



## SERIES: RING28 | DESCRIPTION: HOLLOW SHAFT MECHANICAL ENCODER

### FEATURES

- 15 mm height
- haptic detent feedback
- 30K rotational life cycles



### ELECTRICAL

parameter	conditions/description	min	typ	max	units
power supply			5		V
current consumption				10	mA
output	2-bit quadrature, channel A leads channel B by 90° with clockwise rotation				
output resolution	15, 18 PPR				
insulation resistance	at 250 Vdc	100			MΩ
dielectric strength	for 1 minute at sea level		300		Vac
electrical travel	continuous				
contact bounce	at 15 RPM			2	ms

### MECHANICAL

parameter	conditions/description	min	typ	max	units
operating speed				60	RPM
rotational angle	continuous		360		°
detent step angle	30 detent models 18 detent models		12 20		°
rotational torque		50		250	gf·cm
rotational life			30,000		cycles

### ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
operating temperature		-30		80	°C
storage temperature		-40		85	°C
RoHS	yes				
IP level	IP40				

### SOLDERABILITY

parameter	conditions/description	min	typ	max	units
hand soldering	for maximum 3 seconds		300		°C
wave soldering	for maximum 3 seconds		260		°C

## PART NUMBER KEY

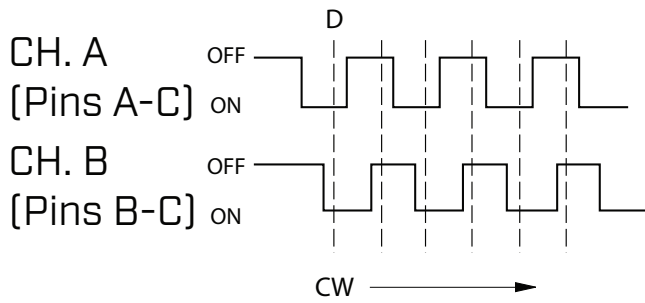
**RING28 - 16 XXXX - TH**

Base Number

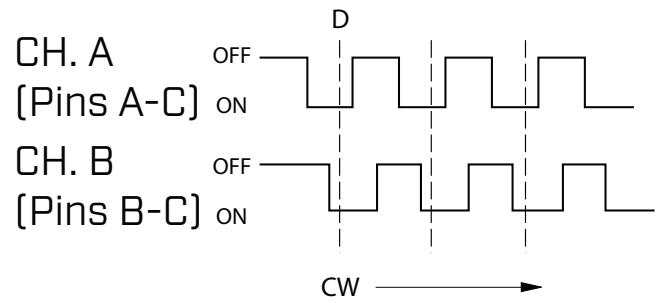
Resolution, Detent:  
1530 = 15 PPR, 30 detents  
1818 = 18 PPR, 18 detents

## OUTPUT WAVEFORM

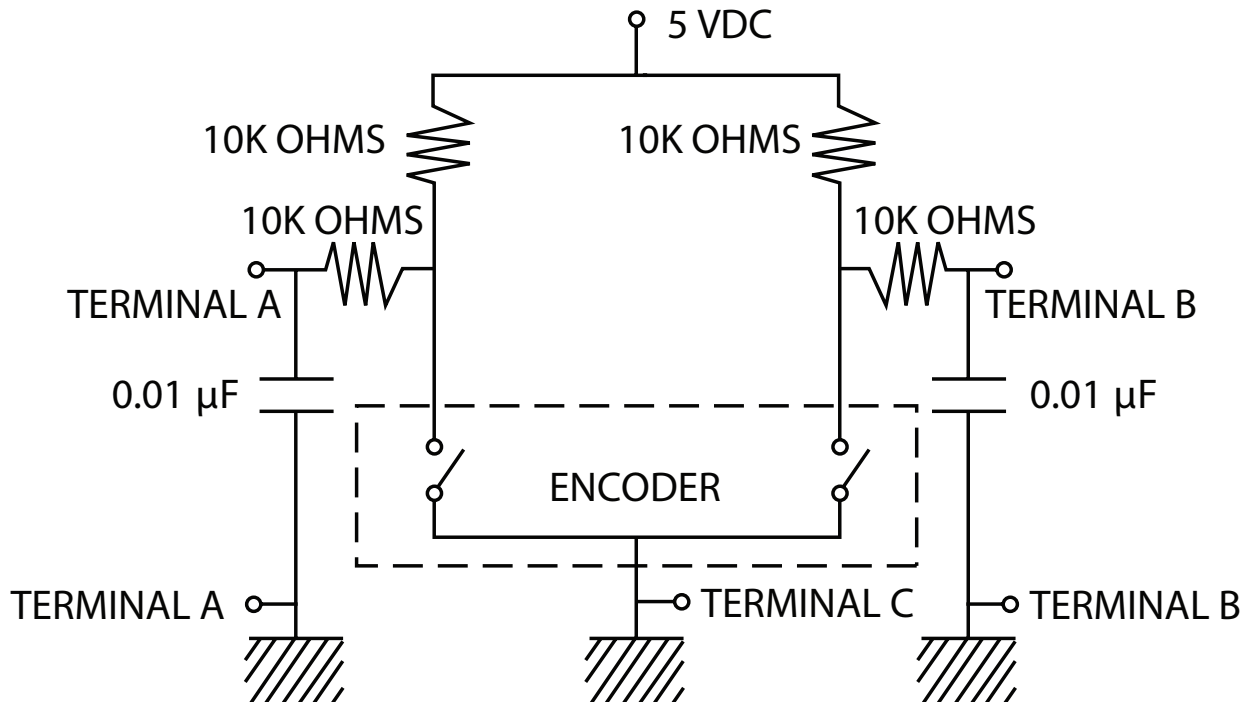
15 PPR, 30 Detent Model



18 PPR, 18 Detent Model



## RECOMMENDED FILTER



## MECHANICAL DRAWING

units: mm [inches]

tolerance:

