

# Elevator open-loop Inverter

## LT 1000H Elevator Inverter

**Model: LT 1000H**



The **LT 1000H** Elevator Inverter is a dedicated high-performance elevator drive engineered for smooth, precise, and reliable elevator operation, combining advanced motor control with elevator-specific functions. It delivers high-performance SVC control, precise speed regulation, pre-torque and weighing compensation, helping achieve smooth starts, accurate stopping, and improved passenger comfort. Designed with comprehensive elevator protection, inspection, multi-speed, brake and contactor control, the **LT 1000H** supports reliable operation across a wide range of elevator applications. RS-485/Modbus communication, flexible I/O, parameter management and battery-driven emergency operation provide convenient integration, commissioning and rescue operation.

## Key Features

### 1. Advanced Elevator Control

V/F control for smooth, stable, and reliable elevator operation.

### 2. Precision Speed & Torque Control

Optimized acceleration, deceleration, speed regulation, and motor torque control for smooth performance.

### 3. Pre-Torque & Weighing Compensation

Improves starting performance, minimizes shock during direction changes, and enhances ride comfort.

### 4. Comprehensive Protection

Over-speed, over/under-voltage, overload, motor over-temperature, phase-loss, short-circuit, and other protection functions.

### 5. Emergency Rescue Operation

Battery/UPS-driven operation enables elevator rescue movement during power failure.

### 6. Robust & Reliable Design

Integrated lightning surge over-current protection and dedicated elevator control functions.

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### 7. Flexible Installation & Integration

Supports application-specific control and communication functions for convenient elevator system integration.

### 8. No capacitor or varistor on the output side

Since the **LT 1000H** output is PWM wave, it is strictly forbidden to connect a capacitor for improving the power factor or a varistor for lightning protection to the output terminals so as to avoid **LT 1000H** fault trip or component damage.

### 9. Contactors and circuit breakers connected to the output of LT 1000H

If a circuit breaker or contactor needs to be connected between the **LT 1000H** and the motor, be sure to operate these circuit breakers or contactor when the **LT 1000H** has no output, so as to avoid any damage to the **LT 1000H**.

### 10. Running voltage

The **LT 1000H** is prohibited from being used beyond the specified range of running voltage. If needed, please use a suitable voltage regulation device to change the voltage.

### 11. Capacitor energy storage

When the AC power supply is cut off, the capacitor of the **LT 1000H** sustains deadly power for a while. So to disassemble **LT 1000H** that is powered, please cut off the AC power supply for more than 10 minutes, confirm the internal charge indicator is off and the voltage between (+) and (-) of the main circuit terminals is below 36V. Generally, the internal circuit enables the capacitor to discharge. However, the discharge may fail in some exceptions. In these cases, users need to consult Centron or our regional distributor.

### 12. Change three-phase input to single-phase input

For a three-phase input controller, users should not change it to be single-phase input. To use a single-phase power supply, disable the input phase-loss protection function. And the bus-voltage and current ripple will increase, which not only influences the life of electrolytic capacitors but also deteriorates the performance of the controller. In that case, the controller must be derated and should be 60% within the rated value of the controller.

### 13. Lightning surge protection

**LT 1000H** internal design has a lightning surge over-current protection circuit, and has certain self-protection capacity against lightning.

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### Rated Value

| Inverter model                                               | Motor (kW) | Rated capacity (kVA) | Rated input current (A) | Rated output current (A) | Product Dimensions | Product Weight |
|--------------------------------------------------------------|------------|----------------------|-------------------------|--------------------------|--------------------|----------------|
| Single-phase / Three-phase power supply: 200 - 240V, 50/60Hz |            |                      |                         |                          |                    |                |
| LT1000H-2R2S2B                                               | 2.2        | 3.8                  | 24.1 / 12 (1)           | 10                       | 240*170*125mm      | 2.7 kg         |
| LT1000H-3R7S2B                                               | 3.7        | 5.9                  | 40 / 19 (1)             | 17                       | 240*170*125mm      | 2.7 kg         |
| LT1000H-5R5S2B                                               | 5.5        | 8.5                  | 60 / 28 (1)             | 25                       | 350*205*190mm      | 6.5 kg         |
| Three-phase power supply: 380 - 460V, 50/60Hz                |            |                      |                         |                          |                    |                |
| LT1000H-2R2T2B                                               | 2.2        | 3.4                  | 7.3                     | 5.1                      | 240*170*125mm      | 2.7 kg         |
| LT1000H-3R7T4B                                               | 3.7        | 5.9                  | 11.9                    | 10                       | 240*170*125mm      | 2.7 kg         |
| LT1000H-5R5T4B                                               | 5.5        | 8.5                  | 15                      | 14                       | 240*170*125mm      | 2.7 kg         |
| LT1000H-7R5T4B                                               | 7.5        | 11                   | 19                      | 18                       | 240*170*125mm      | 2.7 kg         |
| LT1000H-011T4B                                               | 11         | 16                   | 28                      | 26                       | 350*205*190mm      | 6.5 kg         |
| LT1000H-015T4B                                               | 15         | 21                   | 35                      | 33                       | 350*205*190mm      | 6.5 kg         |
| LT1000H-018T4B                                               | 18.5       | 24                   | 39                      | 38                       | 360*210*195mm      | 8.0 kg         |
| LT1000H-022T4B                                               | 22         | 30                   | 47                      | 46                       | 360*210*195mm      | 8.0 kg         |
| LT1000H-030T4B                                               | 30         | 39                   | 62                      | 61                       | 360*210*195mm      | 8.0 kg         |

