

**SERIES:** ACZ12

**DESCRIPTION:** mechanical incremental encoder

## ELECTRICAL SPECIFICATIONS

parameter	conditions/description
output waveform	square wave
output signals	A, B phase
current consumption	10 mA
output phase difference	T1, T2, T3, T4 $\geq$ 3.5 ms @ 60 rpm (see output waveform)
supply voltage	12 V dc max.
output resolution	12, 24 ppr
switch rating	12 V dc, 50 mA (ACZ12BRXE models only)
insulation resistance	300 V dc, 100 M $\Omega$
withstand voltage	300 V ac

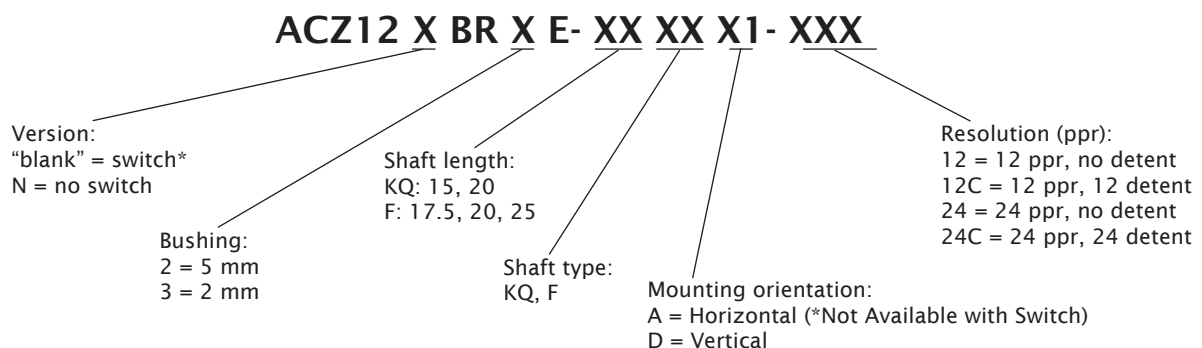
## MECHANICAL SPECIFICATIONS

parameter	conditions/description	min	nom	max	units
shaft load	axial			3	kgf
rotational torque	with detent click	30		200	gf · cm
	without detent click	60	80	100	gf · cm
push switch operational force	(ACZ12BRXE models only)	300		900	gf · cm
push switch life	(ACZ12BRXE models only)			50,000	
rotational life				30,000	cycles

## ENVIRONMENTAL SPECIFICATIONS

parameter	conditions/description	min	nom	max	units
operating temperature		-10		75	$^{\circ}$ C
storage temperature		-20		85	$^{\circ}$ C
humidity		85			% RH
vibration	0.75 mm max. travel for 2 hours	10		55	Hz

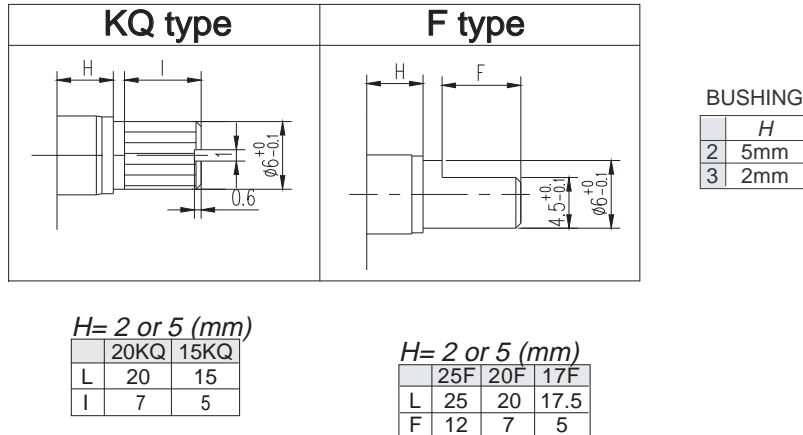
## PART NUMBER KEY



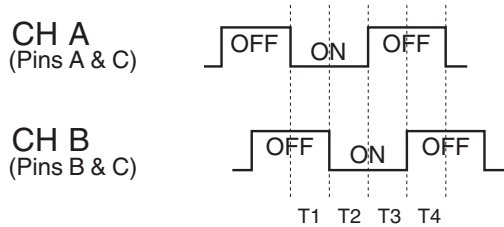
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## SHAFT OPTIONS

