Three-Phase Brushless DC Motor Fans

Designed for data center and storage servers, Delta’s three-phase brushless DC motor fans represent the next stage in advancement of server cooling fans. Three-phase motors provide a stable transition between slots, which allow fans to run smoothly while maintaining low vibration, high air pressure, and high energy efficiency, resulting in energy and cost savings.

Delta’s three-phase fans deliver a variety of advantages:

- High Efficiency
- Lower Rotating Vibration
- Optimized Blade Design
- Advanced FET’s /Drivers for lower start up voltage and ripple current

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Data center and server cooling fans demand high energy efficiency and low rotating vibration to achieve thermal requirements and operating performance. Delta three-phase motor brushless DC fans integrate optimized blade design and advanced electrical drives to achieve high operating efficiency (up to 40%) and low vibration.

**Powered by three-phase motors and advanced electrical drives**
Advance electrical drive technology to lower start-up noise and ripple current.

**Optimized blade design for high efficiency**
New series fans can reach up to 40% efficiency.

### The core technologies of Delta’s three-phase brushless DC fans are:

#### Enhanced Structure
- Advanced CAE Analysis in structure design

#### Three-phase Motor
- New motor shape to smooth motor switching

#### High Efficiency Blade
- Aerodynamic simulation to smooth airflow

#### Advanced Electrical Drive
- Lower start-up noise and smoothly driving

### Available Models

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Dimension (mm)</th>
<th>Operating Voltage Range (VDC)</th>
<th>Voltage (VDC)</th>
<th>Bearing Type</th>
<th>Current (A)</th>
<th>Power (W)</th>
<th>Speed (RPM)</th>
<th>Noise (dB-A)</th>
<th>Air Flow (CFM)</th>
<th>Air Pressure (in H2O)</th>
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<tbody>
<tr>
<td>GFM0412SS-DE1PB7Q</td>
<td>40x40x56</td>
<td>10.8~12.6</td>
<td>12V</td>
<td>Ball</td>
<td>1.1</td>
<td>13.2</td>
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<td>Ball</td>
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<td>Ball</td>
<td>2.4</td>
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<td>12500/11000</td>
<td>73.3</td>
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