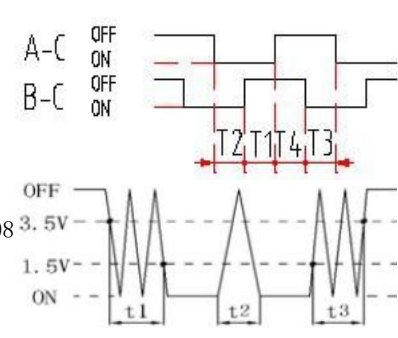
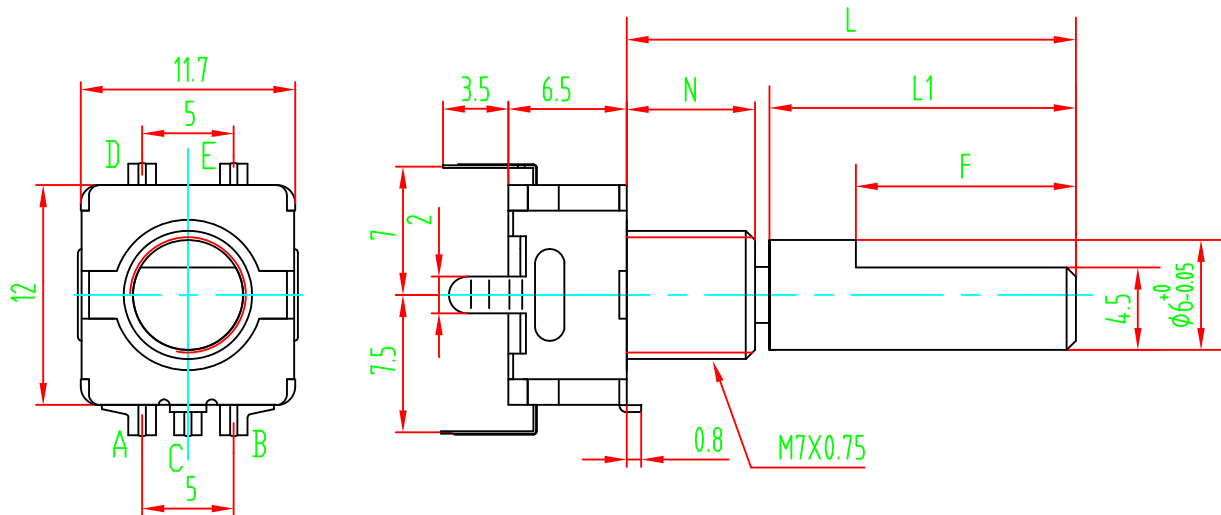


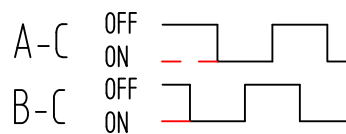
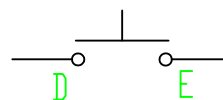
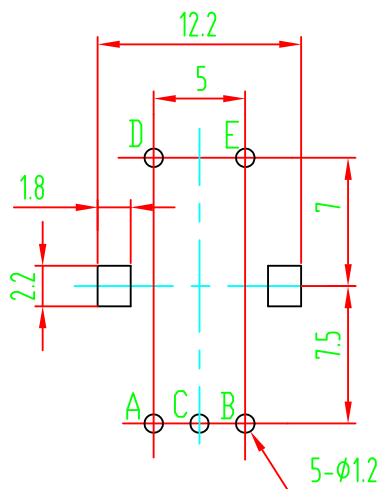
## EC11 Series Specification

EC11E20-20P20C-SW	
Mechanical Characteristics	
ITEM	SPECIFICATION
Total Rotational Angle	360°
Rotational Torque	<input type="checkbox"/> 20 ≈ 200gf.cm
Click pull-out Torque	<input type="checkbox"/> 20 ≈ 150gf.cm
Shaft push-pull Strength	8.0kgf-8.0kgf Min at 8sec
Shaft Wobble Strength	0.7xL/30 mm P-P max L:shaft length
Number of Click	<input checked="" type="checkbox"/> 20 clicks Step Angle:18° ±2° <input type="checkbox"/> 30 clicks Step Angle:12° ±2°
Bushing-nut tightening strength	7.0kgf.cm Min
Shaft rotational gap	0.4mm Max
Shaft play in rotational wobble	5° Max
Electrical Characteristics	
ITEM	SPECIFICATION
Power rated	DC 5V, A、B lead 5mA Max, C lead 10mA Max
Output signal	A、B 2 signals
Resolution	<input checked="" type="checkbox"/> 20 pulses/360° <input type="checkbox"/> 15 pulses/360°
Contact resistance between pins	1 Ω Max
Phase difference	T1、T2、T3、T4 ≥ 0.08
Rotation noise	t1, t3 ≤ 3mS t2 ≤ 2mS
Insulation resistance	100MΩ Min at DC 250V
Dielectric	1 minute at AC 300V
Endurance characteristics	
ITEM	SPECIFICATION
Rotational life	<input type="checkbox"/> 30,000 ± 200 cycles ≤ 100gf.cm <input type="checkbox"/> 15,000 ± 200 cycles ≥ 100gf.cm
Storage temperature range	-40°C ≈ +85°C
Operating temperature range	-30°C ≈ +80°C
Soldering characteristic	dipping in soldering ≤ 206°C ± 5° , within 3S solder by hand: ≤ 300°C ± 5° , within 3S





Mounting Hole



L	15	<del>20</del>	23.5
L1	7.5	<del>12.5</del>	16
F	7	<del>10</del>	12
N	7	<del>7</del>	7

2				5			
1				4			
	DATE	REVISION	APPROVED	3			
2016.12.10	2016.12.10	2016.12.10	MODEL: EC11E20-20P20C-SW				
DWN	DHKD	APPD					