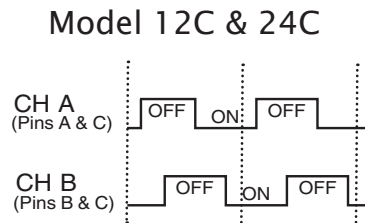


## OUTPUT WAVEFORM

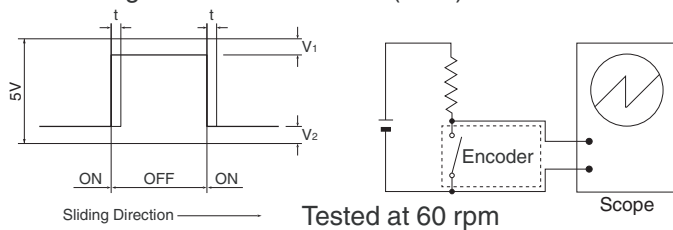


CW direction (@ 60 rpm)

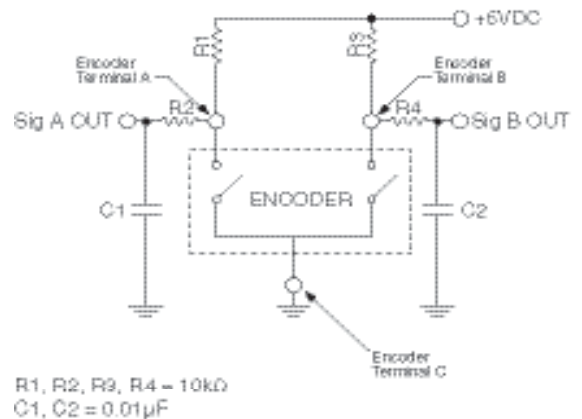
## DETENT POSITIONS



## SLIDING NOISE

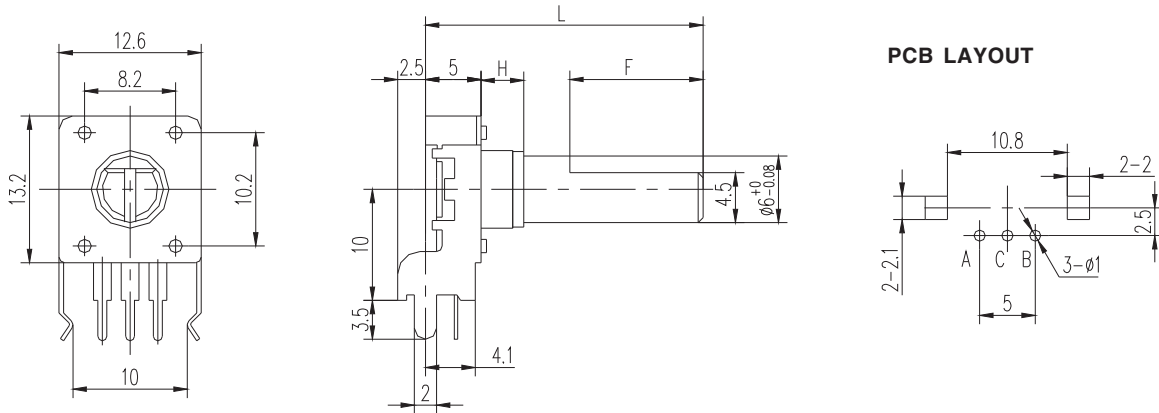
 $t = \text{Masking time to avoid chatter (5mS)}$   $V_1 = V_2 = 1V \text{ max.}$ 


## SUGGESTED FILTER

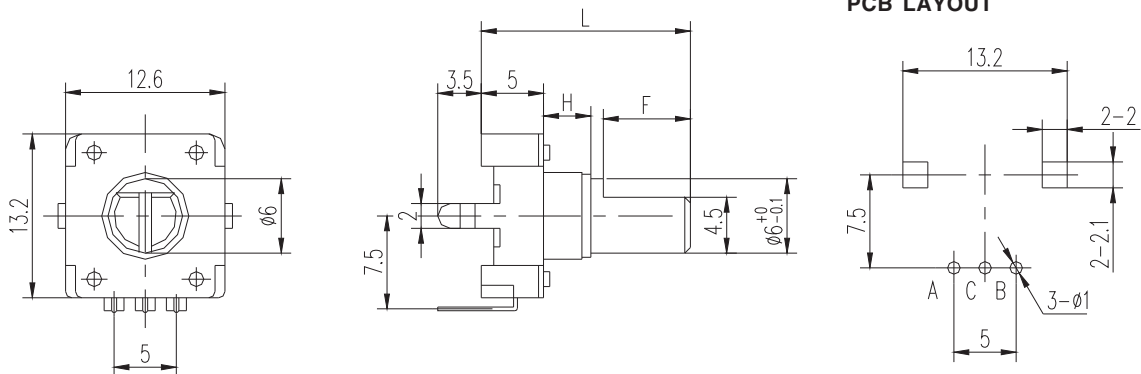


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**MECHANICAL DRAWING (horizontal)**

**MECHANICAL DRAWING (vertical)**

ACZ12NBRXE



ACZ12BRXE

