

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 |

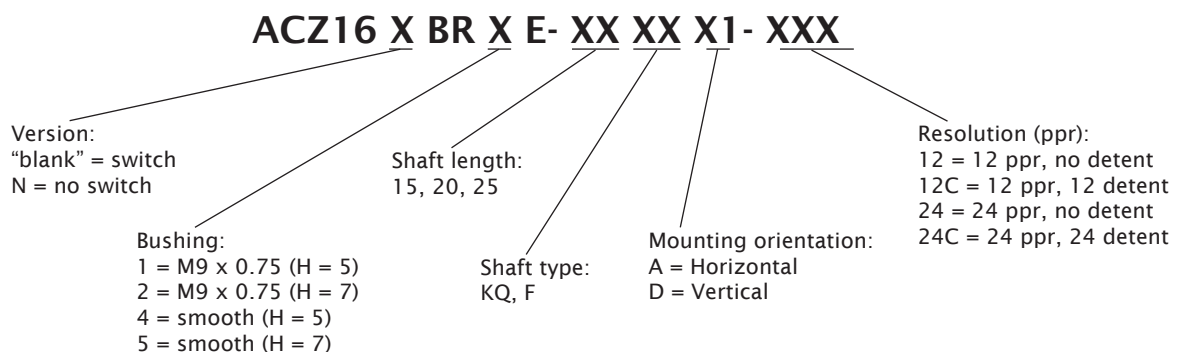
MECHANICAL SPECIFICATIONS

| 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

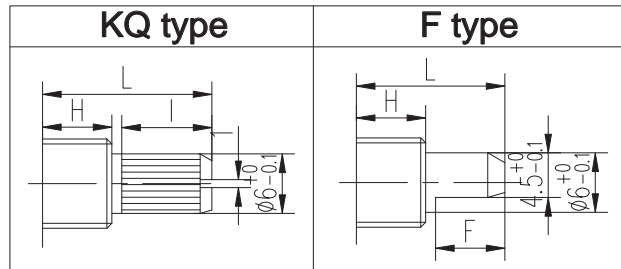
| parameter | conditions/description | min | nom | max | units |
|-----------------------|---------------------------------|-----|-----|-----|--------------|
| operating temperature | | -10 | | 65 | $^{\circ}$ C |
| storage temperature | | -40 | | 75 | $^{\circ}$ C |
| humidity | | 85 | | | % RH |
| vibration | 0.75 mm max. travel for 2 hours | 10 | | 55 | Hz |

PART NUMBER KEY



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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

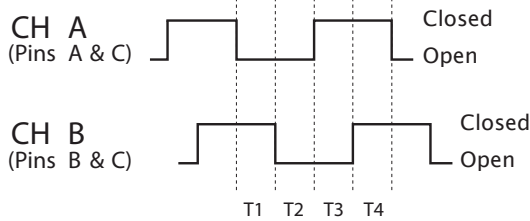
| | 15F | 20F | 25F |
|---|-----|-----|-----|
| L | 15 | 20 | 25 |
| F | 8 | 10 | 12 |

H=7

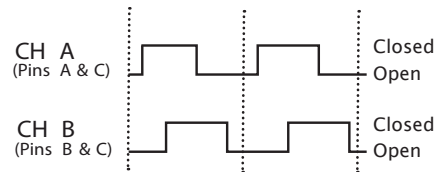
| | 15KQ | 20KQ | 25K Q |
|---|------|------|-------|
| L | 15 | 20 | 25 |
| I | 7 | 12 | 12 |

