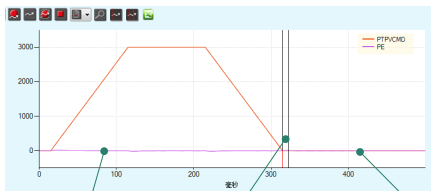




CDHD2S EC

High-performance Servo Drive

CDHD2S boasts the most advanced control algorithms, and is greatly improved in performance based on the CDHD2 servo drive to improve ease of use. It features a wide range of comprehensive functions, making it ideal for high-precision and high-efficiency devices.



Minimum position error Setting time of almost zero No oscillations at stand-still

Features

- High-performance control of motor
- Multiple feedback interface
- Secondary feedback interface for high-precision closed-loop control
- Position comparison output module
- 1D error correction and compensation table
- Advanced nonlinear control algorithms to minimize position error and shorten positioning time to about zero
- High power density
- Frequency domain analysis available to effectively identify system resonance points and automatically design optimal parameters
- STO (Safe Torque Off) function
- ServoStudio™ 2.0 GUI adopted to debugging, with comprehensive integrated parameters

A special solution for linear motors to optimize performance



HD control loop for optimizing servo control

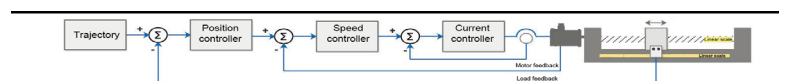
An adaptive nonlinear control algorithm has been developed to enhance servo performance in high-precision motion applications. This proprietary algorithm utilizes a parallel configuration where the position and speed branches operate on the same level and are executed within the same sampling period. In addition, various multiple gain parameters are incorporated into this algorithm and automatically optimized to achieve a high gain and stability. Consequently, the position error and setting time are minimized to levels far superior to other control algorithms.

High-bandwidth current loop with industry-leading frequency response

The current loop design delivers an outstanding frequency response ranging from 3 kHz to 5 kHz. High sampling rates and flexible filtering options guarantee a quicker response, significantly enhanced precision, and increased throughput for the device.

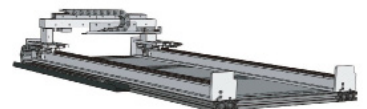
Dual closed-loop control to eliminate mechanical errors and enhance system stability

The dual-loop control algorithm for position and speed enhances the overall performance of the motion system. CDHD2S supports both linear and rotary secondary encoders, including incremental and absolute types. Dual closed-loop control is a core feature of the CDHD2S, eliminating the need for additional add-on options.



Gantry mode

The CDHD2S servo drive is built-in with a support for rigid and flexible gantry mechanical systems. The gantry system synchronizes two Y axes through two CDHD2S drives working in series, and through high-speed communication, generates and controls movement along Y axis. Each of the two Y axes can carry a linear motor or a rotary motor.



ServoStudio™ Wizard for simple commissioning



- Step-by-step guidance for motor setup, application configuration, and commissioning process
- Innovative and self-explanatory user interface
- Excellent teaching results for novice users in minutes
- Real-time data recording and plotting
- Easy integration of servo shaft
- Plug-and-play motor library

Power rating and dimensions

Model	Input Voltage (VAC)	Main Circuit Input Power Supply	Continuous Current (Arms)	Peak Current (Arms)	Width (mm)	Height (mm)	Depth (mm)
CDHD2S-0031DEC2	Power supply 20~90VDC, control power supply 220V single-phase	/	3	9	48.2	150	152.2
CDHD2S-1D52AEC2/AP1	220	1ph	1.5	4.5	48.2	150	152.2
CDHD2S-0032AEC2/AP1	220	1ph	3	9	48.2	150	152.2
CDHD2S-4D52AEC2/AP1	220	1ph/3ph	4.5	18	53.2	150	161.1
CDHD2S-0062AEC2/AP1	220	1ph/3ph	6	18	53.2	150	161.1
CDHD2S-0082AEC2/AP1	220	1ph/3ph	8	31.8	60.3	170.2	181.1
CDHD2S-0102AEC2/AP1	220	1ph/3ph	10	31.8	60.3	170.2	181.1
CDHD2S-0132AEC2/AP1	220	3ph	13	31.8	60.3	170.2	181.1
CDHD2S-0034DEC2	380	3ph	3	9	110	162.8	193.1
CDHD2S-0064DEC2	380	3ph	6	18	110	162.8	193.1
CDHD2S-0124DEC2	380	3ph	12	24	116.4	234.2	193.5
CDHD2S-0244DEC2	380	3ph	24	72	163.3	353	209.3
CDHD2S-0304DEC2	380	3ph	30	90	163.3	353	209.3
CDHD2S-0404DEC2	380	3ph	40	120	179.3	351.5	209.3
CDHD2S-0604DEC2	380	3ph	60	180	330	610	310

Communication:

EtherCAT®, USB, RS232, Daisy Chain

Motor feedback:

sensAR absolute encoder, incremental encoder, Hall sensor, sine encoder (e.g. EnDat®, HIPERFACE®), SSI encoder (e.g. EnDat®, Nikon®, Tamagawa®), motor temperature sensor

Input/output:

Digital: 11 x inputs, 8 x outputs, Analog: 2x outputs or 1x output, pulse & direction, equivalent encoder output, secondary feedback.

(*Some features are not available on all models)

Ordering information

CDHD2S - 006 2A EC2 - RO 000

① ② ③ ④ ⑤ ⑥



① CDHD2S Servo Drive - HD Series

② Power Rating

	120/240 VAC			400/480 VAC			20/90 VDC	
	Continuous [A rms]	Peak [A rms]		Continuous [A rms]	Peak [A rms]		Continuous [A rms]	Peak [A rms]
1D5	1.5	4.5	003	3	9	003	3	9
003	3	9	006	6	18			
4D5	4.5	18	012	12	24			
006	6	18	024	24	72			
008	8	31.8	030	30	90			
010	10	31.8	040	40	120			
013	13	31.8	060	60	180			

CDHD2S-060 voltage: 380VAC/460VAC

④ Communication Interface

	Communication Interface	Analog Input
ECx	EtherCAT, analog voltage, pulse, USB, RS232	1 or 2*
AP1	Analog voltage, pulse, RS232	1
	x= 1: One analog input, 16-bit x= 2: Two analog inputs	*Standard configuration

③ Input Power Supply

1D	Power board input 20-90 VDC Control panel input single-phase 220VAC
2A	Medium-voltage input power supply Single phase 120 L-N VAC +10%-15% 50/60 HZ Single-phase 240 L-N VAC+10%-15% 50/60 HZ Three-phase 120-240 L-L VAC+10%-15% 50/60 HZ
4D	AC input power supply Three-phase 400 L-L VAC +10%-15% 50/60 HZ Three-phase 480 L-L VAC+10%-15% 50/60 HZ Three-phase 460 L-L VAC+10%-15% 50/60 HZ 24 VDC control board power supply

⑤ Motor Type

[blank]	Rotary servo motor and linear motor
RO	Rotary servo motor only

⑥ Special Standards

[blank]	Standard
---------	----------

Servotronics Motion Technology Development (Shenzhen) Co., Ltd.

Address: 13B, Building B, Kelu Building, No. 99 Baoshen Road, Nanshan District, Shenzhen, Guangdong Province
Tel.: 400-111-8669
Fax: +86 0755 86626665
Email: servotronics@midea.com
Website: www.servotronics.cn

