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IND-SFC-3P-1KVA-415Y.240-50HZ-240Y.139-60HZ

1 KVA Solid-state Frequency Converter - 415Y/240V Grounded Wye 50 Hz Input to 240Y/139V Grounded Wye 60 Hz Output

Product ID: 346059



Image: IND-SFC-3P-1KVA-415Y.240-50HZ-240Y.139-60HZ

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.

IND-SFC-3P-1KVA-415Y.240-50HZ-240Y.139-60HZ Frequency Converter

Unit Type: Solid-state Static Frequency Converter

Dimensions: (*Please note that dimensions are approximate and subject to change*) 14" x 21.2" x 27"

Weight: (*Please note that weight is approximate and subject to change*) 175 lbs

Input Voltage: 415Y/240V 3PH +/- 10% 3P4W+G

Input Frequency: 50 Hz +/- 10%

Input neutral current: ≤ 21% of any phase current (no load and full load)

Input power factor: 0.8 lagging to unity

Input current THD: ≤ 5% total; ≤ 3% individual harmonic

Inrush current: ≤ 100% of rated full-load input current (assumes no input transformer)

Surge protection: UL 1449, IEEE C62.41.1 / C62.41.2, Location Category B; no alarms

Capacity: 1 KVA - 100% Load - 30 Mins

Features/Ratings

NRTL Listed to UL 1012A

Advanced Microprocessor Control

True Online Double Conversion

Smart Fan Control

Testing

Routine factory: Input current/PF at low, nominal, high voltage; output voltage/THD/regulation at 50% and 100% load (multiple PFs, non-linear load); efficiency at 50% and 100%; no-load losses; line-drop compensation; harmonic spectra

Burn-in: 24 h minimum, cycling 6 h ON at full load and 3 h OFF at no load, 4 ON cycles, doors closed

Special factory (design tests): PE-signed. Surge (3 consecutive passes), inrush (3 tests), input THD, overload, short circuit (3 passes), output THD, phase angle, transient recovery, EMI, paralleling

Field performance: Initial inspection; load steps at 0/25/50/75/100%; control and protective device checks (3 operations each); 2-hour load test at 100% non-linear load with aircraft cable; transient tests (3 repeats); harmonics to 37th order; line-drop compensation; grounding check

Output Voltage: 240Y/139V 3PH 3P4W+G, ±10% adjustable; over/undervoltage limits ±2%

Output Frequency: 60 Hz ±0.5%

Phase rotation: Clockwise A-B-C

Output power factor: 0.8 PF lagging

Load range: Linear: 0.5 lagging to 0.8 leading PF. Non-linear: ≥ 15% current THD (≥ 6% 3rd, ≥ 7% 5th harmonic)

Amplitude modulation: ≤ 0.5% of nominal voltage

Line drop compensation: Automatic, 0 to 7% adjustable internally

Transient recovery: Per MIL-STD-704

No-load input losses: ≤ 7% of output kW (≥ 30 kVA); ≤ 9% (< 30 kVA). Add 2% if input transformer is used
Short circuit : Withstand bolted L-G, L-L and 3-phase faults without damage until protective device clears

Output Voltage Distortion and Overload:

Balanced linear load: THD ≤ 3% (L-L and L-N); max single harmonic ≤ 2%

Balanced non-linear load: THD ≤ 5% (L-L and L-N); max single harmonic ≤ 3%

15% unbalanced linear load: THD ≤ 4% (L-N). Unbalance: Phase A at full single-phase load; Phases B and C at 85% of A
Overload capability: 110% of full load @ 60 min, 125% of full load @ 5 min, 150% of full load @ 2 min, 200% of full load @ 20 sec

Input/Output Devices:

General: Fully rated 3-pole UL devices; 400/60 Hz devices and cables derated

Circuit breakers: UL 489, derated for 400/60 Hz

Input breaker: Integral, front-operable, ≥ 36 kA symmetrical SCCR

Output contactor: Magnetically held, interlocked with ON/OFF, opens on any protective shutdown; IEC 60947-4-1

Output breaker: Manual, non-automatic, shunt-trip (derated for 400/60 Hz), front-operable

Monitoring and control:

