

## DATASHEET



- Robustness and reliability
- Wide input voltage range  $\pm 20\%$
- Power Factor Correction ( $\cos\phi = 0.99$ )
- Low harmonic content ( $\text{THDi} \leq 3\%$ )
- Parallel operation
- Output Voltage Adjustment Potentiometer
- Output Voltage Compensation
- Graphic display
- Extensible 2 year warranty

LCA-440T6/240T4-075-01

### General description

Frequency Converters are electronic devices that obtain an output alternating current voltage of a frequency programmed from an input voltage of a different frequency.

- Equipment designed for naval industry
- Ground-based aircraft power supply equipment (GPU)
- Robust and compact systems with protection degree up to IP55

The main function of Frequency Converters is to supply loads, such as:

- Motors
- Flight control systems
- Instrumentation
- Special loads

In general all those systems that need a frequency different to that supplied by the commercial distribution network.

Our equipment obtains a stable frequency, digitally generated and controlled by a microprocessor (DSP) that implements cutting-edge control algorithms.

Due to the manoeuvre system and automatic parallelism several equipments can be coupled to the same AC bus. This allows to distribute the load current, achieving a great installation reliability.

Main features of Frequency Converters manufactured by SUPSONIK, S.L:

- Galvanic isolation between equipment input and output
- Built-in Input Power Factor Correction (PFC)
- Symmetrical output voltage with very low harmonic content ( $\text{THD} < 1\%$ )
- Output voltage level adapted to customer needs
- Operation with any type of load (inductive, capacitive, non-linear, etc.)
- Ability to withstand overloads and very high current peaks during load connections, starting tips, short circuits ...
- Possibility to operate in parallel with several units connected to the same AC bus.
- High efficiency and reliability
- Easy and intuitive operator interface via graphic display

*Supsonik S.L. Offer customized development with special features and adapted to your needs.*

*For further information please contact the manufacturer.*

**AC INPUT**

Rated voltage	440 Vac ~3
Voltage range	± 20%
Rated frequency	60 Hz
Frequency range	± 5%
Rated current (100% -load @ Vinput-nom)	107A@75KVA / 214 A@150KVA / 357 A@250KVA
Power factor (100% -load @ Vinput-nom)	0.99
THDi (Line Current Distortion)	≤ 3%

**AC OUTPUT**

Rated power	75KVA / 150KVA / 250KVA
Rated voltage	200 Vac ~3N ± 1%
Rated frequency	400 Hz ± 0.1%
Power factor	-0.7 to +0.8
THDv (output voltage distortion)	≤ 1% (for linear load) ≤ 3% (for non-linear load)
Balance between phases	± 1% (for balanced loads) ± 2% (for balanced loads up to 30%)

**OVERLOAD RANGE**

- 115%	15 min.
- 120%	1 min.
- 200%	2 s.

**PERFORMANCE**

Performance (100% -load @ Vinput-nom)	≥ 91%
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**ENVIRONMENTAL CHARACTERISTICS**

Protection degree	IP23
Working temperature	0°C a 46°C
Storage temperature	-15°C to 55°C
Relative humidity	15% to 95% with no condensation

**WEIGHT**

Dimensions (Width x Depth x Height)	800 x 800 x 2120 mm – 75KVA 1200 x 800 x 2120 mm – 150KVA 2400 x 800 x 2120 mm – 250KVA
Weight*	750 Kg / 1350 Kg / 2450 Kg (75KVA / 150KVA / 250KVA)

**PROTECTIONS**

Protections	<ul style="list-style-type: none"> <li>• Input Overvoltage / Undervoltage</li> <li>• Output Overvoltage / Undervoltage</li> <li>• Output Overload / Short Circuit</li> <li>• Internal insulation failure</li> <li>• Internal overtemperature</li> </ul>
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**USER INTERFACE**

<ul style="list-style-type: none"> <li>• Graphical display with measurements and event history</li> <li>• Local Signalling: Start / Overload / Fault</li> <li>• Remote Start / Stop Control</li> </ul>	<ul style="list-style-type: none"> <li>• 4 ÷ 20 mA Input for Output Voltage Adjustment ± 5% Vout</li> <li>• RS-485 communications, MODBUS / PROFIBUS protocol **</li> </ul>
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**AVAILABLE OPTIONS**

<ul style="list-style-type: none"> <li>• Input Voltage 400 Vac ~ 3</li> <li>• Additional potential-free contact alarms: In Operation, Lock, General failure, Overload, Manoeuvre status</li> <li>• Remote signalling in 4 ÷ 20 mA form</li> </ul>	<ul style="list-style-type: none"> <li>• Analog meters on the front panel</li> <li>• PROFIBUS (RS-485) Communications</li> <li>• PC software (RS-232): graphical user interface</li> <li>• Output Current Leakage Detector</li> <li>• Input Current Leakage Detector</li> </ul>
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**CERTIFICATES AND STANDARDS**

EC Marking	Directive EMC 61000-6-2, 61000-6-4
UNE-EN ISO 9001:2008	Low Voltage Directive EN 50178
Military Regulations	STANAG 1008 / MIL-STD-1399

\* Equipment indicated weight - Standard  
\*\* optional