

E84AVSCE2224SX0

Frequency Inverter 2.2 kW (3 HP), 3-Phase 400/500 V AC, IP20

RATED POWER 2.2 kW 3.0 HP Output	SUPPLY VOLTAGE 400/500 V 3-Phase AC (±0%)	OUTPUT CURRENT 5.6 A 8.4 A Peak (60s)	SYSTEM BUS CANopen Integrated STO
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1. GENERAL DESCRIPTION & APPLICATION

The Lenze 8400 StateLine C frequency inverter (Part No. 15843024) is engineered for precise speed and torque control of three-phase asynchronous motors in industrial automation. Designed for control cabinet installation, this unit delivers high operational reliability, integrated safety functionality (Safe Torque Off), and seamless network integration via native CANopen communication. Typical applications include material handling conveyors, travel drives, hoists, pumps, and processing machinery.

2. ELECTRICAL OUTPUT & MAINS SPECIFICATIONS

Electrical Output Performance (400 V AC Mains)	
Typical Motor Power	2.2 kW / 3.0 HP
Rated Output Current (I_{out})	5.6 A (at 400 V AC) / 4.8 A (at 500 V AC)
Max. Peak Output Current (I_{max})	8.4 A (150% overload for 60 seconds)
Output Voltage Range	3-Phase 0 V to U_{mains}
Output Frequency Range	0 Hz to 599 Hz
Power Power Loss (P_{loss})	75.0 W (at nominal operating point)

Mains Supply Requirements (X100 Terminal)	
Rated Mains Voltage (U_{AC})	3/PE AC 400 V / 500 V AC
Permissible Mains Voltage Range	320 V to 550 V AC (45 Hz to 65 Hz)
Rated Mains Current (Without Choke)	7.0 A
Rated Mains Current (With Mains Choke)	5.5 A
Short-Circuit Current Rating (SCCR)	5 kA

3. REGULATORY & CUSTOMS DATA

Identification & Codes		Compliance & Certifications
Material No. (MPN)	15843024	
EAN-13 / GTIN	4051088019313	
HS Code	8504.40 (Static Converters)	
TARIC Code	8504 40 90 90	
		CE Mark: Low Voltage & EMC Directives UL Listing: UL 508C / cULus Standard Safety Standard: EN ISO 13849-1 (SIL 3, PL e) Environmental: RoHS Compliant, REACH Origin: Made in Germany (DE)

4. CONTROL FEATURES & FUNCTIONAL SAFETY

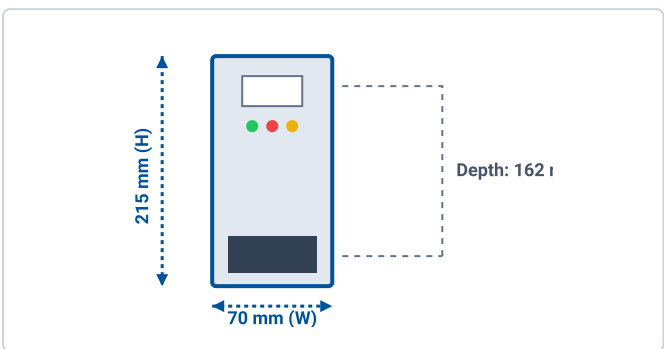
Control Modes & Functions

- **Motor Control:** V/f characteristic (linear/square-law), Sensorless Vector Control (SLVC).
- **Braking Operation:** Integrated Brake Chopper for dynamic braking with external resistor.
- **Logic Functions:** Built-in basic logic functions, comparator, and ramp generator.
- **Memory Module:** Replaceable memory chip for easy device swapping without software re-commissioning.

Integrated Safety (STO)

- **Safety Function:** Safe Torque Off (STO) to prevent unexpected motor start.
- **Safety Level:** Performance Level e (PL e) according to EN ISO 13849-1.
- **Safety Integrity:** SIL 3 according to IEC 61508 / EN 62061.
- **Connections:** Dedicated terminal connections for safety relay loop.

5. PHYSICAL DIMENSIONS & MOUNTING



Mechanical Parameters

Frame Size	Size 2
Height (H)	215 mm (8.46 in)
Width (W)	70 mm (2.76 in)
Depth (D)	162 mm (6.38 in)
Unit Weight	2.48 kg (5.47 lbs)
Enclosure Protection	IP20 / NEMA Type 1
Mounting Clearances	Top / Bottom: ≥ 100 mm Sides: 0 mm (dense mounting)

6. CONTROL TERMINALS & INTERFACES

Terminal Designations & Control Allocation

- X100** Mains Connection: 3-phase 400/500 V AC power input (L1, L2, L3, PE).
- X105** Motor & Brake Chopper Connection: U, V, W, PE, +UG, -UG, Rb1, Rb2.
- X1** CANopen System Bus: Sub-D connector or screw terminal block for network loop.
- X3** Digital & Analog Control I/O: 4–6 Configurable Inputs, 2 Outputs, 2 Analog Inputs (0–10V / 4–20mA), 1 Analog Output, 1 Relay Contact.
- X10** Safe Torque Off (STO): Dedicated dual-channel safety input terminals.

7. ENVIRONMENTAL & OPERATING CONDITIONS

Ambient & Environmental Conditions	
Operating Temperature	-10 °C to +55 °C (Derating: 2.5% per °C above +45 °C)
Storage Temperature	-25 °C to +60 °C
Permissible Humidity	< 95% (relative humidity, non-condensing)
Installation Altitude	0 to 1000 m amsl without derating (max. 4000 m with 5% derating per 1000 m)
Vibration Resistance	Class 3M3 according to EN 60721-3-3