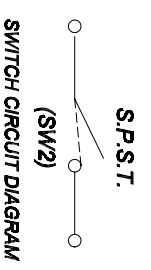
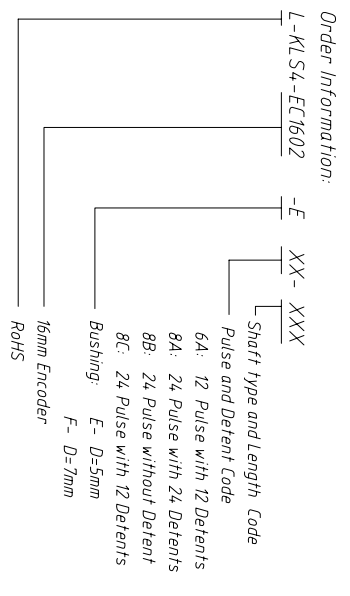


PCB LAYOUT

Electrical Characteristics
 Rated Power: DC5V 5mA Max.
 Output signal: A \ B 2signals
 Resolution: 12 Pulses 360°
 24 Pulses 360°
 Sliding noise: 3mS Max.
 Contact Resistance: 1 Ω Max.
 Insulation resistance: 100MΩ Min. at DC 250V
 Withstand voltage: AC50V / 1 min

Mechanical
 Total rotation angle: 360°
 Detents Torque: 30~200 gf.cm
 Number of Detents: 12 detents Step angle:30°±2°
 24 detents Step angle:15°±2°
 Rotational Life: 30000±200 cycles per 100gf.cm Min.
 Temp. Range: -10 ° C ~ + 70 ° C
 Soldering: 235 ° C 5Sec. Max.

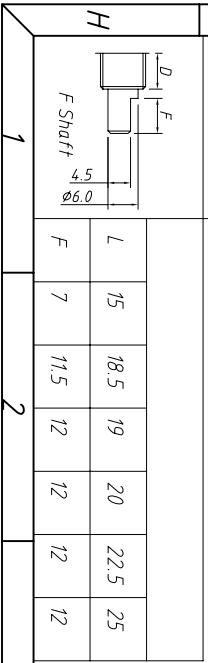


Shaft type

| | | | | | | |
|---|----|------|----|----|------|----|
| L | 15 | 18.5 | 19 | 20 | 22.5 | 25 |
| F | 7 | 11.5 | 12 | 12 | 12 | 12 |

| GENERAL TOLERANCE | ANGLE TOLERANCE | PROJECTION | Description: |
|-------------------|-----------------|------------|--------------------------|
| X: ±0.50 | X: ±5° | mm | 16mm Encoder with switch |
| .X: ±0.38 | .X: ±3° | SHEET SIZE | |
| .XX: ±0.25 | .XX: ±2° | KLS P/N: | KLS4-ECT1602-EXX-XXX |

| | | |
|----------------|------------|----|
| Draw by: Date | 2015-09-01 | |
| Check by: Date | 2015-09-15 | |
| SCALE | SHEET | OF |



GENERAL TOLERANCE

| | |
|------------|----------|
| X: ±0.50 | X: ±5° |
| .X: ±0.38 | .X: ±3° |
| .XX: ±0.25 | .XX: ±2° |

KLS ELECTRONIC CO., LTD.