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### Technical Data

#### Electrical

|                  |                                                                                                           |
|------------------|-----------------------------------------------------------------------------------------------------------|
| Input voltage    | Single-phase: 200 - 240V; Three-phase: 380 - 460V; Fluctuating within $\pm 10\%$ , unbalance rate $< 3\%$ |
| Input frequency  | 50/60Hz $\pm 5\%$                                                                                         |
| Output voltage   | 0 - input voltage                                                                                         |
| Output frequency | 0 - 100.00 Hz                                                                                             |

#### Performance

|                  |                                                                                                                                                       |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Control mode     | V/f, SVC                                                                                                                                              |
| Max. current     | 150% rated output current for 2 minutes; 180% rated output current for 10 seconds                                                                     |
| Running command  | Keypad; Terminals                                                                                                                                     |
| Speed setting    | Digital; Analogue                                                                                                                                     |
| Speed resolution | Digital setting: 0.01 Hz; Analogue setting: 0.1% $\times$ max frequency                                                                               |
| SVC              | Speed control accuracy: $\pm 0.5\%$ ; Speed control range: 1:100; Torque control response: $< 200\text{ms}$ ; Start torque: 180% rated torque / 0.5Hz |

#### Characteristic Functions

|                                        |                                                                                                     |
|----------------------------------------|-----------------------------------------------------------------------------------------------------|
| Parameter upload and download function | Achieve parameter uploading and downloading                                                         |
| I/O interface                          | Programmable input interface: up to 34 functions; Programmable output interface: up to 19 functions |
| Communication protocol                 | Built-in MODBUS communication protocol                                                              |

#### Protection Functions

|                                              |                                                                    |
|----------------------------------------------|--------------------------------------------------------------------|
| Auto-inspection                              | Safety inspection for peripheral devices provided when power is on |
| Over-speed protection                        | Elevator over-speed protection provided                            |
| Speed deviation protection                   | Speed deviation detection protection provided                      |
| Up / Down forced speed switch function       | Avoids climbing elevator or plunging elevator                      |
| Input / Output voltage phase loss protection | Input / Output voltage phase loss auto-detect and alarm function   |
| Motor temperature detection                  | Real-time detection for the motor temperature                      |
| Output GND short-circuit protection          | Enabled                                                            |
| Output inter-phase short-circuit protection  | Enabled                                                            |

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### Input / Output

|                      |                                                                |
|----------------------|----------------------------------------------------------------|
| Digital power supply | +24V, max. current 200mA                                       |
| Digital input        | DI1 – DI7                                                      |
| Digital output       | DO1, DO2                                                       |
| Relay output         | R1A/R1B/R1C; R2A/R2B/R2C; Contact rating 250VAC/3A or 30VDC/1A |

### Communication

|                   |                            |
|-------------------|----------------------------|
| SCI communication | RS-485 interface; Terminal |
|-------------------|----------------------------|

### Keypad

|                |                                                                                                        |
|----------------|--------------------------------------------------------------------------------------------------------|
| LED display    | Five LEDs display; Setting function parameters, checking status parameters, checking fault codes, etc. |
| Indicators     | 5 unit indicators, 5 status indicators                                                                 |
| Parameter copy | Achieve quick parameter copy                                                                           |

