



PCB LAYOUT

Electrical Characteristics
 Rated Power: DC5V 5mA Max.
 Output signal: A \ B 2signals
 Resolution: 20 Pulses 360°
 15 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-EC1121 S - E XX- XX
 RoHS 11mm Encoder
 Switch: S- with switch
 Bushing:

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D	5	7	

Shaft type and Length Code
 Pulse and Detent Code
 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	D=7		D=5		D=7	
	L	F	L	F	L	F
Q Shaft	15.5	16.9	18	20	20.5	
	6	7	6	10	11	
AB Shaft						
	L	14		15	16.5	20
	F	6		5	7	10
D=5						
T Shaft	L	11	11.5	12.5	13.5	14
	F	4	3.5	4.5	6	6
D=7						
F Shaft	L	12.5	13	13.5	14	15
	F	4.5	5	5.5	6	6
D=5						

GENERAL TOLERANCE	ANGLE TOLERANCE	PROJECTION	Description:
X. ±0.50	X. ±5°		11MM Encoder with Switch
.X ±0.38	.X ±3°		
.XX ±0.25	.XX ±2°		
Draw by: Date	2017-09-01	KLS P/N:	KLS4-EC1121S-EXX-XX
Check by: Date	2017-09-05	SHEET SIZE	A4
SCALE	OF	SHEET	

KLS ELECTRONIC CO., LTD.