

# New LDHD3 High Performance Servo Drive

## Product introduction

The LDHD3 series is a new generation of flagship servo drives, positioned to deliver both high cost-effectiveness and high performance. It is specially designed for lithium battery applications to help achieve standardized mass production. It comes standard with EtherCAT bus, STO, Frequency-Division Output, and high-speed probe. It is compatible with linear motors, DD motors, and rotary servo motors. The models are streamlined to 6A and 10A, covering applications within 10A. It supports one-click auto tuning and online auto tuning for efficient and worry-free debugging. Equipped with advanced motion control algorithms, it achieves high-speed and high-precision position control, fundamentally solving issues like vibration and running deviation, ensuring stable equipment operation, and effectively improving operational efficiency and processing accuracy.

## Product features



### High performance

Current loop bandwidth: 5.0 KHz  
Speed loop bandwidth: 3.0 KHz



### Supported motor types

Linear motors, DD motors,  
rotary servo motors



### Multiple functions

EtherCAT bus, STO,  
position-based frequency division,  
high-speed probe



### Supported multiple encoder types

Incremental AB, BissC,  
Tamagawa



### Simple and easy to use

One-click auto tuning and online auto tuning, USB Type-C debugging interface  
Servostudio debugging software, Internal regenerative resistor, hardware dynamic brake



### Rich advanced algorithms

Full-frequency band (high, medium and low) vibration suppression, model following control (MFC), disturbance suppression  
Friction compensation, gravity compensation, gain switching, adaptive notch filter



LDHD3-0062AEB



LDHD3-0102AEB

# LDHD3-0062AEB

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## ① LDHD3 servo drive - HD series

|       |                                   |
|-------|-----------------------------------|
| LDHD3 | 3rd generation linear servo drive |
|-------|-----------------------------------|

## ② Current rating

|     |                                |
|-----|--------------------------------|
| 006 | Continuous 6Arms, peak 18Arms  |
| 010 | Continuous 10Arms, peak 30Arms |

## ③ Input power supply voltage

|     |                                   |
|-----|-----------------------------------|
| 2A  | 1ph 200V-240V, -10%~+10%, 50/60Hz |
| 4D* | 3ph 380V-440V, -10%~+10%, 50/60Hz |

## ④ Communication interface

|    |              |
|----|--------------|
| EB | EtherCAT、USB |
|----|--------------|

\* Coming soon

## Electrical specifications

| Specification                            |                                           | LDHD3-0062AEB        | LDHD3-0102AEB        |
|------------------------------------------|-------------------------------------------|----------------------|----------------------|
| Ratings                                  |                                           |                      |                      |
| Power circuit inputs L1, L2, L3、         | Rated voltage (L-N) $\pm 10\%$            | 220                  | 220                  |
|                                          | Line frequency (Hz)                       | 50/60                | 50/60                |
|                                          | 220 VAC                                   | 1ph                  | 1ph/3ph              |
|                                          | Continuous current (1ph/3ph, Arms)        | 9                    | 14/8                 |
|                                          | Line fuse (FRN-R, LPN, or equivalent) (A) | 16                   | 20                   |
| Drive output                             | Continuous output current (Arms)          | 6                    | 10                   |
|                                          | Continuous output current (Apeak)         | 8.48                 | 14.14                |
|                                          | Peak output current (Arms) for 2s         | 18                   | 30                   |
|                                          | Peak output current (Apeak) for 2s        | 25.45                | 42.42                |
|                                          | kVA, 220 VAC                              | 1.5                  | 2.2                  |
|                                          | PWM frequency (kHz)                       | 16                   | 8                    |
| Hardware                                 |                                           |                      |                      |
| Connection specification                 | PE screw/torque                           | M4/1.35 Nm           | M4/1.35 Nm           |
| Cable specification                      | Control circuit (<3 m) (AWG)              | 24-28                | 24-28                |
|                                          | Main circuit motor line (AWG)             | 16                   | 14                   |
|                                          | Main circuit AC input (AWG)               | 16                   | 14                   |
| Clearance specification                  | Installation                              | Installation of Book | Installation of Book |
|                                          | Left/right (mm)                           | 10                   | 10                   |
|                                          | Top/bottom (mm)                           | 50                   | 50                   |
| Voltage protection                       | Undervoltage protection value (VDC)       | 180                  | 180                  |
|                                          | Overvoltage protection value (VDC)        | 400                  | 400                  |
| Fan                                      | Fan activation conditions                 | Enable               | Enable               |
| External regenerative resistor<br>(P. D) | Min resistance ( $\Omega$ )               | 40                   | 20                   |
|                                          | Max current (A)                           | 10                   | 30                   |
|                                          | Internal bus capacitance ( $\mu F$ )      | 940                  | 2040                 |
|                                          | regenerative circuit off voltage (VDC)    | 380                  | 380                  |
|                                          | regenerative circuit on voltage (VDC)     | 390                  | 390                  |

### Servotronix Motion Control Ltd.

Address: 13B, Block B, Kelu Building, No. 99 Baoshen Road, Nanshan District, Shenzhen, Guangdong, China  
Tel: 400-111-8669  
Fax: +86 0755 8662 6665  
E-mail: servotronix@servotronix.cn  
Website: www.servotronix.cn



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