

10 mm Encoder

EN10 Series



Features:

- Compact design
- 2 bits gray code
- Incremental/contacting type
- Plastic Hollow Shaft
- Vertical and Horizontal mount versions

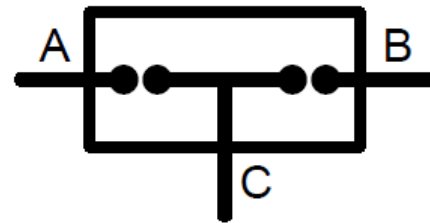


Description:

10 mm encoder is a small encoder which is a good fit for various small electronic applications such as frequency modulation, volume adjustment, and function switching.

Applications:

- Computer Mouse
- Earphones
- Radios
- Electronic toys



Electrical Characteristics

T_A = 25°C unless otherwise noted

Output	2 Bits Gray Code
Pulses (Per Revolution)	6, 12
Phase Difference	0.08T ± 0.1T
Power Rating	5 Vdc / 10 mA
Insulation Resistance	10MΩ 1 Minute at 50 Vdc Max.
Dielectric Strength	1 Minute at 50 Vac
Chattering	3 ms maximum
Bounce	2 ms maximum

Encoder Characteristics

T_A = 25°C unless otherwise noted

Rotation	360° continuous
Rotational Torque	15-50 gf.cm
Detents per Rotation	12, 24
Rotational Life	100,000 Cycles Min.

10 mm Encoder

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Environmental Characteristics

TA = 25°C unless otherwise noted

Operating Temperature	-20°C to +80°C
IP Rating	IP 40
Soldering Condition	Wave Soldering 260°C maximum for 1-3 seconds Hand Soldering 350°C maximum for 3 seconds
RoHS	Please refer to TT Electronics website
REACH	Please refer to TT Electronics website

Ordering

Part Family

Style

HS = Top Adjust, Surface Mount
HT = Top Adjust, Double Tab Bracket
VT = Side Adjust, Double Tab Bracket
VTS = Side Adjust, Single Tab Bracket
VTN = Side Adjust, No Bracket

Pulses/360°

06 = 6 pulses
12 = 12 pulses

Detent/Rotation

12 = 12/360° (6 or 12 pulses)
24 = 24/360° (12 pulses only)

Switch Option

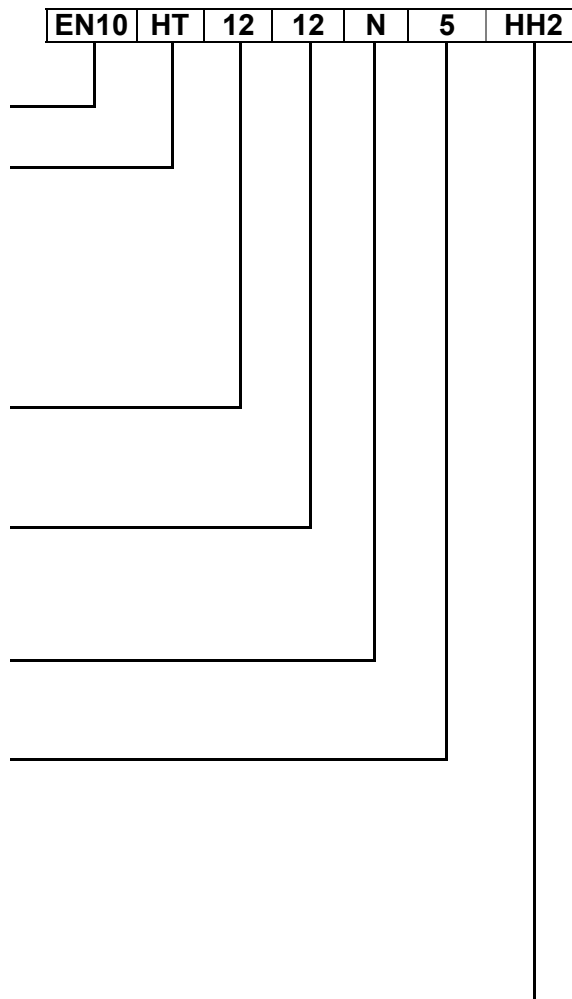
N = No Switch

Standoff Length

1 = 7 mm
2 = 9 mm
3 = 11 mm
4 = 13 mm
5 = 5.5 mm
6 = 6.4 mm (HT only)

