



## High-Performance Servo Drives

Hardware and software design innovations deliver superior servo performance, high power density, simple commissioning, and extensive versatility in a cost-effective package.



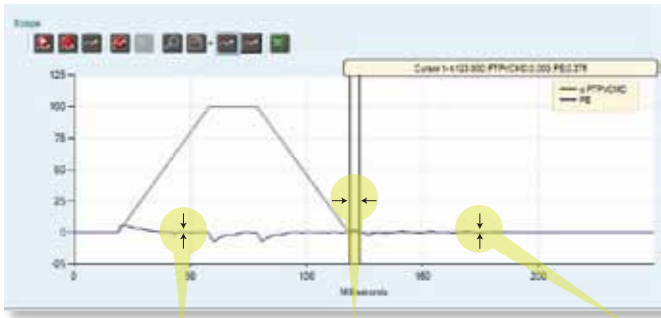
### New current loop design achieves an industry-leading frequency response of 3-5 kHz



High sampling rates and flexible filtering options provide a faster response, and ensure maximum machine accuracy and throughput.

### Advanced autotuning minimizes position error and settling time to almost zero

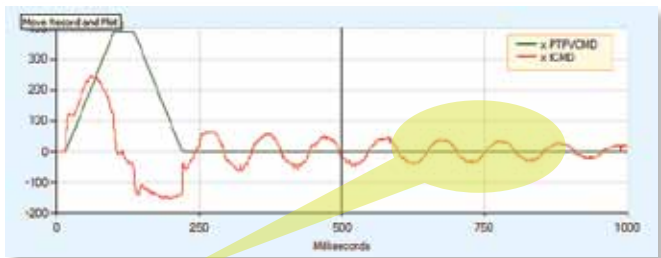
Engineering experience and expertise has been implemented in a sophisticated autotuning function that performs optimal configurations for a difference making performance.



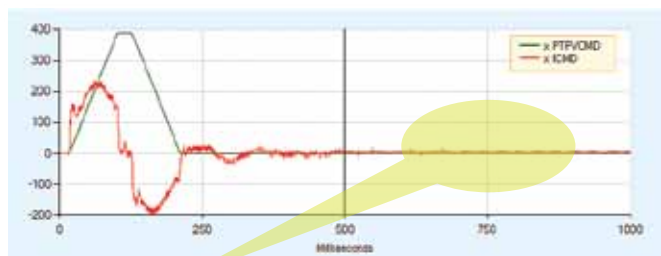
Minimum position error      Settling time of almost zero      No oscillations at stand-still

### Innovative anti-vibration control algorithm eliminates mechanical resonance

An active non-linear algorithm eliminates vibration in highly flexible resonant systems. Commissioning is easy, using just a few gain parameters.



Without anti-vibe control



With anti-vibe control

### Key benefits

- High performance control of all synchronous servo motors
- Interfaces multiple feedback devices
- I/O programming for any drive functionality
- Advanced control algorithms achieve maximum machine accuracy and throughput
- High power density in a small footprint
- Safe Torque Off (STO)
- Simple commissioning using ServoStudio™ GUI along with comprehensive parameterization options for optimal configuration
- Fast firmware modifications to meet particular application needs
- CE and UL compliance
- Competitive price
- 30-month warranty

### Offered with matched servo motors for optimal performance



#### PRO/PRO2 Series

50 W – 7.5 kW  
0.16 Nm – 48 Nm

#### MT Series

50 W - 4.5 kW  
0.16 Nm - 28 Nm

## ServoStudio™ wizard for simple commissioning in 4 steps

- Step-by-step guidance through the setup and tuning process
- Excellent results for novice users within minutes
- Real-time data recording and plotting
- Easy integration of servo axes
- Plug-and-play motor and feedback wiring



