Founded in April 2003, Shenzhen Sine Electric Co., Ltd, a leading supplier of AC drive in China, offers a wide range of innovative, reliable, efficient and high-quality products, solutions and services in industrial device manufacturing.

SINEE owns more than ten patents and software copyrights, and all products are registered, own the proprietary intellectual property rights and CE approval.

SINEE offers a wide range of reliable products, efficient services and custom-tailored solutions for specific industry customers including cable, crane, metal processing, extruder, textile and food machinery, refrigerator, ball mill, escalator, water treatment, civil engineering, mining, petrochemical, construction, and etc.

SINEE is always open for more opportunities to set up business partnership with distributors worldwide and builds win-win channels for those who are willing to grow with SINEE.

Product Profile

Power Ratings
- AC input, 3-phase
- 380V, 0.75kW~400kW

Product Orientation
- General Purpose
- 1. High performance
- 2. High reliability

Target Market
- Open-loop Vector Control
- 1. High torque at low frequency
- 2. Quick acceleration/deceleration
- 3. High spindle torque accuracy

Highlights

Performing
- Acceleration/Deceleration at 0.1S
  - Acceleration/deceleration at 0.1S with small load, AOS, automatic current limiting, ensuring optimized control
- Strong Load Capacity Even at Low Frequency
  - SVC/SVC in 50% starting torque
- Non-stop at Instantaneous Power Failure
  - Non-stop at instantaneous power grid blackout and power failure
- Waveform of Quick Acceleration/Deceleration
  - Waveform of acceleration/deceleration at 0.1S, and switching at 10Hz~100Hz quickly
- Strong Load Capacity Even at Low Frequency
  - SVC/SVC in 50% starting torque

Reliability

- IPD Management
  - Following IPD Process
  - Through Lab tests
- Continuous Operation
  - Motor load taken automatically switched to DC bus when rectifier failure
- High Control Accuracy
  - Simultaneous vector control
  - Torque control accuracy: ±7.5rpm
  - Speed control accuracy: ±0.75%

Adaptability

- Premiums engineering seeking
  - Optimized thermal design
  - High-precision adaptability

Technical Specifications

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
<th>Input Rated Voltage</th>
<th>AC input, 3-phase 380VAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Rated Voltage</td>
<td>AC output, 3-phase 380VAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input Rated Current</td>
<td>AC input, 3-phase 380VAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output Rated Current</td>
<td>AC output, 3-phase 380VAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency Control Range</td>
<td>0.00 ~ 600.00Hz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage Input</td>
<td>24V/150mA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Input</td>
<td>0<del>10V or 0</del>20mA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analog Input Terminals</td>
<td>4 analog inputs: 2 voltage inputs (0<del>10V), and 2 current inputs (0</del>20mA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analog Output Terminals</td>
<td>2 programmable analog output terminals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digital Input Terminals</td>
<td>7 programmable numeric input terminals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digital Output Terminals</td>
<td>2 programmable digital output terminals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Display</td>
<td>LED Human interactions with displays and control actuators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governor Deflection</td>
<td>1:50(V/F), 1:100(SVC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speed Control Accuracy</td>
<td>±0.2% rated synchronous speed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Torque Control Accuracy</td>
<td>5% rated torque (SVC1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start Torque</td>
<td>150%/1Hz(V/F), 150%/0.5Hz(SVC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acceleration/Deceleration at 0.1S</td>
<td>±0.5g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deceleration/acceleration at 0.1S</td>
<td>±0.5g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Redundancy</td>
<td>Redundancy with dual full size inverters</td>
<td></td>
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<td>Redundancy</td>
<td>Redundancy with dual full size inverters</td>
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</tr>
</tbody>
</table>

Environmental Conditions

- Ambient Temperature: 0~40°C, the temperature range: -30°C~+55°C, the internal cooling air temperature is decreased by 1% for every additional 1°C. 20%~90% (no condensation)
- Humidity: 30%~95%
- Vibration: ±0.5g, ±1g, ±2g (in the temperature range: 0~55°C, the vibration is increased by 1% for every additional 1°C. In the temperature range: 55~65°C, the vibration is increased by 1% for every additional 1°C)
- Installation Site: Indoor, with altitude less than 1000 meters, free from dust, corrosive gas, and etc.
**Applications**

- **Rope saw machine**
- **Veneer**
- **Main shaft of CNC Lathe**
- **Wire drawing machine**

**Overall Installation Dimensions**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>W1</th>
<th>D1</th>
<th>H1</th>
<th>H2</th>
<th>D2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EM303B-0.75G/1R1P-3B</td>
<td>140</td>
<td>161</td>
<td>220</td>
<td>250</td>
<td>310</td>
</tr>
<tr>
<td>EM303B-1.5G/2R2P-3B</td>
<td>156</td>
<td>170</td>
<td>250</td>
<td>270</td>
<td>343</td>
</tr>
<tr>
<td>EM303B-2.2G/3R0P-3B</td>
<td>209</td>
<td>235</td>
<td>335</td>
<td>353</td>
<td>497</td>
</tr>
<tr>
<td>EM303B-4.0G/5R5P-3B</td>
<td>310</td>
<td>353</td>
<td>497</td>
<td>522</td>
<td>656</td>
</tr>
<tr>
<td>EM303B-5.5G/7R5P-3B</td>
<td>353</td>
<td>390</td>
<td>550</td>
<td>586</td>
<td>807</td>
</tr>
</tbody>
</table>

**Model Numbering Scheme**

**EM 303B - 400G/505P - 3 B**

- Model Company: EM Inverter
- Model Code: EM 303B
- 3-phase 380V, 303B is an integrated model with G&P in one.
- **G**: General purpose
- **P**: Blower, water pump (Omitted if not specified)

**Power Ratings:**

- 0.75kW
- 1.5kW
- 2.2kW
- 4.0kW
- 5.5kW
- 7.5kW
- 11.0kW
- 13.2kW
- 16.0kW
- 18.5kW
- 20.0kW
- 22.0kW
- 25.0kW
- 30.0kW
- 35.5kW
- 45.0kW
- 55.0kW
- 75.0kW
- 110kW
- 132kW
- 160kW
- 185kW
- 200kW
- 220kW
- 250kW
- 280kW
- 315kW
- 355kW
- 400kW
- 450kW

**B**: Integrated Braking Unit

- **None**: No Braking Unit

**Voltage Class:**

- 1: 1-phase 220V
- 2: 3-phase 220V
- 3: 3-phase 380V

**EM303B**

A General Purpose Inverter

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**Applications**

* High torque at low frequency/high dynamic response

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**Model Company**: EM Inverter

EM Inverter Systems Co., Ltd.

Address: 1251 Shuangde Industrial Park, Qianhai B.D, Nanshan District, Shenzhen, Guangdong, China

Tel: (+86) 755-8626 7064/2695 0797
Fax: (+86) 755-8626 7216

www.sinee.hk / www.sinee.cn

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