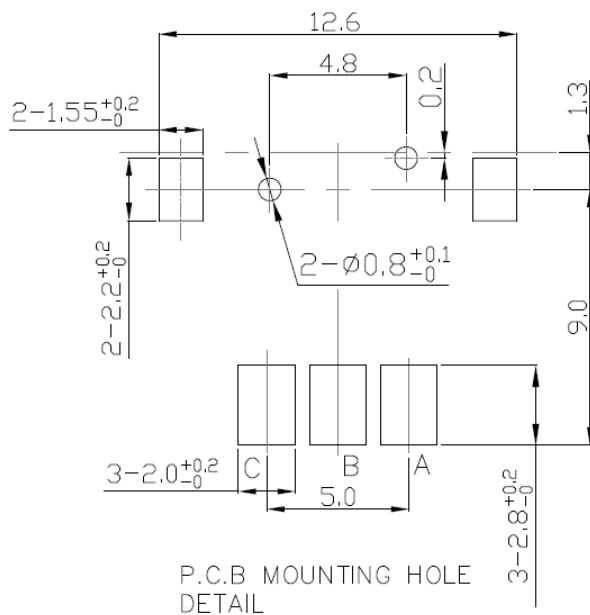
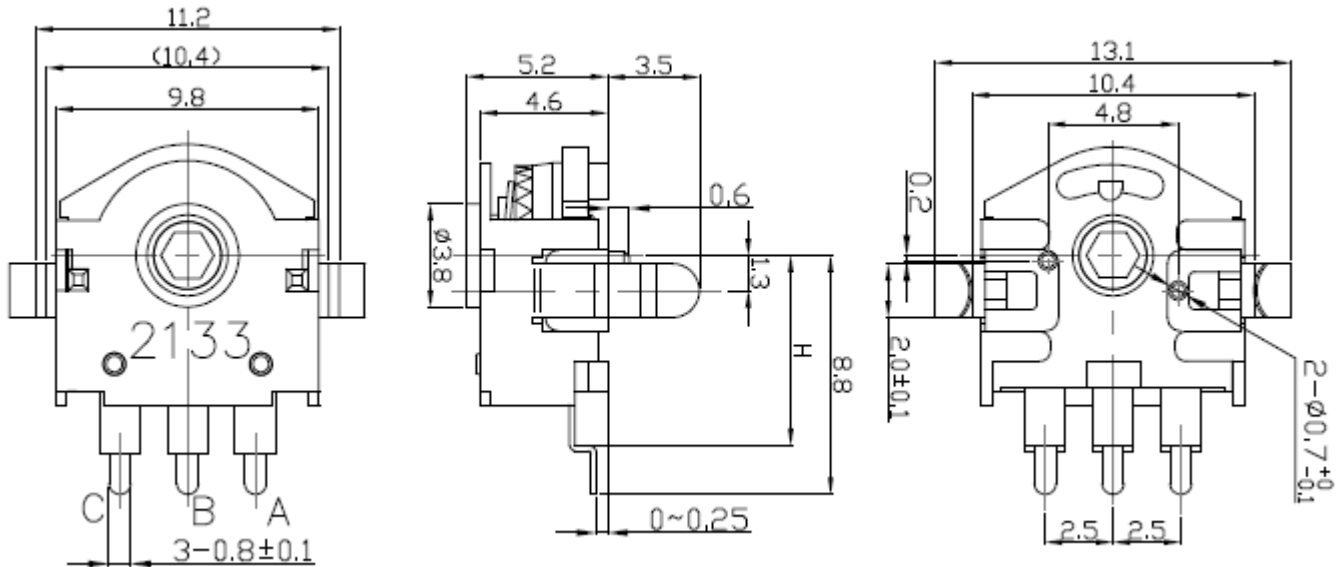
Shaft Style