## Rating and dimensions

Model	Input Voltage (VAC)	Input Power Main Circuit	Continuous Current (A <sub>rms</sub> )	Peak Current (A <sub>rms</sub> )	Width (mm)	Height (mm)	Depth (mm)
CDHD-1D5	120/240	1 Phase	1.5	4.5	43.2	150	143.7
CDHD-003	120/240	1 Phase	3	9	43.2	150	143.7
CDHD-4D5	120/240	1/3 Phase	4.5	18	54.7	150	167.4
CDHD-006	120/240	1/3 Phase	6	18	54.7	150	167.4
CDHD-008	120/240	1/3 Phase	8	28	61.8	170	181.6
CDHD-010	120/240	1/3 Phase	10	28	61.8	170	181.6
CDHD-013	120/240	3 Phase	13	28	61.8	170	181.6
CDHD-020	120/240	3 Phase	20	48	117.4	233.8	193.5
CDHD-024	120/240	3 Phase	24	48	117.4	233.8	193.5
CDHD-033 <i>i</i>	120/240	3 Phase	33	88	155	305	200
CDHD-044 <i>i</i>	120/240	3 Phase	44	120	155	305	200
CDHD-055 <i>i</i>	120/240	3 Phase	55	138	155	305	200
CDHD-003	400/480	3 Phase	3	9	110	162.8	193.1
CDHD-006	400/480	3 Phase	6	18	110	162.8	193.1
CDHD-012	400/480	3 Phase	12	24	117.4	234	193.5
CDHD-024	400/480	3 Phase	24	72	149.1	353	200.9
CDHD-030	400/480	3 Phase	30	90	149.1	353	200.9

### Communication:

CANopen®\*  
EtherCAT®\*  
USB\*  
RS232  
Daisy Chain  
PWM\*\*

### Motor feedback:

Incremental Encoder  
Hall Sensors  
Resolver\*  
Sine Encoder (e.g., EnDat®, HIPERFACE®)  
sensAR absolute encoder  
SSI Encoder (e.g., EnDat®, Nikon®, Tamagawa®)  
Motor Temperature

### I/Os:\*

Digital: 11 x Input, 6 x Output  
Analog: 1 x Input or 2 x Input\*, 1 x Output  
Pulse & Direction  
Equivalent Encoder Output  
Secondary Feedback  
Fault Output Relay

\*Some features are not available on all models. |\*\*Power block only, without motor feedback and I/Os

## Ordering information

CDHD - 006 2A AP1 - ST

CDHD Servo Drive – HD Series

Rating		
	120/240 VAC	
	Cont [A rms]	Peak [A rms]
1D5	1.5	4.5
003	3	9
4D5	4.5	18
006	6	18
008	8	28
010	10	28
013	13	28
020	20	48
024	24	48/72
033	33	88
044	44	120
055	55	138
	400/480 VAC	
	Cont [A rms]	Peak [A rms]
003	3	9
006	6	18
012	12	24
024	24	72
030	30	90

Motor Type and Safe Torque Off (STO) Function	Functional Safety Certified*
[blank] Rotary and linear servo motors.	No
-RO Rotary servo motors. Available in Asia market only.	No
-ST Rotary and linear servo motors. Available for 120/240 VAC drives: models 1D5, 003, 4D5, 006, 008, 010, 013.	Yes
-RT Rotary servo motors. Available for 120/240 VAC drives: models 1D5, 003, 4D5, 006, 008, 010, 013. Available in Asia market only.	Yes

\* Functional safety certification option not available for following:  
120/240 VAC drives: models 020, 024  
400/480 VAC drives: all models

Communication Interfaces	Analog Inputs
PB0 PWM Power Block	none
APx Analog Voltage, Pulse Train Ref, RS232	1* or 2
AFx Analog Voltage, Pulse Train Ref, CANopen, USB, RS232	1* or 2
ECx EtherCAT, USB, RS232	1 or 2*
EB2 EtherCAT, USB.	2

\* Standard configuration  
x = 1: One analog input, 16 bit  
x = 2: Two analog inputs, 14 bit each

AC and Controller Input Power Supply
2A Input Single Phase 120 L-L VAC +10% -15% 50/60 Hz Input Single Phase 240 L-L VAC +10% -15% 50/60 Hz Input Three Phase 120-240 L-L VAC +10% -15% 50/60 Hz
4D AC Input Power Supply: - Input Three Phase 400 L-L VAC +10% -15% 50/60 Hz - Input Three Phase 480 L-L VAC +10% -15% 50/60 Hz 24 VDC input for control board power supply



**SERVOTRONIX**  
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