

SERIES: ACZ16

DESCRIPTION: mechanical incremental encoder

## ELECTRICAL SPECIFICATIONS

parameter	conditions/description
output waveform	square wave
output signals	A, B phase
current consumption	0.5 mA
output phase difference	T1, T2, T3, T4 $\geq$ 3.5 ms @ 60 rpm (see output waveform)
supply voltage	5 V dc max.
output resolution	12, 24 ppr
insulation resistance	50 V dc, 100 M $\Omega$
withstand voltage	50 V ac

## MECHANICAL SPECIFICATIONS

parameter	conditions/description	min	nom	max	units
shaft load	axial			7	kgf
rotational torque	with detent click without detent click	50 90		130 210	gf·cm gf·cm
rotational life				100,000	cycles

## ENVIRONMENTAL SPECIFICATIONS

parameter	conditions/description	min	nom	max	units
operating temperature		-10		65	$^{\circ}$ C
storage temperature		-40		75	$^{\circ}$ C
humidity		85			% RH
vibration	0.75 mm max. travel for 2 hours	10		55	Hz

## PART NUMBER KEY

ACZ16 X BR X E- XX XX X1- XXX

Version:  
"blank" = switch  
N = no switch

Shaft length:  
15, 20, 25

Bushing:  
1 = M7 x 0.75 (H = 5)  
2 = M7 x 0.75 (H = 7)  
4 = smooth (H = 5)  
5 = smooth (H = 7)

Shaft type:  
KQ, F

Mounting orientation:  
A = Horizontal  
D = Vertical

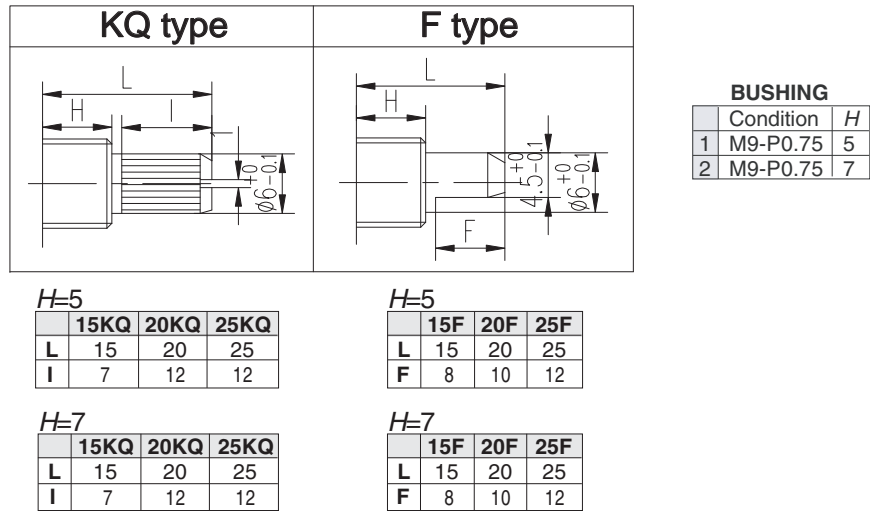
Resolution (ppr):  
12 = 12 ppr, no detent  
12C = 12 ppr, 12 detent  
24 = 24 ppr, no detent  
24C = 24 ppr, 24 detent



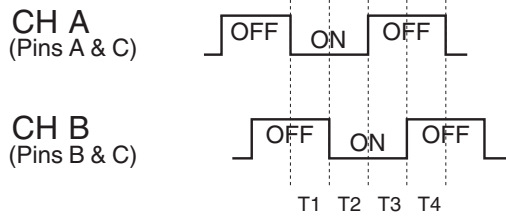
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## SHAFT OPTIONS

