NEMA1 Kit: IP20 to NEMA1 Conversion Kit
VFD67-E-CBOX1K	Size E CBOX1 Kit: Conduit Box
VFD67-F-CBOX1K	Size F CBOX1 Kit: Conduit Box
VFD67-N-SMST1K	Smart Stick

VFD67 Series Variable Frequency Drives (Continued)

Technical Specifications

VFD67 Series Variable Frequency Drives

Model	VFD67
Drive Voltage Rating	110 VAC, 230 VAC, 460 VAC, 575 VAC at 60 Hz (110 VAC, 230 VAC, 400 VAC, 575 VAC at 50 Hz)
Output Voltage/Output Frequency	230 VAC, 460 VAC, 575 VAC at 60 Hz (230 VAC, 400 VAC, 575 VAC at 50 Hz)
Switching Frequency	3 kHz, 6 kHz, 12 kHz, 18 kHz (110 VAC, 230 VAC) 3 kHz, 6 kHz, 12 kHz (460 VAC) 3 kHz, 6 kHz (575 VAC)
Duty	Normal, Heavy
Overload Limit	Normal Duty: 110% overload current for 215 seconds Heavy Duty: 150% overload current for 60 seconds
Acceleration/Deceleration	0 to 3200.0 sec/100 Hz
Start/Stop	Terminal Control/Keypad Control
Motor Cable Lengths	≤100m
Ambient Temperature	Size A to D: -10° to 40°C (14° to 104°F) Operation up to 55°C (131°F) with de-rating Size E to F: -10 to 40°C (14 to 104°F) Operation up to 50°C (122°F) with de-rating
Storage Temperature	-40 to 60°C (-40 to 140°F)
Altitude	Altitude range is 0 to 3,000 m (9,750 ft), subject to the following de-rating: Reduce normal full load current by 1% for every 100 m (325 ft) above 1,000 m (3,250 ft) up to a maximum of 3,000 m (9,750 ft)
Humidity	Maximum Relative Humidity 95% Noncondensing at 40°C (104°F)
Enclosure	IP20 Underwriters Laboratories Inc.® (UL) Type 1, National Electrical Manufacturers' Association (NEMA) Type 1 rating with optional cover + conduit entry kit
Compliance	North America: cUL/UL Approval File E244421 Europe: CE Mark – Johnson Controls, Inc., declares that this product is in compliance with the essential requirements and other relevant provisions of the EMC Directive 2004/108/EC and Low Voltage Directive 2006/95/EC. Australia: C Tick Compliant (N1652)