HH2 = Hollow Hex Shaft 1.72mm
HH3 = Hollow Hex Shaft 1.75mm



Outline Drawings

EN10HS - Top Adjust, Surface Mount



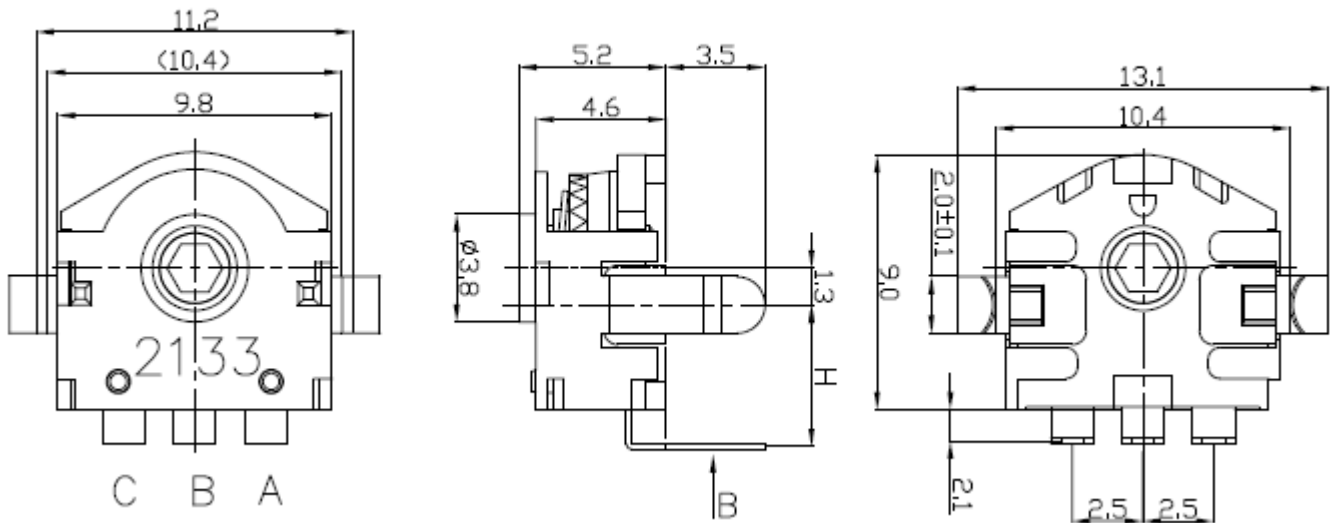
Standoff Height Code

X	1
H	7

Note: Though Surface Mounted in configuration, this part must be hand soldered as it is not rated for reflow soldering process.