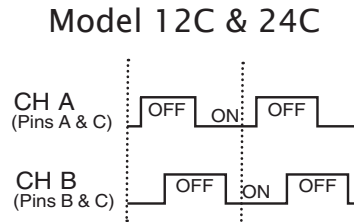


## OUTPUT WAVEFORM



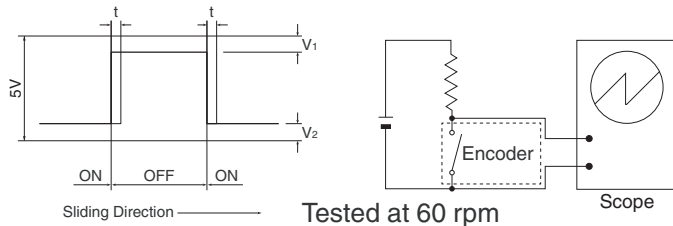
CW direction (@ 60 rpm)

## DETENT POSITIONS

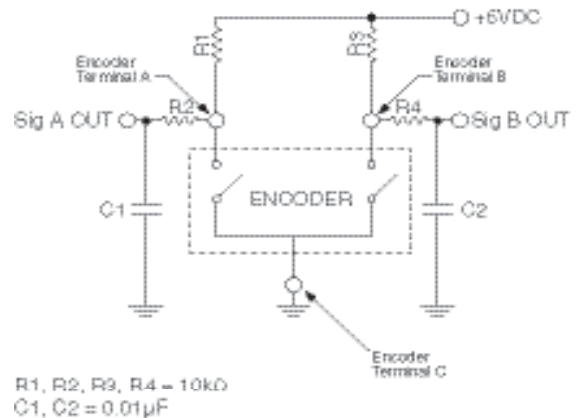


## SLIDING NOISE

$t$  = Masking time to avoid chatter (5mS)  $V_1 = V_2 = 1V$  max.



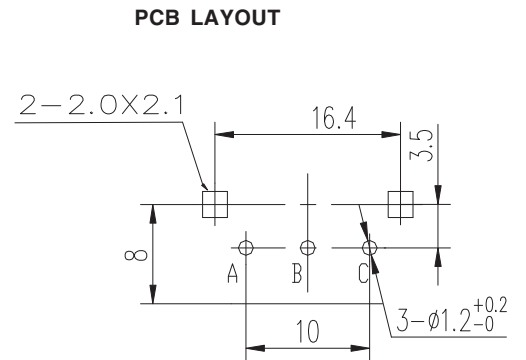
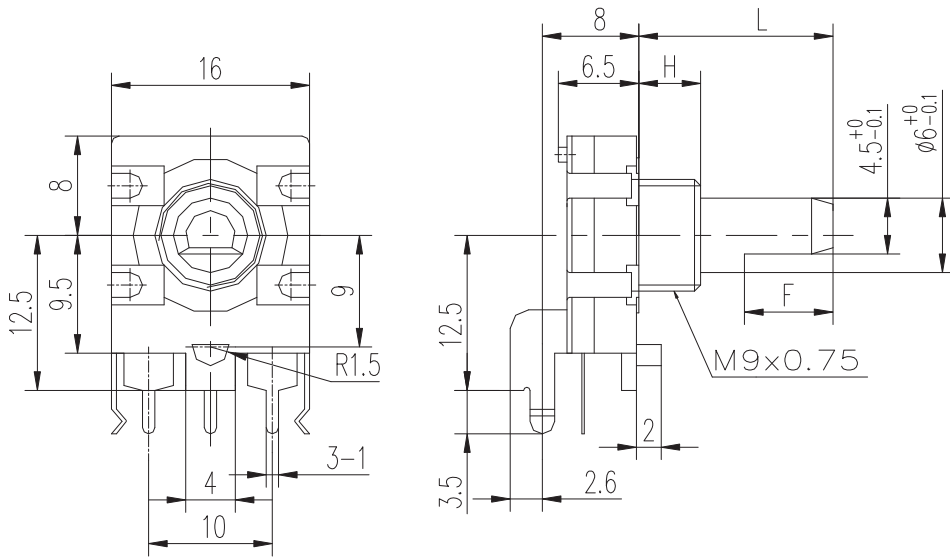
## SUGGESTED FILTER



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**MECHANICAL DRAWING (horizontal)**



**MECHANICAL DRAWING (vertical)**

