



PCB LAYOUT

Electrical Characteristics

Rated Power: DC5V 5mA Max.
 Output signal: A \ B 2signals
 Resolution: 15 Pulses 360°
 20 Pulses 360°
 9 Pulses 360°
 Phase difference: 0.08T Min.
 Sliding noise: 3mS Max.
 Contact Resistance: 1Ω Max.
 Insulation resistance: 100MΩ Min. at DC 250V
 Withstand voltage: AC300V / 1min

Mechanical

Total rotation angle: 360°
 Rotational Torque: 20~200 gf.cm Max
 Click Torque: 20~150 gf.cm
 Push-pull Strength of Shaft: 8.0kgf Min.
 Number of Detents: 30 detents Step angle:12°±2°
 20 detents Step angle:18°±2°
 18 detents Step angle:20°±2°
 Without detents
 Rotational Life: 30000±200 cycles per 100gf.cm Min.
 Temp. Range: -30 °C ~ +80 °C
 Soldering: 250 °C 3Sec. Max.

Order Information:

L-KLS4-EC1120 - E XX- XX

RoHS
11mm Encoder

Shaft type and Length Code
Pulse and Detent Code

Bushing:	<input checked="" type="checkbox"/> E	<input type="checkbox"/> F	<input type="checkbox"/>
	D	5	7

- 5A: 15 Pulse with 30 Detents
- 5B: 15 Pulse without Detent
- 4A: 20 Pulse with 20 Detents
- 4B: 20 Pulse without Detent
- 3A: 9 Pulse with 18 Detents
- 3B: 9 Pulse without Detents

Shaft type

Q Shaft	D=7				
	L	15.5	16.9	18	20
F	6	7	6	10	11

AB Shaft	D=5			D=7		
	L	14		15	16.5	20
F	6			5	7	10

T Shaft	D=5						D=7				
	L	11	11.5	12.5	13.5	14	16	13.7	16	17	18.5
F	4	3.5	4.5	6	6	5	4	5	5	5	5.5

F Shaft	D=5						D=7							
	L	12.5	13	13.5	14	15	15.5	14.5	15	16	17	18	19	20
F	4.5	5	5.5	6	6	7	4.5	5	6	6.5	7	7	10	12

GENERAL TOLERANCE	ANGLE TOLERANCE	PROJECTION		Description:
.X ±0.50	.X ±5°	UNITS	mm	11MM Encoder without switch
.X ±0.38	.X ±3°	SHEET SIZE	A4	
.XX ±0.25	.XX ±2°	KLS P/N: KLS4-EC1120-EXX-XX		
Draw by: Date	2017-09-01	KLS ELECTRONIC CO., LTD.		
Check by: Date	2017-09-05			
SCALE	SHEET	OF		