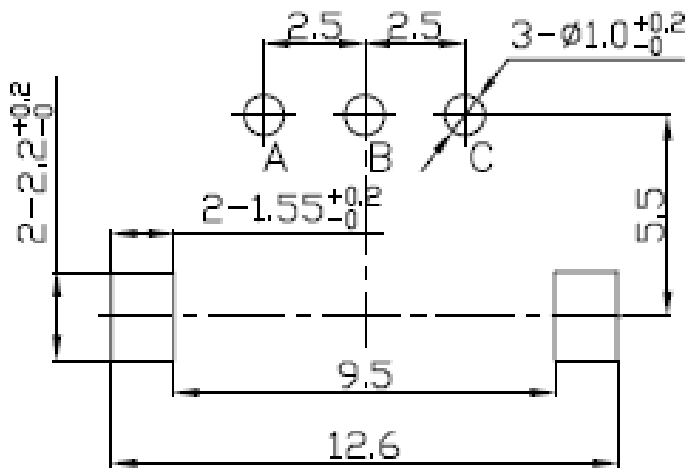
Outline Drawings

EN10HT - Top Adjust, Double Tab Bracket

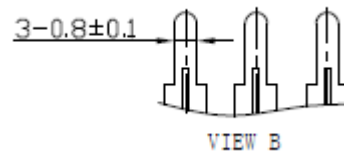


Standoff Height Code

X	5	6
H	5.5	6.4

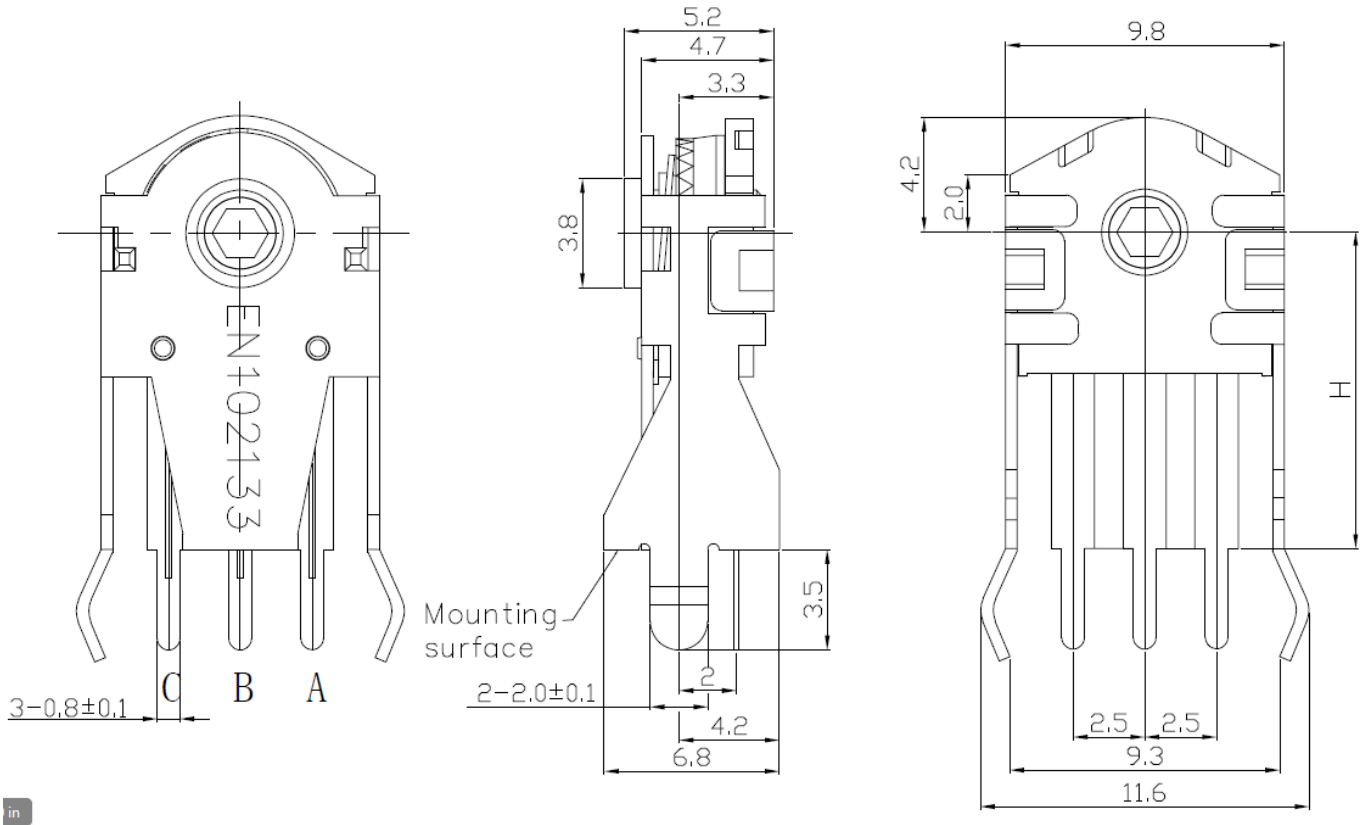


P.C.B MOUNTING HOLE
