

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 | 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**ACZ16 X BR X E- XX XX X1- XXX**

Version:
 "blank" = switch (momentary)
 N = no switch

Bushing:
 1 = M9 x 0.75 (H = 5)
 2 = M9 x 0.75 (H = 7)

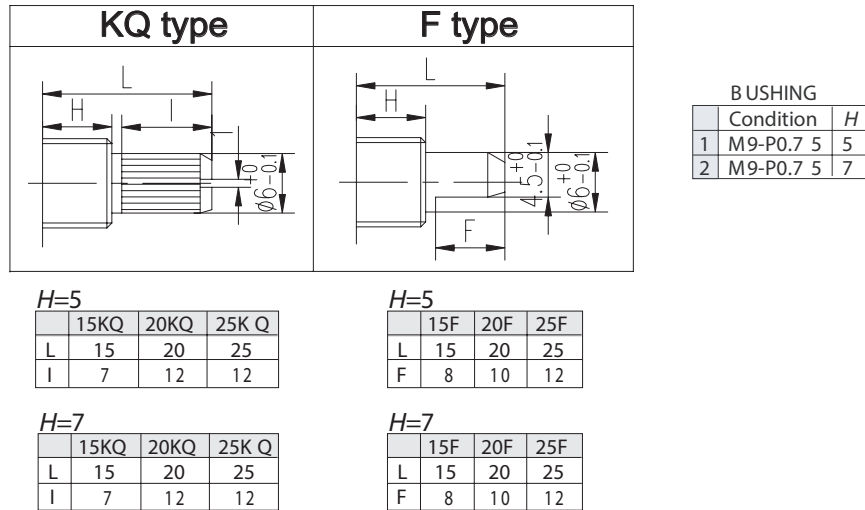
Shaft length:
 15, 20, 25

Shaft
 type:
 KQ, F

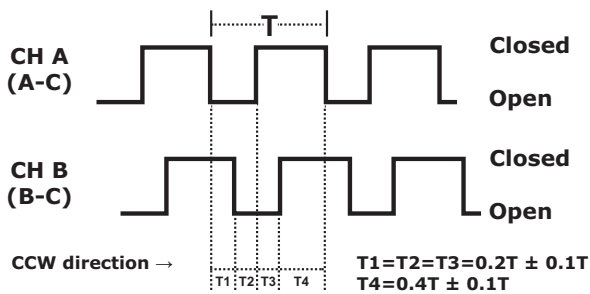
Mounting orientation:
 A = Horizontal
 D = Vertical

