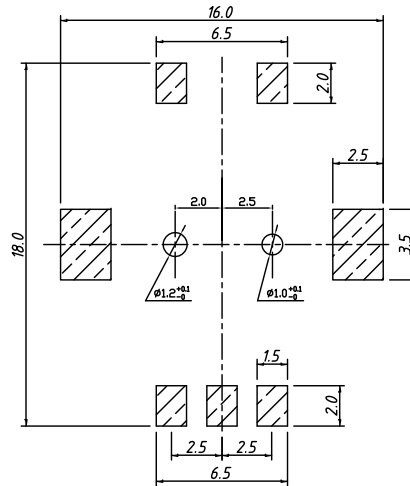
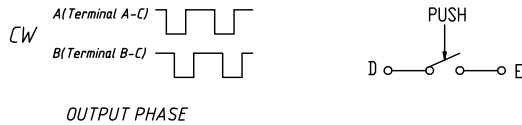


Electrical Characteristics

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 / 1 min

Mechanical

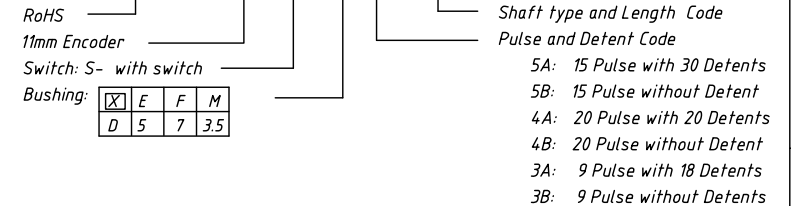
Total rotation angle: 360°
 Rotational Torque: 20~200 gf.cm Max
 Click Torque: 20~150 gf.cm
 Push-pull Strength of Shaft: 8.0kgf Min.
 Number of Detents: 30 detents Step angle:12°±2°
 20 detents Step angle:18°±2°
 18 detents Step angle:20°±2°
 Without detents
 Rotational Life: 30000±200 cycles per 100gf.cm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



PCB LAYOUT

Order Information:

L-KLS4-EC1103 S - E XX- XX



Shaft type		D=5		D=7						D=3.5			
Q Shaft	L	13	17.5	12	14	16.7	17	20.5	22	25.5	27.5	8.5	9
	F	5	6	3.5	5	5	7	11	11	5	15	4	4

Shaft type		D=5					D=7						
AB Shaft	L	10	12.5	13.5	15.5	16.7	12.5	13	14.5	15	17	18	20
	F	4	6	5	5	7	4.5	4	5.5	7	7	7	7

Shaft type		D=5					D=7						D=3.5				
T Shaft	L	9.5	11	11.5	12.5	13	15.3	12.5	13.5	14	15	15.5	18	18.5	19	8.5	
	F	3.5	3.5	5	5	5	7.8	4	4	5	7	5	9	8.5	7	3.5	

Shaft type		D=5					D=7						D=3.5				
F Shaft	L	10	10.5	12.5	13	16.7		13	14	15.5	16.5	17	18.5	19	20	9.5	11.5
	F	4	4	5	7	7		4	5	7	7	7	6.5	7	10	5	7

GENERAL TOLERANCE	ANGLE TOLERANCE	PROJECTION	Symbol	Description:
.X ±0.50	.X ±5°	UNITS	mm	11MM SMD Encoder with Switch
.X ±0.38	.X ±3°	SHEET SIZE	A4	
.XX ±0.25	.XX ±2°		KLS P/N:	KLS4-EC1103S-EXX-XX
Draw by: Date	2017-09-01	KLS ELECTRONIC CO., LTD.		
Check by: Date	2017-09-05			
SCALE	SHEET	OF		