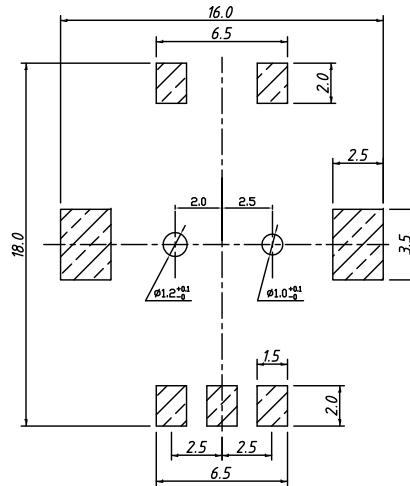
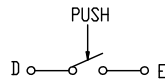
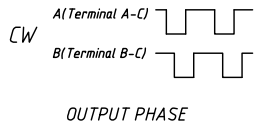


**Electrical Characteristics**

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

RoHS

11mm Encoder

Switch: S- with switch

Bushing:

<input checked="" type="checkbox"/>	E	F	M
D	5	7	3.5

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**

	L	D=5					D=7					D=3.5	
		F	13	17.5	12	14	16.7	17	20.5	22	25.5	27.5	8.5

	L	D=5					D=7						
		F	10	12.5	13.5	15.5	16.7	12.5	13	14.5	15	17	18

	L	D=5					D=7					D=3.5				
		F	9.5	11	11.5	12.5	13	15.3	12.5	13.5	14	15	15.5	18	18.5	19

	L	D=5					D=7					D=3.5				
		F	10	10.5	12.5	13	16.7		13	14	15.5	16.5	17	18.5	19	20

GENERAL TOLERANCE	ANGLE TOLERANCE	PROJECTION		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		