DETAIL

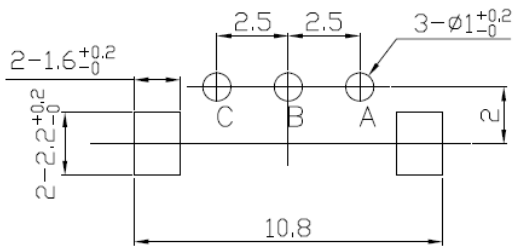


Outline Drawings

EN10VT - Side Adjust, Double Tab Bracket



in



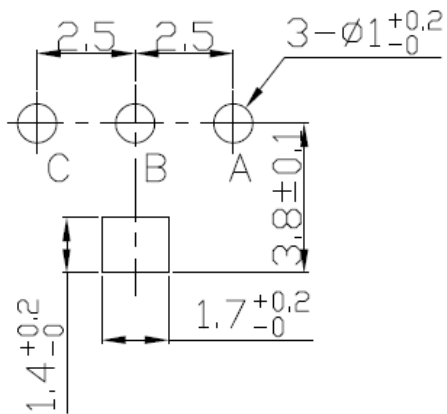
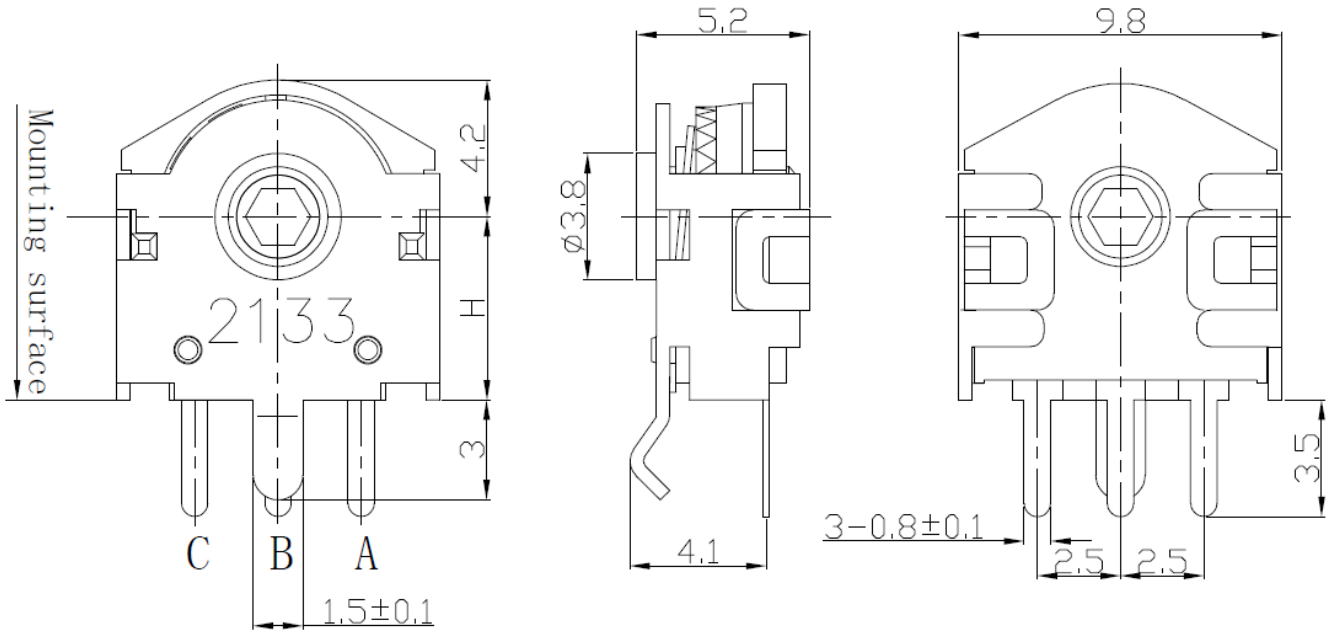
P.C.B MOUNTING HOLE
DETAIL

