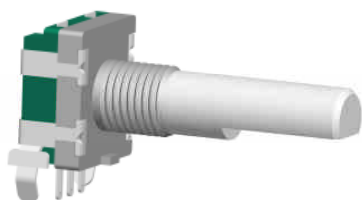




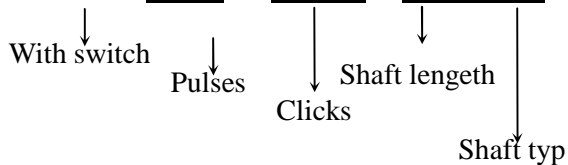
**11mm Metal Shaft Rotary Encoder With Push-On Switch**

**ED112S**

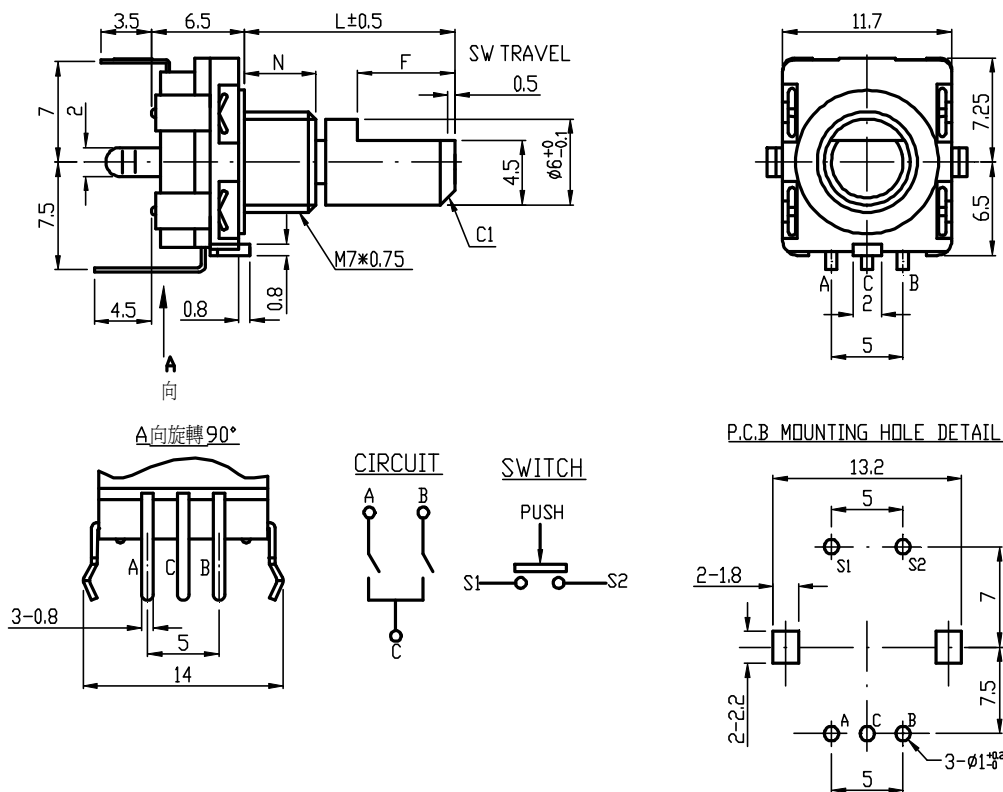


**Part Number**

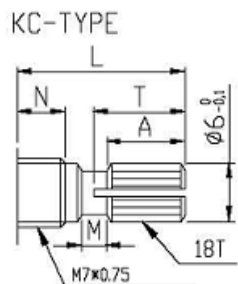
**ED112S - 20P - 20C - 25 F**



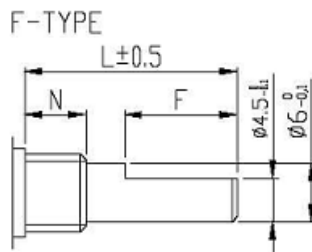
**Dimensions**



**Shaft Type**



N	5	7		
L	10	12	15	20
T	25	5	7	12
A	2	4	6	10
M	0.5	1	1	2



N	5	7
L	15	20
F	7	10

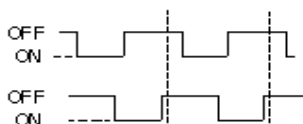


## 11mm Metal Shaft Rotary Encoder With Push-On Switch

### 1.Push-On Switch Specifications

Switch Circuit	Single Pole and Single Throw (push on)
Switch Travel(mm)	0.5 $\begin{matrix} +0.4 \\ -0.3 \end{matrix}$ mm
Switch Operating Force	500 $\begin{matrix} +300 \\ -300 \end{matrix}$ gf.
Switch Rating Power	DC 5V 10mA (minimum ratings :DC 5V 1mA)
Switch Contact Resistance	First period : 100m $\Omega$ , 200m $\Omega$ after the end of useful life is reached
Switch Push Life	20,000 Cycles (500cycles/H, shaft push load 1kgf. Max.)

### 2.Electrical Characteristics

Power Rating	DC 5V 0.5mA
Insulation Resistance	More than 10 M $\Omega$ at DC 250V 1 Minute
Withstand Voltage	1 Minute at AC 50V
Sliding Noise	$t_1, t_3 \leq 3\text{mS}$ (Test conditions:360°/S); $t_2 \leq 2\text{mS}$ Using the C/R filter circuit is Recommended
Resolution	20 Pulses/360° for each phase .
Phase Difference	$\Delta T = 0.25 \pm 0.17T$
Output Signal And Rotational Direction	C.C.W direction A Signal B Signal 
Working Temperature	-10°C ~ 70°C
Storage Temperature	-40°C ~ 85°C

### 3.Mechanical Characteristics

Total Rotational Angle	360 °
Rotational Torque	30~200 gf.cm ※(Shaft Rotatable at-10°C ~ +5°C)
Shaft Push-Pull Strength	5.1 Kgf.cm
Number and Position Detent	<ul style="list-style-type: none"><li>• 20 detents (Step angle: 18°±3°)</li><li>• 0 detents (Step angle:360°)</li></ul>
Shaft Play in Axial Direction	0.4mm Max.
Rotational Life	30,000 Cycles Min. at a speed of 600 cycles/H
Resistance To soldering Heat	Manual Soldering: Less than 300°C and quicker than 3 seconds. Auto soldering:260±5°C 3~5 seconds.