

PCB LAYOUT

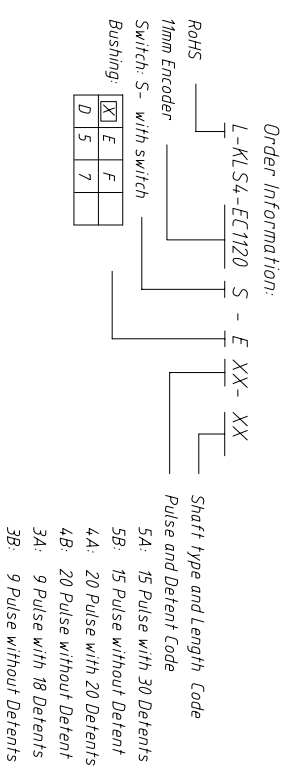
Shaft type	D=7		D=5		D=7	
	L	F	L	F	L	F
Q Shaft	15.5	6	16.9	7	18	6
	20	7	20.5	10	20.5	11
AB Shaft						
	14		15		16.5	
	6		5		7	
					10	
T Shaft						
	11		11.5		12.5	
	13.5		13.5		14	
	4		3.5		6	
			4.5		6	
			6		5	
			4		4	
			5		5	
			5.5		5.5	
F Shaft						
	12.5		13.5		14	
	13		14		15	
	4.5		5.5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

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.



GENERAL TOLERANCE	ANGLE TOLERANCE	PROJECTION	Description:
X. ±0.50	X. ±5°	mm	11MM Encoder with Switch
.X ±0.38	.X ±3°	A4	
.XX ±0.25	.XX ±2°	SHEET SIZE	
Draw by: Date	2017-09-01	KLS P/N:	KLS4-EC1120S-EXX-XX
Check by: Date	2017-09-05		
SCALE	SHEET	OF	

KLS ELECTRONIC CO., LTD.