

DATASHEET



- Robustness and reliability
- Traction motors of 420V and 920V
- Start and stop automatic control
- Selectable magnetization curves
- Output Voltage Adjustment Potentiometer
- Extensible 2 year warranty

LCA-380T5/920T6-110

General description

Speed Variators developed by SUPSONIK S.L. are ready to work cage rotor asynchronous motors.

These equipment are used when the following is required:

- Controlling torque and speed of a motor
- Regulate the movement of a motor in both directions and in a precise way
- Performing functional tests in a test bench for asynchronous traction motors

Speed variators are electronic devices that allow the speed and torque of three-phase induction motors to be varied.

Speed Variator developed by SUPSONIK, S.L. is a Voltage and Frequency converter that generates a nearly constant rotational magnetic flow in the air gap of the induction motor. The constant magnetic flow gives the motor a constant torque, and allows to move large loads at low revolutions, a characteristic property of railway traction motors.

The Speed Variator is specially designed to handle two different types of induction motors with custom voltages and magnetizing curves (V / F ratio):

- 420Vac III / 4 ÷ 100Hz / 55-110-330kW Traction Motors
- 920Vac III / 4 ÷ 100Hz / 55-110-330kW Traction Motors

The characteristics of the Speed Variator include the following parameters:

- Programmable and adjustable frequency from the front panel
- Selectable magnetization curve
- Pre-programmed start and stop curves
- Remote frequency setpoint
- Change of rotation direction
- Integration of digital measuring devices on the front panel: Output Frequency Setpoint; Output Voltage and Frequency; Input Voltage and Current
- Motor switch on/off by means of a quick connector

*Supsonik S.L. has a wide range of speed variators, from **55 kVA to 330 kVA** maximum power.*

For further information please contact the manufacturer.

AC INPUT

Rated voltage	400 Vac ~3N
Voltage range	± 10%
Rated frequency	50 Hz
Frequency range	± 5%
Rated current (100% -load @ Vinput-nom)	88A@55KVA / 175 A@110KVA / 530 A@330KVA

AC OUTPUT

Rated power	55KVA / 110KVA / 330KVA
Motor # 1 Rated voltage	420 Vac ~3
Motor # 2 Rated voltage	920 Vac ~3
Motor frequency	0 ÷ 100 Hz (adjustable)

OVERLOAD RANGE

- 115%	3 min.
- 135%	10 s.
- 150%	1 s.

PERFORMANCE

Performance (100% -load @ Vinput-nom)	≥ 91%
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REGULATION

V / F start and stop curve	V / F curve
Output voltage for 420V motor	0 ÷ 420 Vac ~3
Output voltage for 920V motor	0 ÷ 920 Vac ~3
Front panel adjustment potentiometer	0 ÷ 100 Hz (adjustable)

ENVIRONMENTAL CHARACTERISTICS

Protection degree	IP23
Working temperature	0°C a 40°C
Storage temperature	-15°C to 55°C
Relative humidity	15% to 95% with no condensation

WEIGHT

Dimensions (Width x Depth x Height)	2400 x 800 x 2250 mm – 110KVA
Weight*	1000 Kg / 1250 Kg / 2500 Kg (55KVA / 110KVA / 330KVA)

PROTECTIONS

Protections	<ul style="list-style-type: none"> • Output overvoltage • Output Overload / Short Circuit • Internal overtemperature
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USER INTERFACE

<ul style="list-style-type: none"> • Digital devices for measuring input and output parameters • Local Signalling: Network / Elevated train / Load / Equipment OK / Engine 420V / Motor 920V 	<ul style="list-style-type: none"> • Start / Stop Control / Change of Direction / Load / Motor Selector • Frequency setting potentiometer
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AVAILABLE OPTIONS

<ul style="list-style-type: none"> • Input PFC • Input Current Leakage Detector 	<ul style="list-style-type: none"> • Additional potential-free contact alarms: • PROFIBUS (RS-485) Communications
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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