

VFD-3P-480V-700HP-830A-DCM-N12

700 HP Variable Frequency Device - 480V AC 3PH Input/Output - 830 Amps - 630kW - NEMA 12 Enclosure

Product ID: 322855

Please see last page for supporting documentation for this product (certificates, CAD files & drawings, IES files, wiring diagrams, etc).



Image: VFD-3P-480V-700HP-830A-DCM-N12

Larson Electronics LLC manufactures a wide variety of products, including custom built to spec designs. The pictures displayed for this unit are a general representation of form factor for the product line and may not accurately represent this exact configuration in every detail due to custom builds and changes between similar products in our standard catalog. The specifics for this configuration are listed in the specification table and supporting documentation (CAD files, Dimensional Drawing, Name Plate Diagram, Wiring Diagram, etc.). This means that specific details (receptacles, plugs, wires, connections, mounting brackets, external finishes, etc.) may not be accurately represented in images vs specifications. Please review specifications and do not order based solely on images.

VFD-3P-480V-700HP-830A-DCM-N12 Variable Frequency Device

Unit Type: 3 Phase Delta, 3 Wire Variable Frequency Device

Dimensions: 30.39"-W x 17.4"-D x 44.9"-H

Weight: 536 lbs

Input/Output Voltage: 480V $\pm$ 10% AC 3PH

Rated Voltage: 690V

Output Current Rating: 830 Amps

Operating Frequency: 60 Hz (0.01 to 1200 Hz)

Kilowatts: 630 kW

HP: 700

Cooling Method: Forced air cooling

Ground Wire Size: 4/0

Control Method: V/F, Sensorless Vector, Slip Compensation, Easy Start Selectable

Frequency Setting Resolution: Digital Reference: 0.01 Hz (Below 100 Hz), 0.1 Hz (Over 100 Hz), Analog Reference: 0.01 Hz / 60 Hz

Frequency Accuracy: Digital: 0.01 % of Max. Output Frequency, Analog: 0.1 % of Max. Output Frequency

V/F Ratio: Linear, Squared Pattern, User V/F

Overload Capacity: 110% rated current for 1 minute / every 10 minutes.

Voltage Boost: Manual Voltage Boost (0 ~ 15 % programmable), Auto Boost

Features/Ratings

Variable Frequency Device

LED Display

3 Phase Delta, 3-Wire Configuration

NEMA 12 Weatherproof Enclosure

Hinged Door on Enclosure

Indoor Use

CE Marked

UL Listed

cUL Listed

I/O and Control Features:

Local/Remote selector switch

Start/Stop pushbuttons

Speed potentiometer

Run/Trip pilot lights

Operation Method: Keypad / Terminal / Communication Operation

Frequency Setting (Isolated): Analog: 0~12V, -12V~+12V, 4~20mA or 0~20mA, Pulse, Ext-PID, Digital: Keypad

Start Signal: Forward, Reverse

Multi-Step: Max 18 Speeds can be set including Jog, Dwell via (4) Multi-Function Terminals

Acc/Dec Time Pattern: 0.1~ 6,000 sec. Linear, U-Curve, S-Curve Selectable

Inverter Disable: Interrupts the output of the drive

Jog: Jog operation

Fault Reset: Trip status is reset when a fault indication is active.

Operating Status: Relay Output contacts (Isolated). (4) Form A (Ax-Cx) - AC 250V, 1A.

Programmable to: Frequency Detection Level, Overload Alarm, Stall, Over Voltage, Low Voltage, Inverter Overheat/Run/Stop/Steady/Ready, Inverter Bypass, Speed Searching

Fault Output: Relay Output contacts (Isolated). Form C (3A, 3C, 3B) – AC 250V 1A, DC 30V 1A

DC Link Choke: Included, Built-In

Meter/Indicator: Output Voltage: (2) 0~10VDC Outputs (Non-Isolated): Choose from: Output Frequency, Output Current, Output Voltage, DC Link Voltage, Power (Watts)

Operation Functions: DC Braking, Frequency Limit, Frequency Jump, 2nd Function, Slip Compensation, Reverse Rotation Prevention, Auto Restart, Inverter Bypass, Auto-Tuning, PID Control, Flying Start, Safety Stop, Flux Braking, Low Leakage, Pre-PID, Dual-PID, MMC, Easy Start, Pre-heater

Inverter Trips: Over Voltage, Low Voltage, Over Current, Ground Fault, Inverter Overheat, Motor Overheat, Output Phase Open, Overload Protection, External Fault 1, 2, Communication Error, Loss of Speed Command, Hardware Fault, Option Fault

Inverter Alarms: Stall Prevention, Overload Alarm, Over Heat, Thermal Sensor Fault

Momentary Power Loss: Below 8.3 msec: Continuous operation Above 8.3 msec: Auto restart active (AFN-22) Above 1 sec: Auto restart active (AFN-22) and for high inertia loads, Safety Stop (FUN-28) set to "Yes"

Display: Keypad, Operation Information: Output Frequency, Output Current, Output Voltage, Frequency Set Value, Operating Speed, DC link voltage, Integrating Wattmeter, Run-Time, Last Trip Time / Trip Information: Trip Indication when a fault occurs. Maximum of five (5) faults are log along with the Last Trip Time.

