## BLA2FB21/22 Technical Specification

(THIS DATA IS JUST A REFERENCE. IT IS NOT A GUARANTEED DATA.)

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Signal Voltage:</strong></td>
<td></td>
<td><strong>HIGH:</strong> min. 2.0V max. Vcc <strong>LOW:</strong> min. 0.0V max. 0.45V</td>
</tr>
<tr>
<td><strong>Frame Rate:</strong></td>
<td>T</td>
<td>2.0~30ms</td>
</tr>
<tr>
<td><strong>Left/Center/Right Td:</strong></td>
<td></td>
<td>1060/670/460μs (Resolution recommends less than 1μs)</td>
</tr>
</tbody>
</table>

### Communication Interface
- **PWM**

### Item Specification
- **Rated Voltage**: 8.0V DC
- **Operating Voltage**: 4.0~8.4V DC
- **Standby Current**: ≤ 45mA at 8.0V
- **Consumption Current**
  - LL: Low Limit
  - Me: Medium Value
  - UL: Upper Limit
  - at 8.0V, No-Load
- **Max. Torque**
  - LL: Low Limit
  - Me: Medium Value
  - UL: Upper Limit
  - at 8.0V
- **Rated Torque**
  - LL: Low Limit
  - Me: Medium Value
  - UL: Upper Limit
  - at 8.0V
- **No Load Speed**
  - LL: Low Limit
  - Me: Medium Value
  - UL: Upper Limit
  - at 8.0V
- **Default Travel Angle**
  - CW 50° (460μs)
  - CCW 50° (1060μs)
- **Max Travel Angle**
  - CW 75° (460μs)
  - CCW 75° (1060μs)
- **BackLash**
  - ≤ 0.5°
- **Operating Temperature Range**
  - -40 to +60°C (-40 to 140°F)
- **Operating Humidity Range**
  - ≤ 90%RH
- **Storage Temperature Range**
  - -54 to +159.8°F (-40 to 140°F)
- **Storage Humidity Range**
  - ≤ 90%RH
- **Outer Dimension**
  - 1.58 x 0.79 x 1.44 inch (40.0 x 20.0 x 36.8mm)
- **Weight**
  - BLA2FB21: 3.17oz (90g)
  - BLA2FB22: 2.79oz (79g)
- **Case Material**
  - Upper: AL / Middle: AL / Bottom: AL
- **Gear Set Material**
  - 1st: Resin / 2nd, 3rd, 4th (Final): Metal

### Cable
- **Connector**
  - **Type**: TE794617-6 etc.
  - **Pin Assignment**
  - 1: White / S.BUS / PWM
  - 2: Red / Vcc
  - 3: Black / GND
  - 4: Yellow / Position Feedback+
  - 5: Green / Position Feedback-
  - 6: Shield / Case Shield Line

### Test Condition
- **MTT(B)F**
  - 1000h
  - (Calculated by Weibull analysis.)
  - Test Condition at 8.0V / Load: 20% of Max. Torque / 0.5Hz sweep (±50°)
- **Vibration Resistance**
  - Operating time ≥ 50h (at 8.0V)
  - Test Condition
    - Frequency range: 80 to 400Hz
    - Acceleration: 30G (294m/s²)
    - Sweep rate: 1.2min
    - Vibration axis: X, Y, Z

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* Initial Performance Data at 23±5°C

**Caution**
- This product SHOULD NOT be used for the devices that is directly related to human life and/or harmful devices for human body such as below applications.
  1. Medical Devices
  2. Aerospace/Aviation Related Devices
  3. Nuclear Related Devices

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**Update Number**: 160419-05
Outer Dimension

![Outer Dimension Diagram]

Cable Length
BLA2FB21 400mm
BLA2FB22 150mm

Position Feedback

![Position Feedback Diagram]