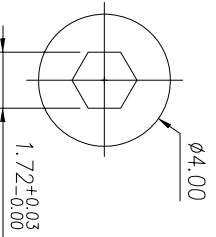


PCB LAYOUT



**Electrical Characteristics**  
 Rated Power: DC5V 5mA Max.  
 Output signal: A \ B 2signals  
 Resolution: 12 Pulses 360°  
 24 Pulses 360°  
 Phase difference: 4ms Min.  
 Sliding noise: 7ms Max.  
 Contact Resistance: 1Ω Max.  
 Insulation resistance: 1000MΩ Min. at DC 250V  
 Withstand voltage: AC300V / 1min

**Mechanical**  
 Total rotation angle: 360°  
 Rotational Torque: 30~200 gf·cm Max  
 Number of Detents: 24 detents Step angle: 15°±2°  
 12 detents Step angle: 30°±2°  
 Rotational Life: 10000±200 cycles  
 Temp. Range: -10 ° C ~ +70 ° C  
 Soldering: 230±5 ° C 5Sec. Max.

Order Information:  
 L-KLS4-EC1004 - XX  
 RoHS \_\_\_\_\_  
 10mm Encoder \_\_\_\_\_  
 Pulse and Detent Code \_\_\_\_\_  
 9A: 12 Pulse with 24 Detents  
 9B: 12 Pulse without Detent

| GENERAL TOLERANCE |            | ANGLE TOLERANCE          |                | PROJECTION |    | Description: |
|-------------------|------------|--------------------------|----------------|------------|----|--------------|
| X: ±0.50          | X: ±0.38   | X: ±5°                   | X: ±3°         | UNITS      | mm |              |
| XX: ±0.25         | XX: ±2°    |                          |                | SHEET SIZE | A4 | 10mm Encoder |
| Draw by: Date     | 2017-09-01 | KLS P/N:                 | KLS4-EC1004-XX |            |    |              |
| Check by: Date    | 2017-09-05 | KLS ELECTRONIC CO., LTD. |                |            |    |              |
| SCALE             | SHEET      |                          |                |            |    |              |

