



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 ≥ 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 MΩ
withstand voltage	50 V ac

## MECHANICAL SPECIFICATIONS

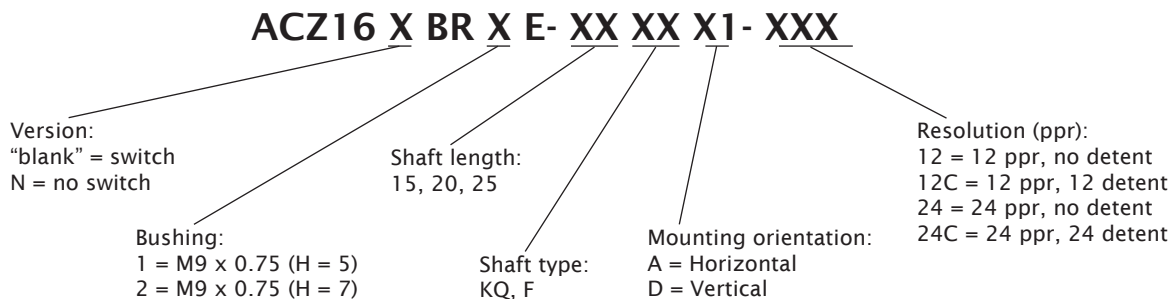
parameter	conditions/description	min	nom	max	units
shaft load	axial			7	kgf
rotational torque	with detent click	50		130	gf·cm
	without detent click	90		210	gf·cm
rotational life				100,000	cycles

## ENVIRONMENTAL SPECIFICATIONS

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

- Notes:
1. It is recommended to use products within 6 months.
  2. For storage conditions, it is recommended to keep away from direct sunlight, corrosive gas, or high humidity conditions.
  3. Use the product as soon as possible once the plastic bag has been unsealed, and reseal the bag if product is not immediately used.
  4. The products are packaged in sealed bags with anti humidity tablets.

