

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 Ω |
| 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

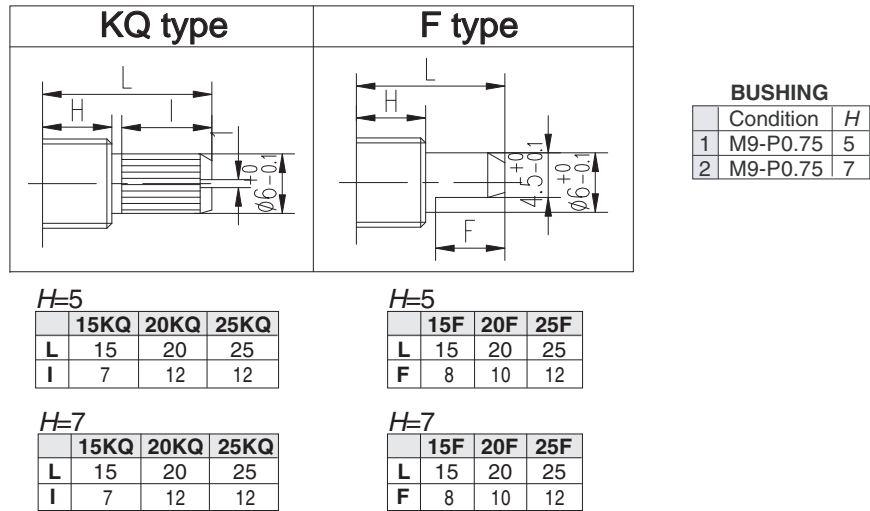
Resolution (ppr):
12 = 12 ppr, no detent
12C = 12 ppr, 12 detent
24 = 24 ppr, no detent
24C = 24 ppr, 24 detent



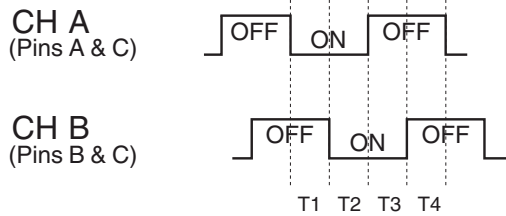
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SHAFT OPTIONS

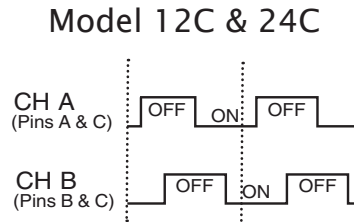


OUTPUT WAVEFORM



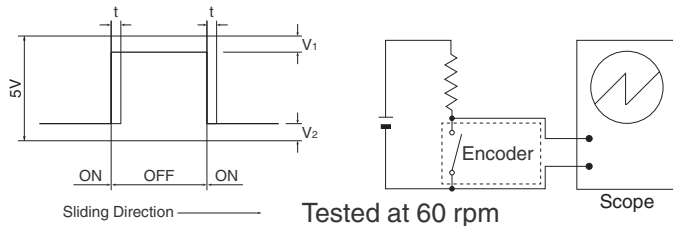
CW direction (@ 60 rpm)

DETENT POSITIONS

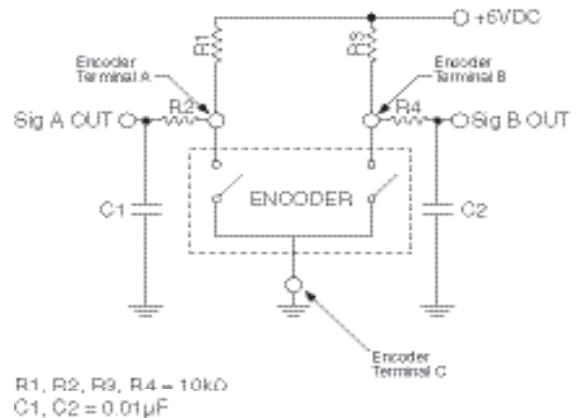


SLIDING NOISE

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



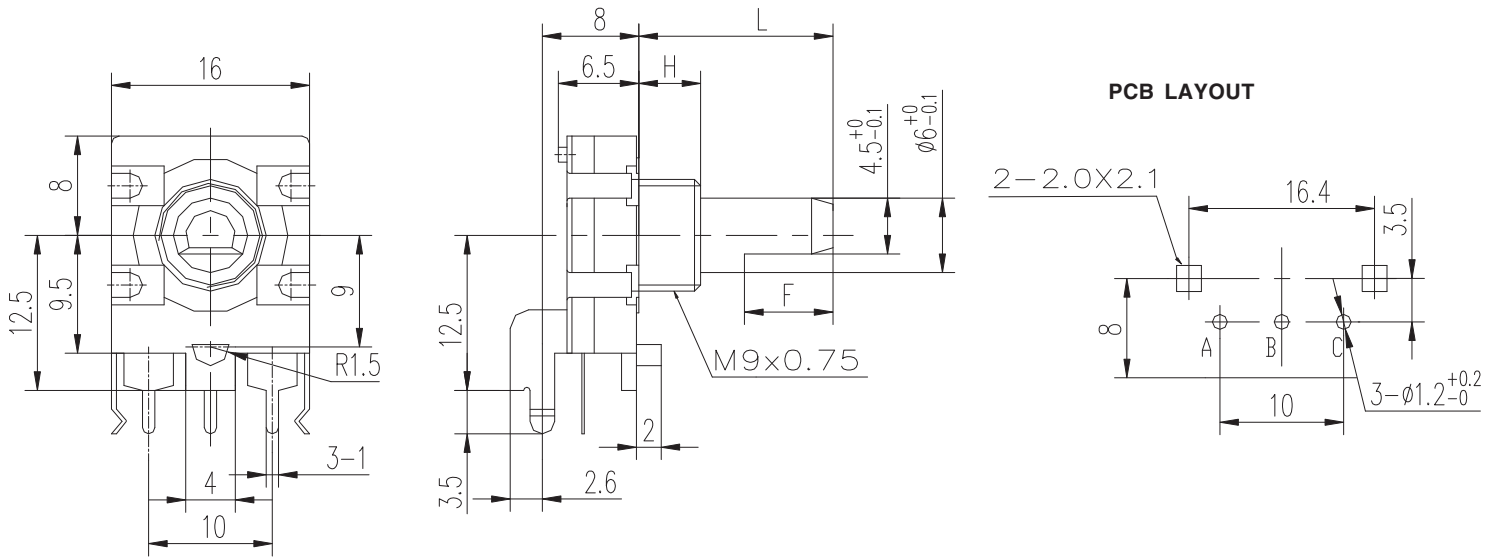
SUGGESTED FILTER



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MECHANICAL DRAWING (horizontal)



MECHANICAL DRAWING (vertical)