Standoff Height Code

X	1	2	3	4
H	7	9	11	13

Outline Drawings

EN10VTS - Side Adjust, Single Tab Bracket



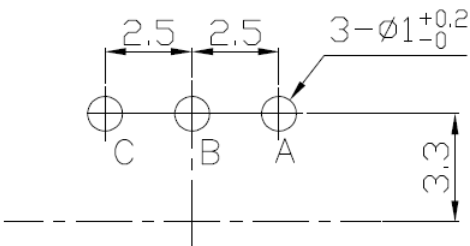
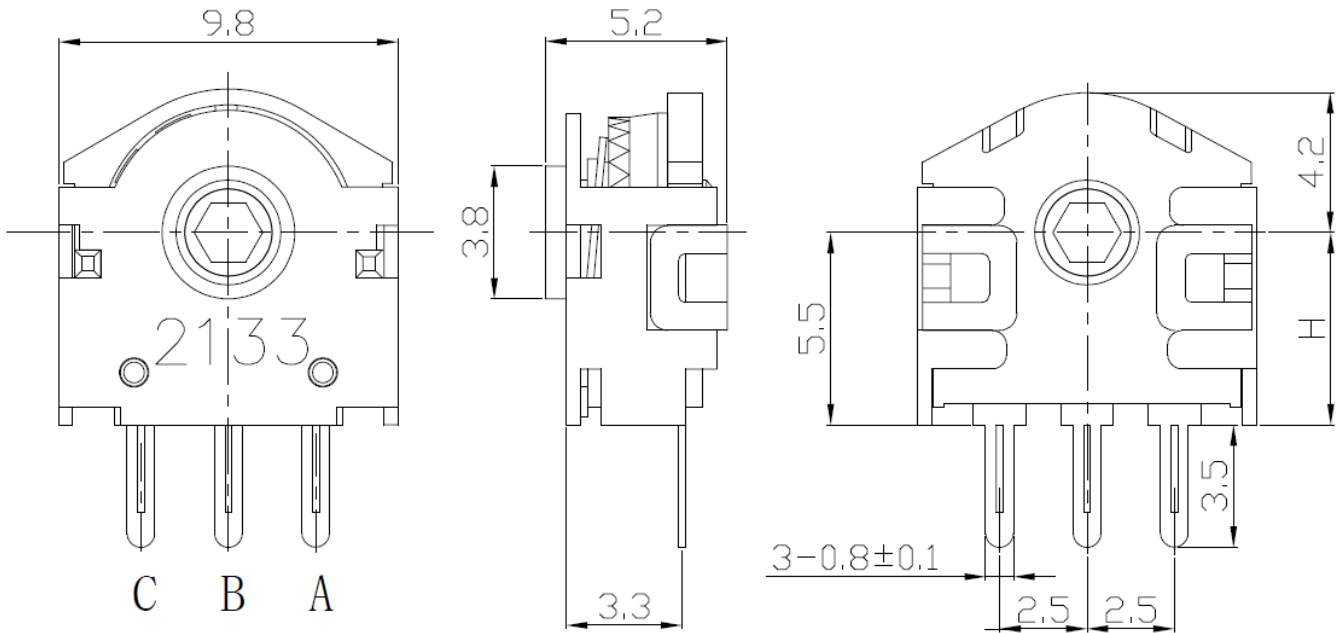
P.C.B MOUNTING HOLE DETAIL