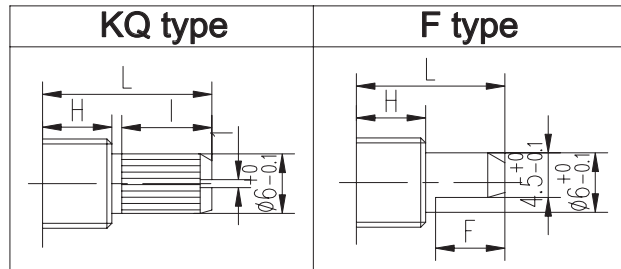
## PART NUMBER KEY



SERIES: ACZ16

DESCRIPTION: mechanical incremental encoder

### SHAFT OPTIONS



BUSHING		
Condition	H	
1	M9-P0.7 5	5
2	M9-P0.7 5	7

**H=5**

	15KQ	20KQ	25K Q
L	15	20	25
I	7	12	12

**H=5**

	15F	20F	25F
L	15	20	25
F	8	10	12

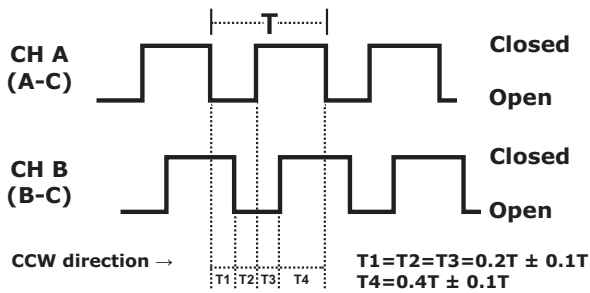
**H=7**

	15KQ	20KQ	25K Q
L	15	20	25
I	7	12	12

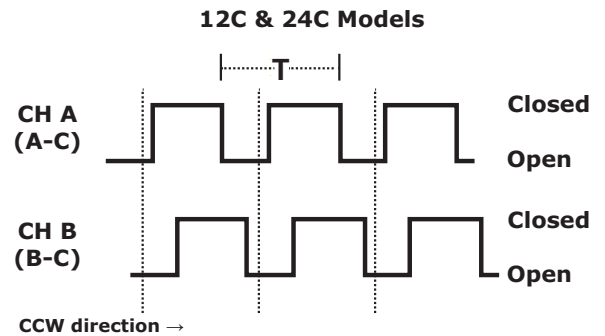
**H=7**

	15F	20F	25F
L	15	20	25
F	8	10	12

### OUTPUT WAVEFORM

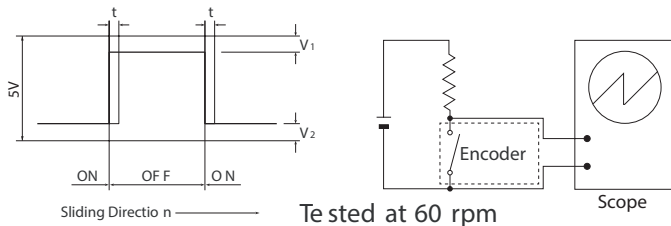


### DETENT POSITIONS

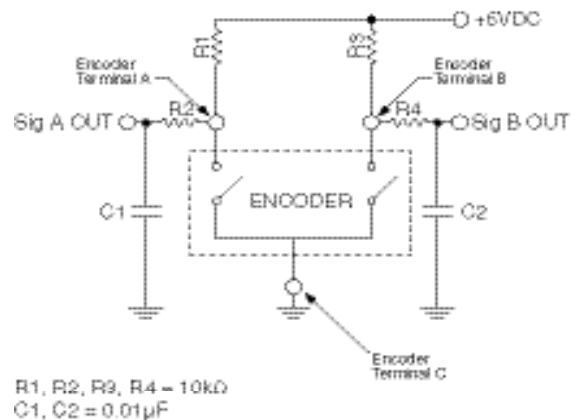


### SLIDING NOISE

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



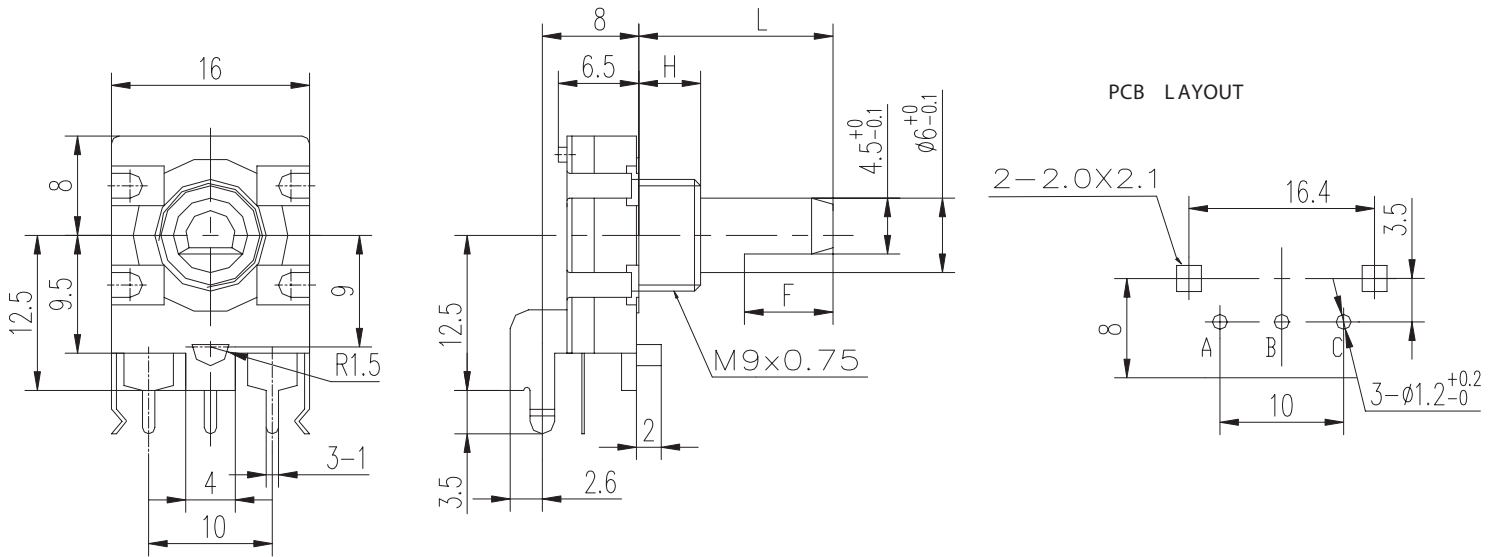
### SUGGESTED FILTER



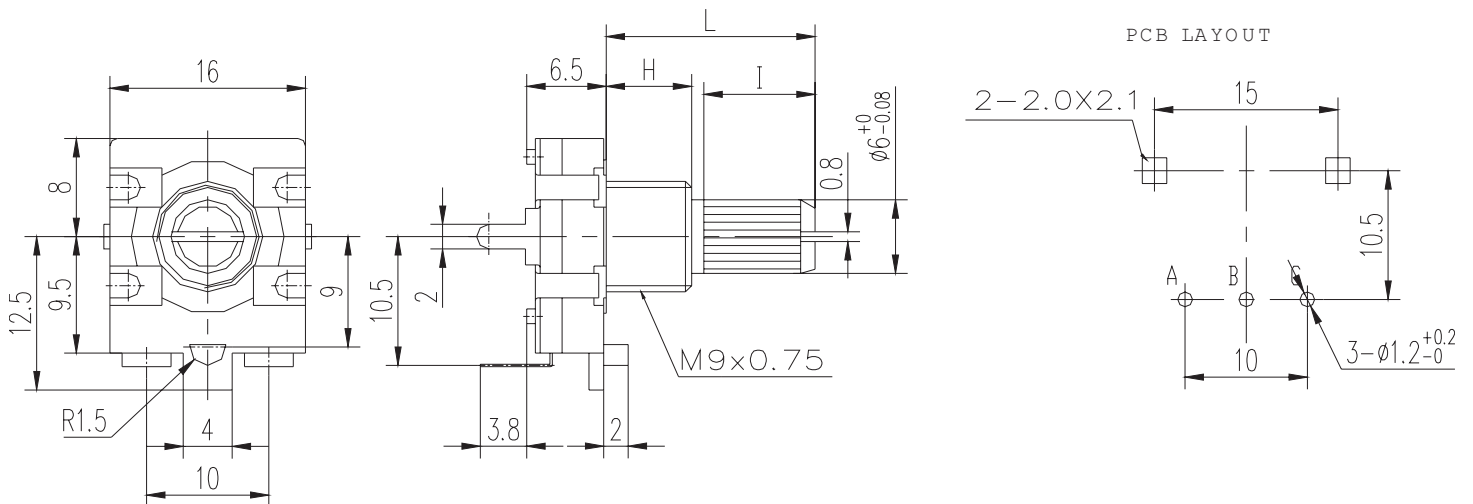
SERIES: ACZ16

DESCRIPTION: mechanical incremental encoder

**MECHANICAL DRAWING (horizontal)**



**MECHANICAL DRAWING (vertical)**



**SERIES:** ACZ16

**DESCRIPTION:** mechanical incremental encoder

**MECHANICAL DRAWING (vertical, push switch)**