Communication: EtherNet/IP, Profinet, Modbus TCP/IP compatible.

Ambient Temperature: -10°C (14°F) ~ 40°C (104°F) (Derate by 20% for use at 50°C ambient)

Storage Temperature: -20°C (-4°F) ~ 65°C (149°F)

Ambient Humidity: < 90 % RH Max. (Non-Condensing)

Vibration: Below 5.9m/sec² (=0.6g)

Altitude: Below 3300ft (1000m), Derate 1% (drive current) for every 300ft above 3300 ft

Pollution Degree: 2, No Corrosive Gas, Combustible Gas, Oil Mist, or Dust

Enclosure: NEMA 12 Weatherproof Enclosure, front access design.

Mounting: Surface/Wall Mounted

Color: Gray

Special Orders - Special Requirements

Contact us for special requirements

Toll Free: 1-800-369-6671

Intl: 1-903-270-1187

E-mail: sales@larsonelectronics.com

The VFD-3P-480V-700HP-830A-DCM-N12 from Larson Electronics is a 3 Phase, 3-Wire Configuration Variable Frequency Drive that is suitable for improving AC motor performance in industrial operations. This fan-cooled unit features a three-phase 480V AC input/output voltage comparability. Designed for steady speed error, fast torque rise and protection from resonance vibrations, the device provides an output current of 830 amps @ 480V and an operating frequency range of 0.01 to 120 Hz with 700 horsepower. The NEMA 12, hinged enclosure makes this unit suitable for indoor applications.

The VFD-3P-480V-700HP-830A-DCM-N12 offers accurate AC motor control in industrial facilities. This 630kW unit is compatible with three-phase nominal 480V (within the range of

380-480V) AC input/output voltage, provides an output current of 830 amps @ 480 V and an operating frequency range of 0.01 to 120 Hz.

This device supports seven on-off programmable digital inputs, one high-speed pulse input and two programmable analog inputs, as well as one programmable open collector output, one analog output (open collector or high-speed pulse), two relay outputs and two analog outputs. The device also features a total of four operating modes: Keypad control, Terminal control, Serial communication control, and Frequency Setting Mode for digital setting, analog setting, pulse frequency setting, serial communication setting, multi-step speed setting & simple PLC, PID setting, etc.

The NEMA 12 enclosure makes the VFD-3P-480V-700HP-830A-DCM-N12 weatherproof rated and suitable for indoor and outdoor applications. It can also handle operating temperatures ranging between -10°C to +40°C. The hinged door on the enclosure makes access simple. Operators may mount the variable frequency drive on compatible surfaces.

Applications: Speed control of AC motors, industrial machines, large compressors, energy savings and more.

At Larson Electronics, we do more than meet your lighting needs. We also provide replacement, retrofit, and upgrade parts as well as industrial grade power accessories. Our craftsmen can custom build any lighting system and/or accessories to fit the unique demands of your operation. A commitment to honesty, quality, and dependability has made Larson Electronics a leader in the lighting and electronics business since 1973. Contact us today at 800-369-6671 or message sales@larsonelectronics.com for more information about our custom options tailored to meet your specific industry needs.



Frequently Asked Questions (FAQ)

There are no Faqs



Export Control Classification Number (ECCN): EAR99

Links (Click on the below items to view):

- **HigResPic1**(<https://www.larsonelectronics.com/images/product/HigResPic1/322855.JPG>)
- **Video1**(<https://www.youtube.com/watch?v=FM7BXInKJaY>)
- **Video4**(<https://www.youtube.com/watch?v=FM7BXInKJaY>)
- **ISO 9001 Certification**(<http://larsonelectronics.com/images/pdfdocs/ISO9001.PDF>)
- **Business Certificate**(<https://www.larsonelectronics.com/images/pdfdocs/w9.PDF>)
- **Shipping Time Map**(<https://www.larsonelectronics.com/images/product/ShippingTimeMap/ShippingTimeMap.pdf>)