

SERIES: ACZ16 | **DESCRIPTION:** MECHANICAL INCREMENTAL ENCODER

ELECTRICAL SPECIFICATIONS

| parameter | conditions/description | min | typ | max | units |
|-------------------------|--|-----|-----|-----|-------|
| 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

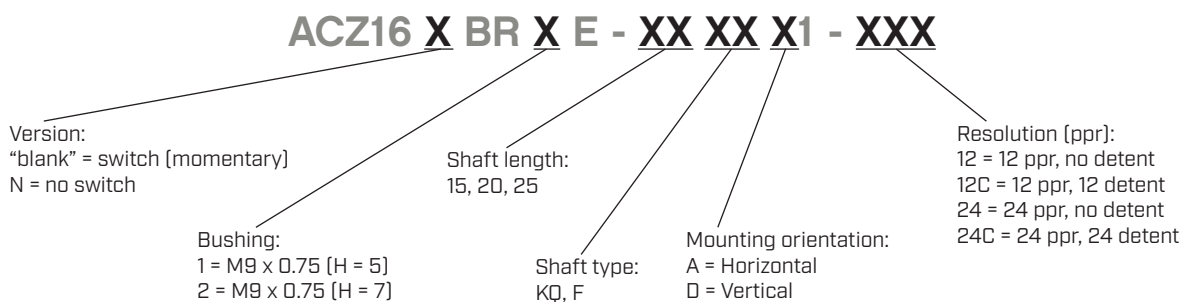
| parameter | conditions/description | min | typ | max | units |
|-------------------|------------------------|-----|-----|---------|--------|
| shaft load | axial | | | 7 | kgf |
| rotational torque | with detent click | 50 | | 130 | gf·cm |
| | without detent click | 90 | | 210 | gf·cm |
| rotational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

ENVIRONMENTAL SPECIFICATIONS

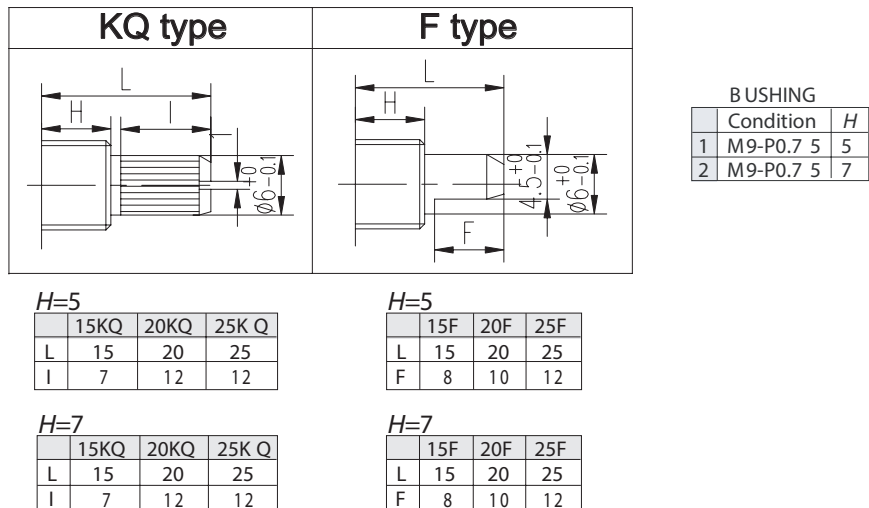
| parameter | conditions/description | min | typ | max | units |
|-----------------------|---------------------------------|-----|-----|-----|-------|
| operating temperature | | -10 | | 65 | °C |
| storage temperature | | -40 | | 75 | °C |
| humidity | | 85 | | | % RH |
| vibration | 0.75 mm max. travel 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.

