

**PART NUMBER:** EC251AB**DESCRIPTION:** rotary encoder

## ELECTRICAL SPECIFICATIONS

output waveform	Square wave
output signals	A, B phase
current consumption	20 mA max.
output voltage	V <sub>cc</sub> ~ 0.5 V min.
“H”	0.7 V max.
“L”	
output current	-0.1 mA max.
supply voltage	5 V dc ± 5%
output resolution (ppr)	25
frequency response	100 Hz

## MECHANICAL SPECIFICATIONS

max shaft load, radial:	1 kgf
axial:	1 kgf
starting torque	0.4 ±0.2 N·cm max. (41 ±20 gf·cm max.)
rotational angle	360° continuous
maximum speed	120 RPM
rotational life	1,000,000 cycles
weight	20 g

## ENVIRONMENTAL SPECIFICATIONS

operating temp	0° to +60° C
storage temp	-20° to +80° C
humidity	85% RH, no condensation
vibration	10 ~ 55 Hz. 1.5 mm, 2 hours
shock	50 G, 6 ms, 3 axes, 3 reps

## ORDERING INSTRUCTIONS

### EC251X050X

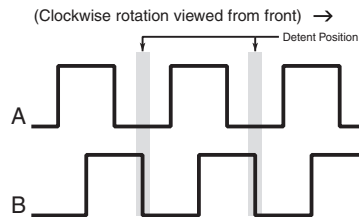
Detent:  
A = Without detent  
B = With detent

Termination options:  
A = Solder holes  
B = Connector  
C = Cable  
D = PC board mount

**PART NUMBER:** EC251AB

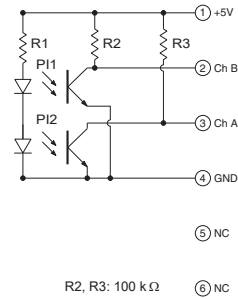
**DESCRIPTION:** rotary encoder

## OUTPUT WAVEFORM

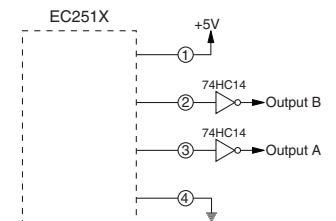


## OUTPUT CIRCUIT

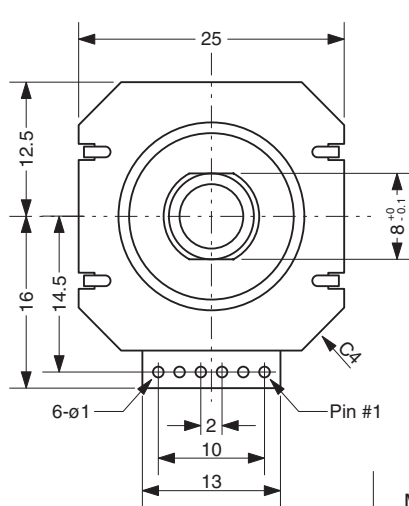
INTERNAL CIRCUIT



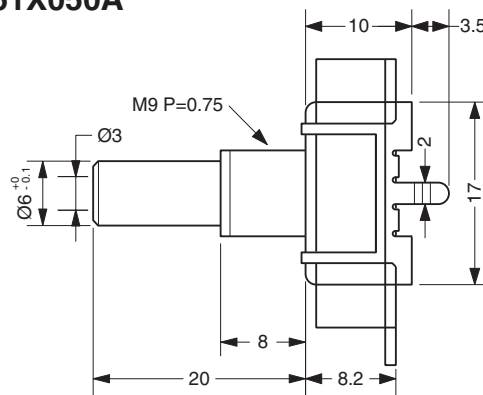
EXTERNAL CIRCUIT



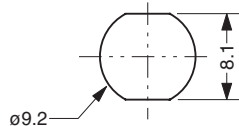
## MECHANICAL DRAWING



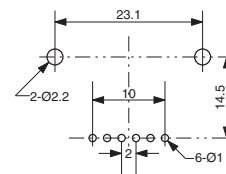
**EC251X050A**



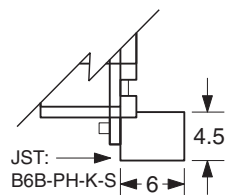
Mounting Hole Dimensions



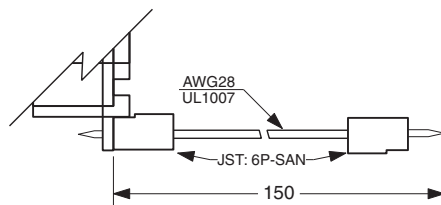
PCB Footprint



**EC251X050B**



**EC251X050C**



**EC251X050D**

