**Product Overview**

- Auto Phasing
- Auto Tuning
- Auto Gain Switch

- Current Filter
- Oscilloscope
- S-curve Profile

- Anti-Cogging
- Scripting

- Auto Tuning
- Auto Phasing
- Filter
- Response Bode plot
- Time response plot

**Wizard**

Step by step setup interface

**System status LEDs**

5 Digit 7-Segment display

24VDC & 3Ø220VAC power connector

4x front panel key

Communication interface

2x ±10V Analog Input

2x 5V Digital Input

2x 500mA Digital Output (Open-collector)

Motor power connector

External Breaking resistor

Motor power connector

External Pulse Command Input (A/B, P/D, CW/CCW)

Buffered output for Pulse Command or Motor Encoder

10x 5V Digital Input

Motor Encoder Input

5x 5V Digital Input

External Pulse Command Input

5x 5V Digital Input

Motor Encoder Input
Auto tune

- Auto tuning
- Visible control loop
- User-friendly interface
- Highly efficient tuning algorithm
- Short tuning time
- Can tune for stable or fast system response

Auto tune(position)

- Fast control loop up to 5 kHz
- Can test 3 groups of gain set
- Feedforward signal path
- Easy to fine tune
- Input response with profile position

Auto phasing

- Auto phasing
- Hall sensor or force commutation
- Step by step phasing progress prompt

Gain switch

- 3 groups of position and velocity gains can be switched
- Gain-switch rule: Demand, Feedback, Error, Target, and Digital input
- Easy to fine tune for different application

Auto tune(velocity)

- Fast control loop up to 10 kHz
- Can test 3 groups of gain set
- Easy to fine tune
- Feedforward signal path
- Response Bode plot
- Automatic label bandwidth
- Input response test with step/sine/triangle
- 3 filters on force output

Gain switch Test

- Distance 0.6m
- Velocity 3 m/s
- Acceleration 3g
- Deceleration 3g

Performance without Gain-switch
Yellow: velocity profile
Red: Position Error [± 35 count]
Performance with Gain-switch
Yellow: velocity profile
Red: Position Error [+ 11 count]

Scripting
- Scope provides a real-time monitor of driver information.
- User could inspect motion details without an oscilloscope.

Scope

Homing
- Setup interface provides 35 kinds of homing methods.
- Also, the vivid animations explain how a homing method is performed.

Specification

<table>
<thead>
<tr>
<th>Operating voltage</th>
<th>AC110 V~220 V</th>
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</thead>
<tbody>
<tr>
<td>Maximum peak power</td>
<td>3 kW</td>
</tr>
<tr>
<td>Maximum peak current</td>
<td>50 A</td>
</tr>
<tr>
<td>Maximum continuous current</td>
<td>8 A</td>
</tr>
<tr>
<td>Communication</td>
<td>RS232, CAN</td>
</tr>
<tr>
<td>Size</td>
<td>202 mm x 76.5 mm x 108 mm</td>
</tr>
<tr>
<td>Motor type</td>
<td>Linear Servo Motor, Rotary Servo Motor</td>
</tr>
<tr>
<td>Encoder feedback</td>
<td>A/B incremental</td>
</tr>
<tr>
<td>Auxiliary command</td>
<td>Position, Current/Velocity command</td>
</tr>
<tr>
<td>AutoTune</td>
<td>Phase, Current Loop, Velocity Loop, Position Loop, Filter, Gain Scheduling</td>
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<tr>
<td>Find phase</td>
<td>Hall Sensor, Force Commutation</td>
</tr>
<tr>
<td>Control panel</td>
<td>Display, 5 Digit 7 Segment display, Input, 4 Keys</td>
</tr>
<tr>
<td>Protection</td>
<td>Over Voltage, Over Current, Acceleration, Motor Stuck, Software position limit, etc.</td>
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</tbody>
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