

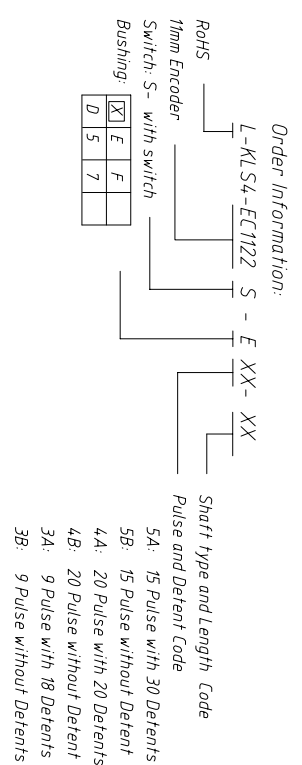
PCB LAYOUT

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: 1 Ω 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.



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	11	11
AB Shaft	14	6	15	5	16.5	7
	20	7	20	10	20	10
T Shaft	11	4	11.5	3.5	12.5	4
	13.5	6	14	6	14	6
	16	5	16.5	5	17	5
	18.5	5.5	18.5	5.5	18.5	5.5
F Shaft	12.5	4.5	13.5	5.5	14	6
	15.5	5	16	6	16.5	7
	17	6	17	7	17	7
	18	7	18	8	18	8
	19	7	19	7	19	7
	20	12	20	12	20	12

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°	KLS P/N.	KLS4-EC1122S-EXX-XX
Draw by: Date	2017-09-01		
Check by: Date	2017-09-05		
SCALE	SHEET	OF	

KLS ELECTRONIC CO., LTD.