### Environment

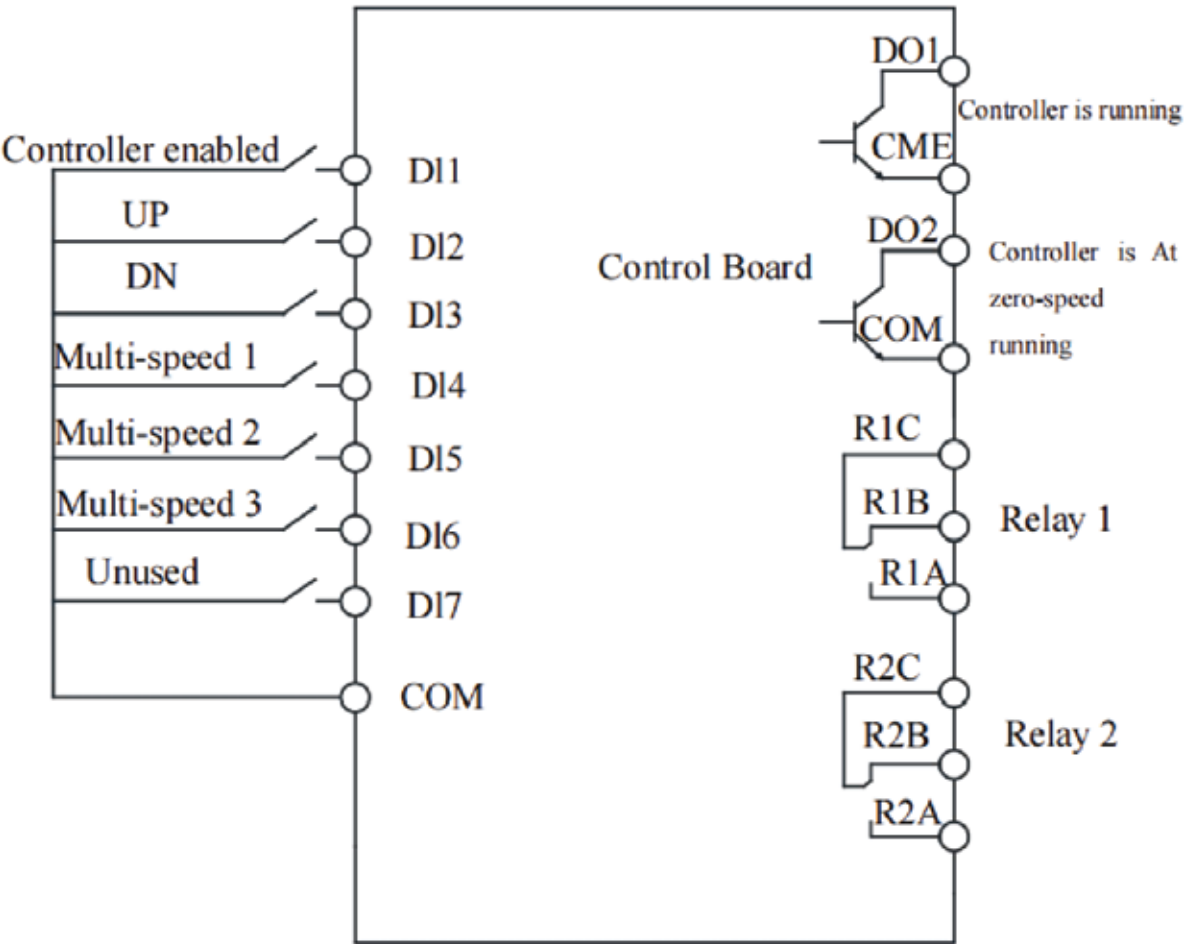
|                     |                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Running temperature | -10 - +40°C, max. 50°C, air temperature fluctuation < 0.5°C/min. Derating: 2% per °C above 40°C. Max allowed temperature: 50°C |
| Storage temperature | -40 - +70°C                                                                                                                    |
| Location for use    | Indoor, preventing direct sunlight, no dust, corrosive, flammable gases, oil mist, water vapor, dripping, or salt, etc.        |
| Altitude            | Less than 1000 meters, otherwise derating should be used                                                                       |
| Humidity            | Less than 95% RH, non-condensing                                                                                               |
| Oscillation         | Less than 5.9m/s <sup>2</sup> (0.6g)                                                                                           |
| Protection class    | IP20                                                                                                                           |
| Pollution level     | Level 2 (Dry, non-conducting dust pollution)                                                                                   |

### Accessories

|              |                                                                                              |
|--------------|----------------------------------------------------------------------------------------------|
| About keypad | Mounting base to keypad [HD-KMB]; 1m/2m/3m/6m extension cable to keypad [HD-CAB-1M/2M/3M/6M] |
| Power units  | Power regenerative unit [HDRU]                                                               |

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wiring



**CONTACT US**

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