Analog Driver
Model TB6600

Analog Technology, max. 40 VDC / 4.0 A (PEAK)

Product Description:
The TB6600 single axis drive is a low cost microstepping drive. It is suitable for driving 2-phase and 4-phase hybrid stepper motors. Not for professional applications.

Features:
- Cost-effective
- Supply voltage up to +40 VDC, Output current up to 4.0 A (PEAK)
- Output current selectable in 8 steps via DIP-switch
- Automatic idle-current reduction (in standstill mode) to reduce motor heating
- Pulse input frequency up to 20 kHz
- Input suitable for 5 V signals
- Inputs are optically isolated
- 6 selectable microstep resolutions, up to 6400 steps/rev with standard 1.8° motors
- Suitable for 2-phase and 4-phase motors
- Supports PUL/DIR mode
- Over current and overheat protection

Electrical Specifications:

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Min</th>
<th>Typ.</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output current</td>
<td>0.7</td>
<td>-</td>
<td>4.0 (3.5 RMS)</td>
<td>A</td>
</tr>
<tr>
<td>Supply voltage</td>
<td>+9</td>
<td>+36</td>
<td>+40</td>
<td>VDC</td>
</tr>
<tr>
<td>Logic signal current</td>
<td>8</td>
<td>10</td>
<td>15</td>
<td>mA</td>
</tr>
<tr>
<td>Puls input frequency</td>
<td>0</td>
<td>-</td>
<td>20 when duty cycle is 25 high / 75 low 13 when duty cycle is 50 / 50</td>
<td>kHz</td>
</tr>
<tr>
<td>Insulation resistance</td>
<td>500</td>
<td></td>
<td></td>
<td>MΩ</td>
</tr>
</tbody>
</table>

Further Specifications:

<table>
<thead>
<tr>
<th></th>
<th>200</th>
<th>6400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsteps / 1,8 °</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PUL / DIR</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>NEMA sizes</td>
<td>17</td>
<td>24</td>
</tr>
<tr>
<td>Motor type Mechatron</td>
<td>42BYGH-XXXX</td>
<td>60BYGH-XXX</td>
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</tbody>
</table>
TB6600  Stepper motor driver

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Mechanical Specifications: (Unit: mm)

Applications:
Suitable for a wide range of stepping motors of NEMA sizes 17, 23 and 24 (42x42 mm to 60x60 mm). It can be used in various kinds of machines, such as X-Y tables, engraving machines, labeling machines, laser cutters, pick-place devices, and so on. Particularly well suited for applications where low noise levels, less heat development, high speed and high precision are desired.

Typical Connection Schematic:
A typical system consists of stepper motor, stepper motor driver, power supply and controller. The following image shows a typical connection schematic:

Logic control signals which have 5 V can be connected directly;
R 1kΩ must be connected in line when control signal is 12V;
R 2kΩ must be connected in line when control signal is 24V to ensure control signal current is 8mA to 15mA.

22.01.18