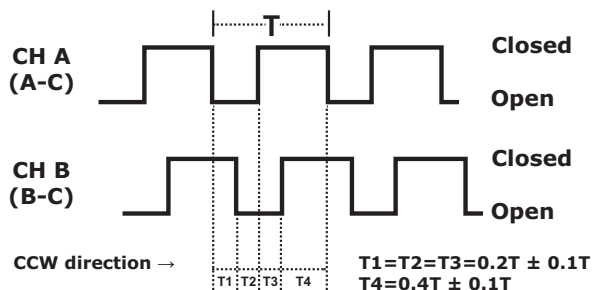
PART NUMBER KEY



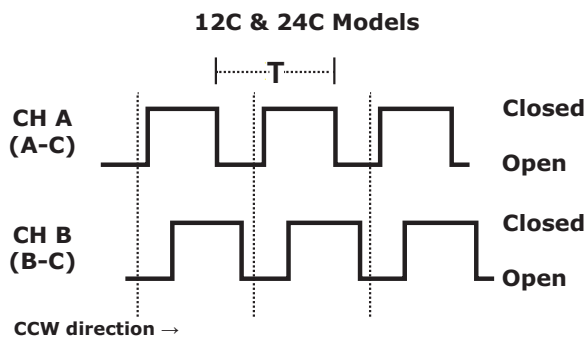
SHAFT OPTIONS



OUTPUT WAVEFORM

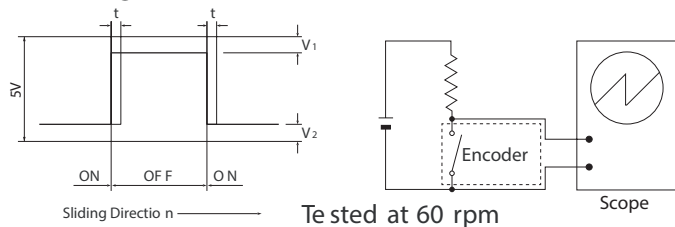


DETENT POSITIONS

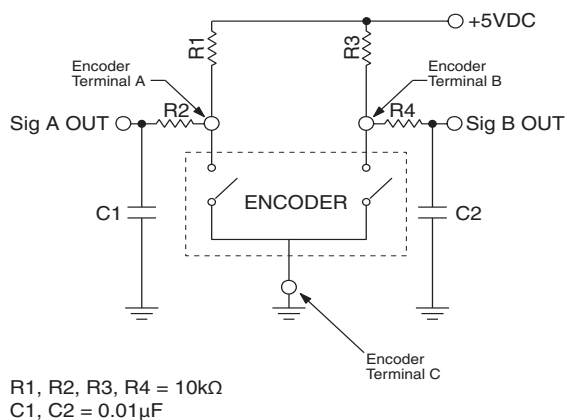


SLIDING NOISE

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

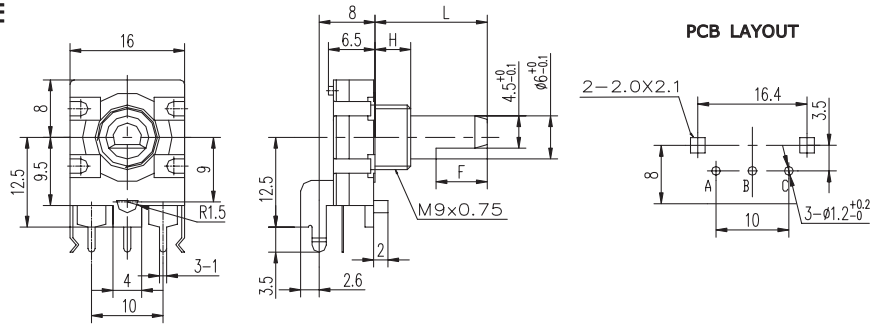


SUGGESTED FILTER

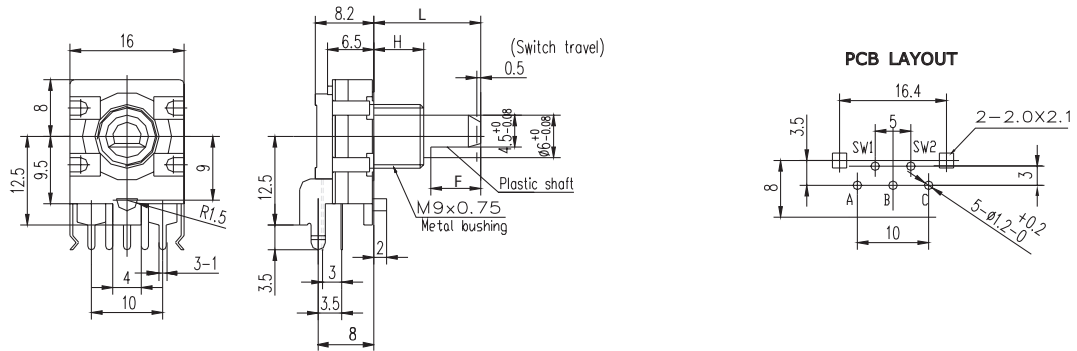


MECHANICAL DRAWING (HORIZONTAL)

ACZ16NBRXE

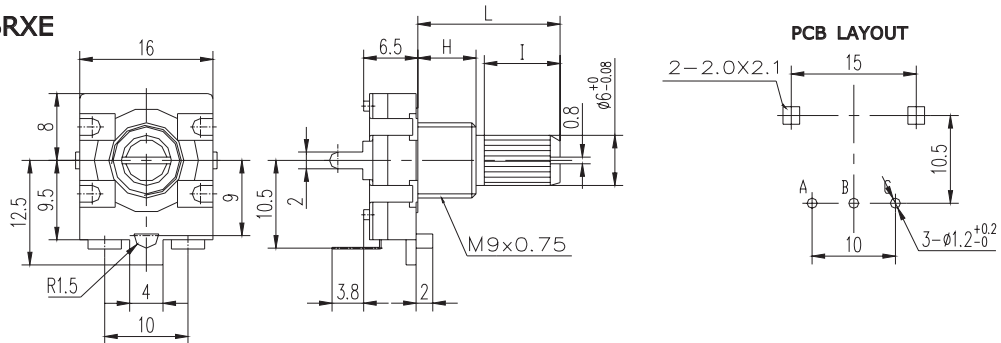


ACZ16BRXE

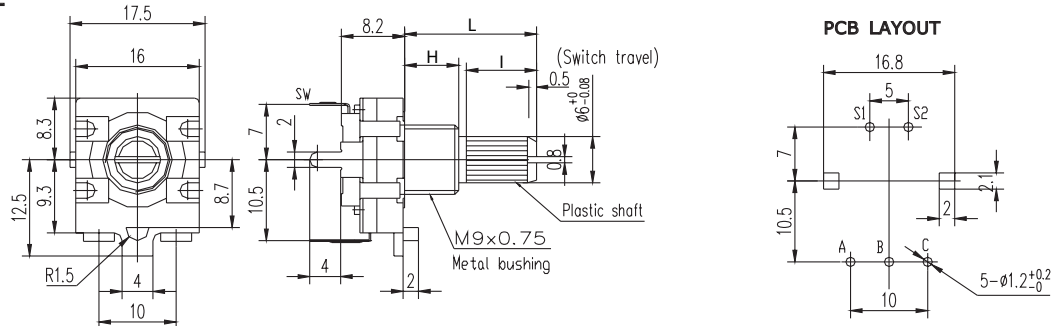


MECHANICAL DRAWING (VERTICAL)

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 |
| 1.05 | logo, datasheet style update | 09/08/2022 |

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



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