Controls: Controls Start/stop, LED test, alarm reset, emergency power off, circuit breaker, output contactor ON/OFF, output voltage adjust
Indicators: Input available, output on/off, system alarm (latched), alarm-silence disabled, elapsed time meter, contactor ON, aircraft interlock bypass
Metering: True RMS, ±1%, microprocessor-based, 3-line LCD: L-L voltage, L-N voltage, phase current, neutral current, frequency
Alarms: Input over/undervoltage, output over/undervoltage, output overload, system alarm, control logic failure, overtemperature, logic supply failure
Built-in test: Built-in test Monitors primary and protection circuits; LED diagnosis to module level
Remote panel: Terminal blocks for future remote extension: de-energize button, status lamp, output breaker position lamp, system alarm

Protective settings:

Input: Undervoltage, overvoltage, loss of phase, loss of power

Door interlock: Opens input and output devices; maintenance bypass provided

Output overvoltage: Trip at ≥ 30% instantaneous, or 10 to 30% for > 0.25 s

Output undervoltage : Block closing until ≥ 95%; trip if < 90% for > 5 s (adjustable 4 to 10 s)

Output frequency: Trip at ±5%

Other: Output overload; converter overtemperature

Calibration: Instruments NIST-traceable; calibration cycle ≤ 12 months

MTFB: > 24,000 hours

Rectification: IGBT
Efficiency: Up to 95%
Load Stabilization Rate: < +/- 1%
Frequency Stability: ±0.5% of output frequency, all operating conditions
Harmonic Distortion: Pure Sine Wave < 2%
4-digit Meters: Digital Frequency Meter- Resolution 0.1Hz/Step; Digital Voltage Meter- Resolution 0.1V; Digital Ammeter- Resolution 0.1A; Digital Watt Meter- Resolution 0.1W
Protection: Overload, Short Circuit, Over Temp, Instant Power Failure Protection, Alarm
Ambient Operating Temperature: 0°C - 55°C
Humidity: 0-95% (Non-condensation)

Altitude: Sea level to 305 m

Enclosure rating: NEMA 250 Type 12K (indoor); louvers/cooling as required; rust-inhibiting treatment plus finish coat

Construction: Modular; power and electronic modules serviceable from the exterior

Acoustic noise: ≤ 75 dBA continuous
Magnetics: Class 180 insulation per NEMA ST 20 and UL 506; not exceeded at max ambient and 100% load
EMI: MIL-STD-461 Class A (design tests: Part 9, Class C2)
Marking: Engraved start/stop plate on front; encapsulated schematic inside; unique wire ID tags
Mounting: Floor channels or wall bracket
Color: Tan

Special Orders - Special Requirements

Contact us for special requirements

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The IND-SFC-3P-1KVA-415Y.240-50HZ-240Y.139-60HZ from Larson Electronics is a Solid-state Frequency Converter that is designed for voltage and frequency rectification in industrial locations. The 1 KVA static converter comes with an input voltage/frequency of three-phase 415Y/240V, 50 Hz and an output voltage/frequency of three-phase 240Y/139V, 60 Hz. This unit could be mounted on floor channels or wall bracket.

The IND-SFC-3P-1KVA-415Y.240-50HZ-240Y.139-60HZ can be used to accurately convert voltages and frequencies in industrial sites. This 1 KVA unit offers three-phase 415Y/240V, 50 Hz on the input side and 240Y/139V, 60 Hz on the output side. During operation, rectification is completed via IGBT. The static frequency converter provides robust microprocessor control, true online double conversion and active input power factor correction.

This solid-state frequency converter is equipped with several protective features, including overload, short circuit, over temp, instant power failure connection and alarm. For efficient operation, the unit features smart fan control and ultra high efficiency (98% in Smart Eco Mode). Operators are provided access to a panel, which houses various controls for meters. Available meter components include digital frequency meter, digital voltage meter, digital ammeter and digital watt meter.

Mounting: The IND-SFC-3P-1KVA-415Y.240-50HZ-240Y.139-60HZ is secured inside a NEMA 12K enclosure and could be mounted on floor channels or wall bracket.

Applications: Industrial facilities, laboratories, air compressor testing, power supply testing, motor equipment testing, quality assurance, lighting systems 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.

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Frequently Asked Questions (FAQ)

There are no Faqs