Standoff Height Code

X	5
H	5.5

Outline Drawings

EN10VTN - Side Adjust, No Bracket



P.C.B MOUNTING HOLE DETAIL

Standoff Height Code

X	5	7
H	5.5	6.5

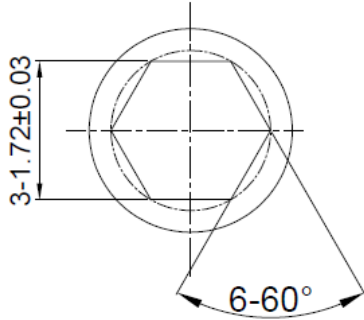
General Note

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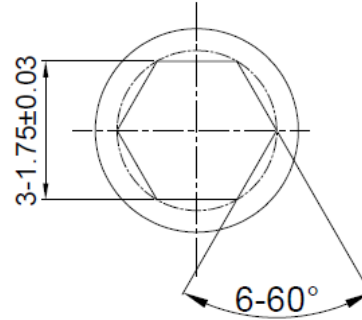
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Shaft Detail

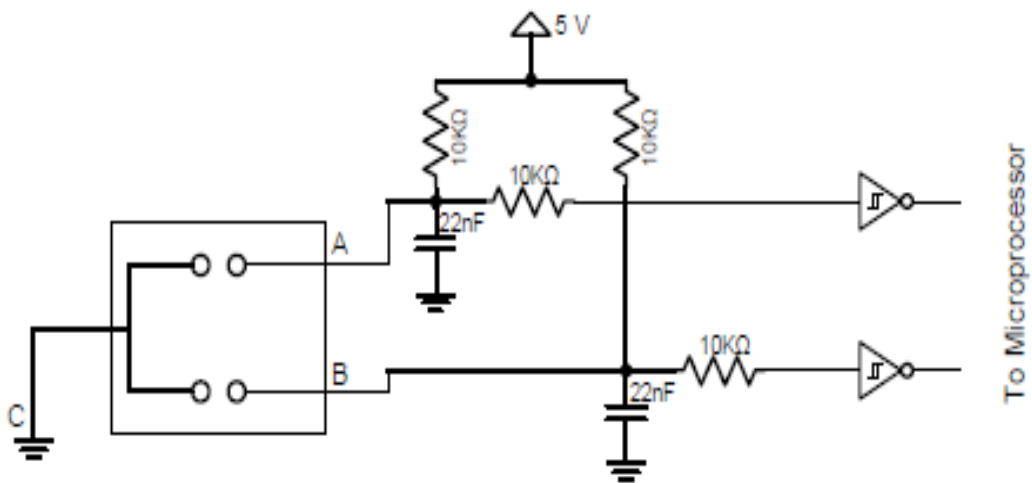
HH2



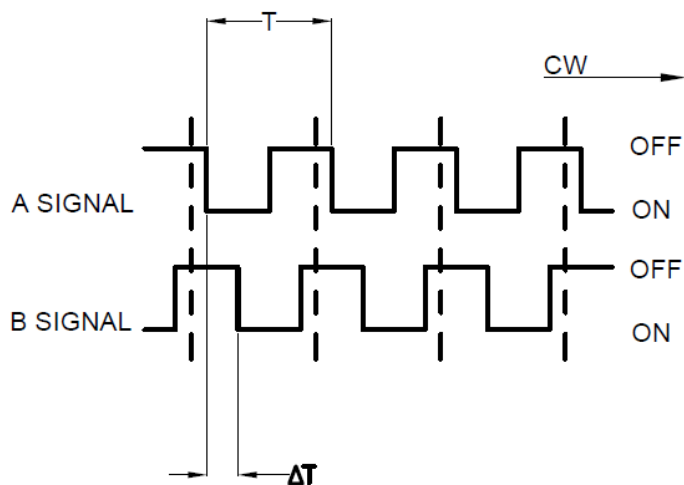
HH3



Recommended Filter Schematic



Output Phase Shift



Packaging

Standard Packaging	Plastic Trays
Included Hardware	None