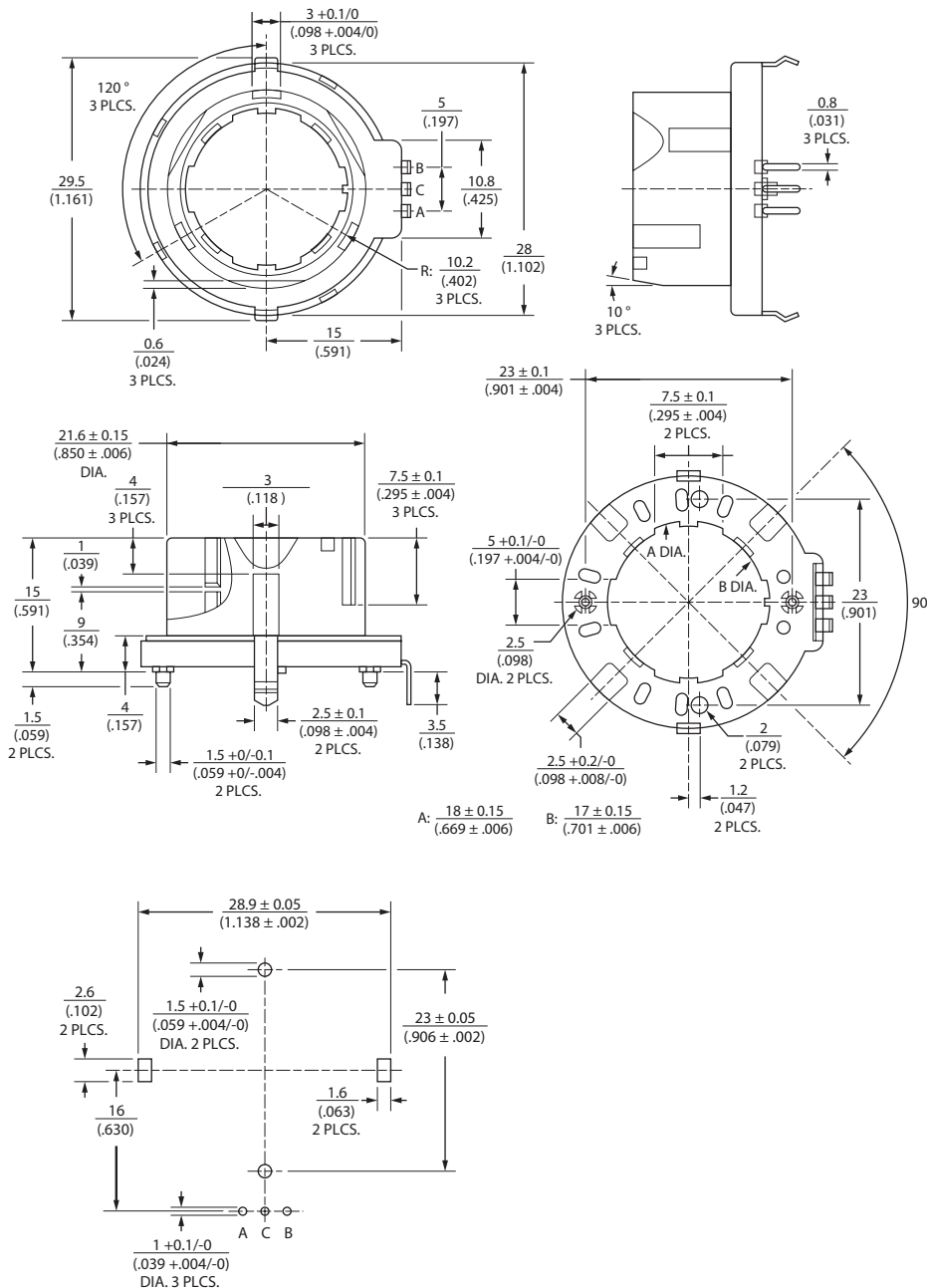
$X \leq 10.00$ :  $\pm 0.30$  mm

$10.00 < X \leq 30.00$ :  $\pm 0.50$  mm

$30.00 < X \leq 100.00$ :  $\pm 1.00$  mm

unless otherwise noted

DESCRIPTION	MATERIAL	PLATING/COLOR
rotor	PC (UL94V-2)	black
wiper	C5210	silver
base	PBT (UL94V-2)	black
terminals	C2680	silver
positioning piece	SUS301	---
bracket	cold rolled steel	tin



Recommended PCB Layout  
Top View

## REVISION HISTORY

rev.	description	date
1.0	initial release	12/16/2024

The revision history provided is for informational purposes only and is believed to be accurate.



Same Sky offers a one (1) year limited warranty. Complete warranty information is listed on our website.

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