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

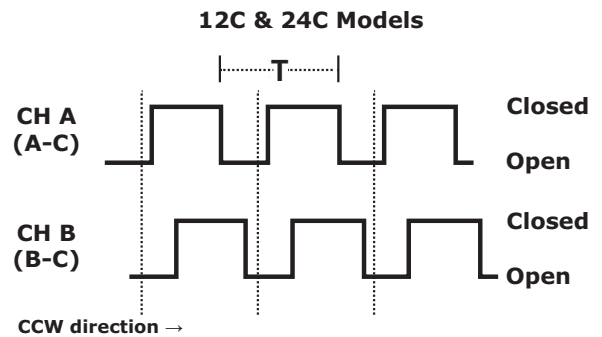
SHAFT OPTIONS



OUTPUT WAVEFORM

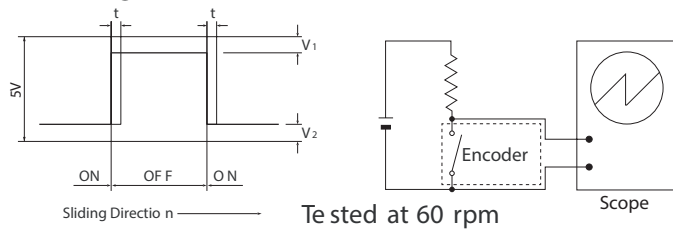


DETENT POSITIONS

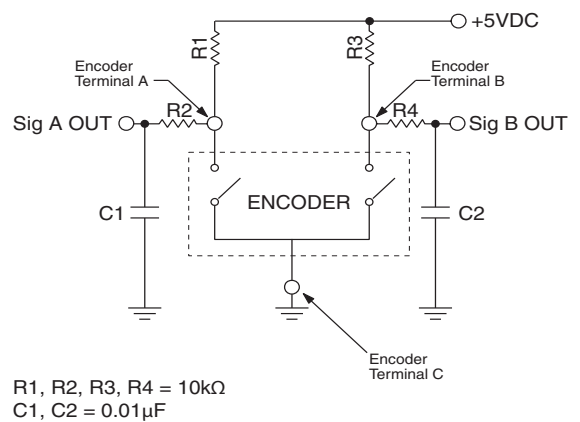


SLIDING NOISE

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

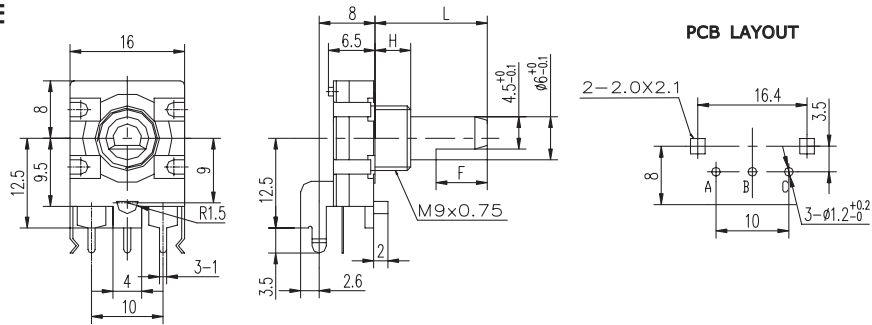


SUGGESTED FILTER

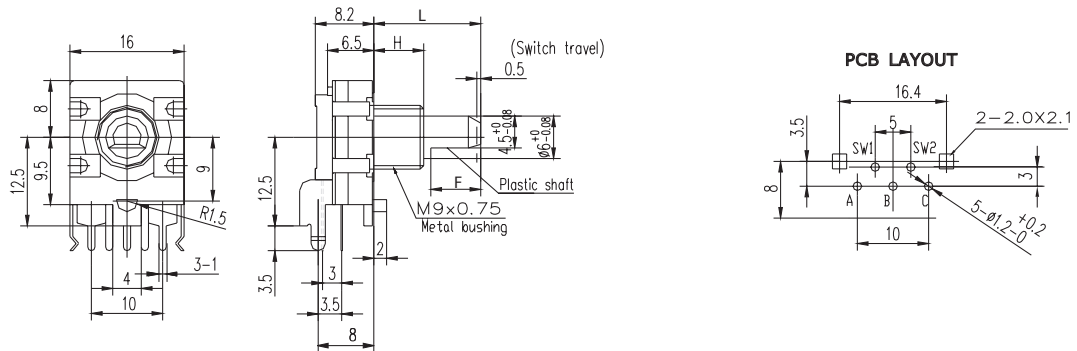


MECHANICAL DRAWING (horizontal)

ACZ16NBRXE

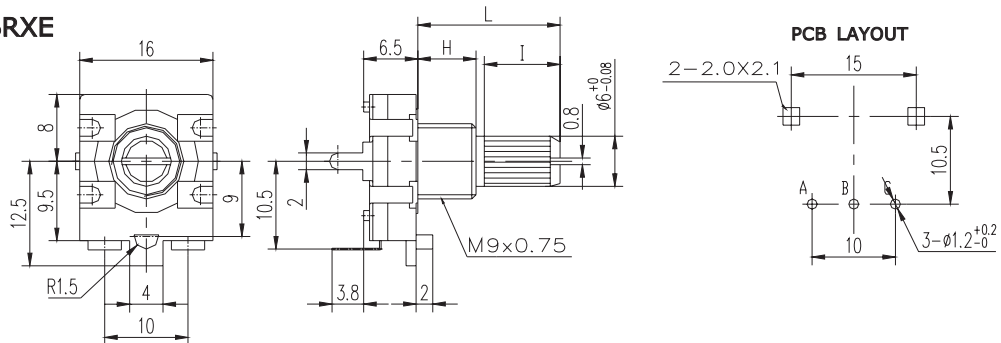


ACZ16BRXE

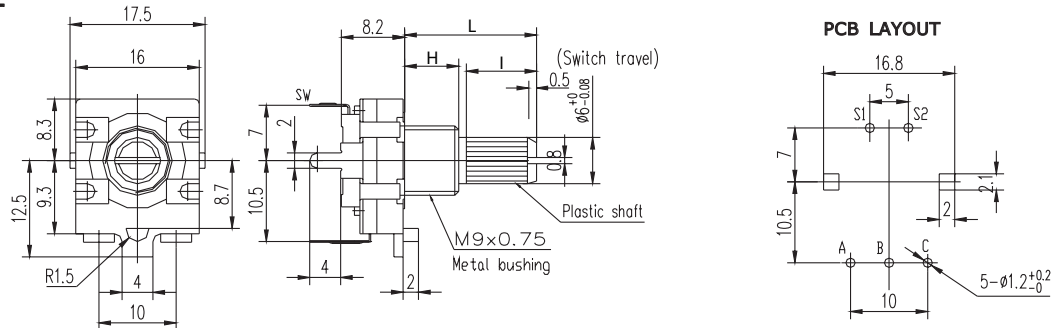


MECHANICAL DRAWING (vertical)

ACZ16NBRXE



ACZ16BRXE



REVISION HISTORY

| rev. | description | date |
|------|-----------------------|------------|
| 1.0 | initial release | 10/30/2009 |
| 1.01 | added storage details | 12/04/2014 |
| 1.02 | brand update | 10/04/2019 |
| 1.03 | updated datasheet | 06/15/2020 |
| 1.04 | updated drawings | 07/14/2020 |

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

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