H=7

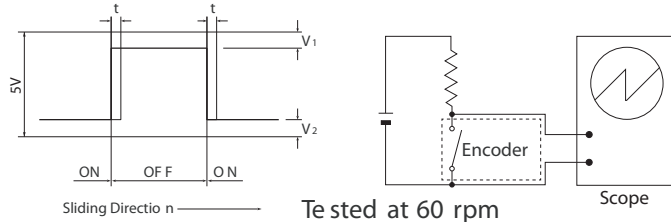
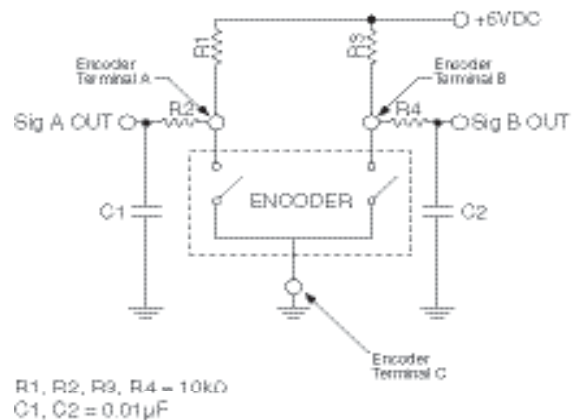
| | 15F | 20F | 25F |
|---|-----|-----|-----|
| L | 15 | 20 | 25 |
| F | 8 | 10 | 12 |

OUTPUT WAVEFORM


CW direction (@ 60 rpm)

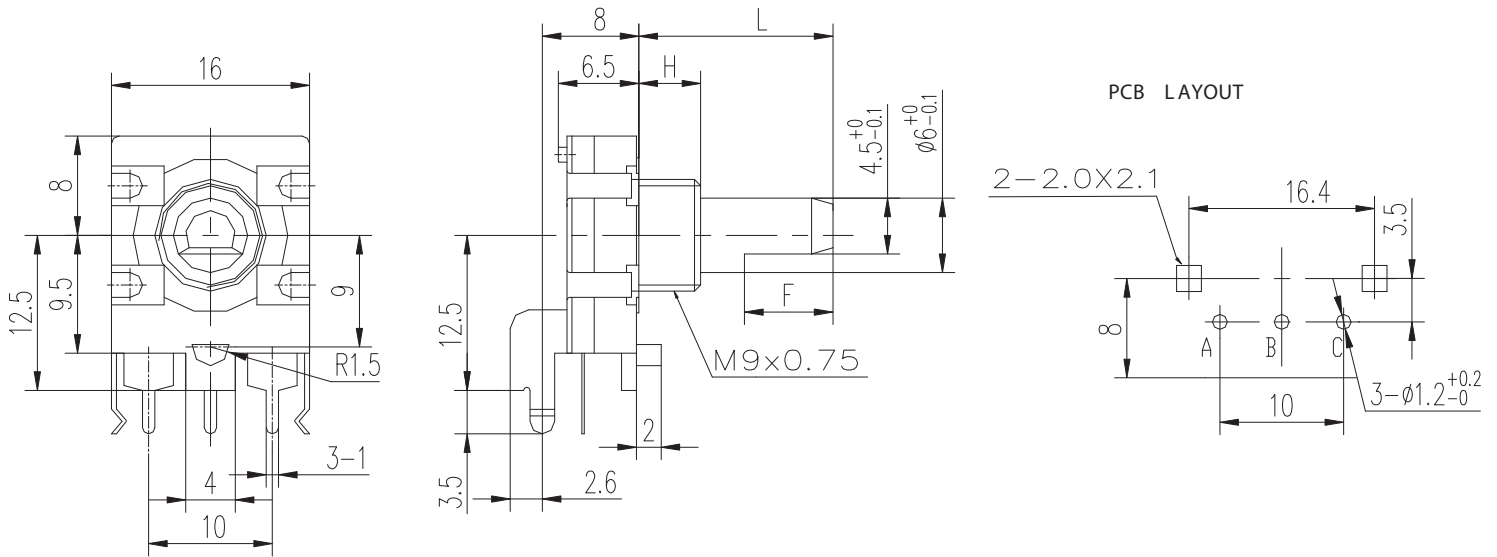
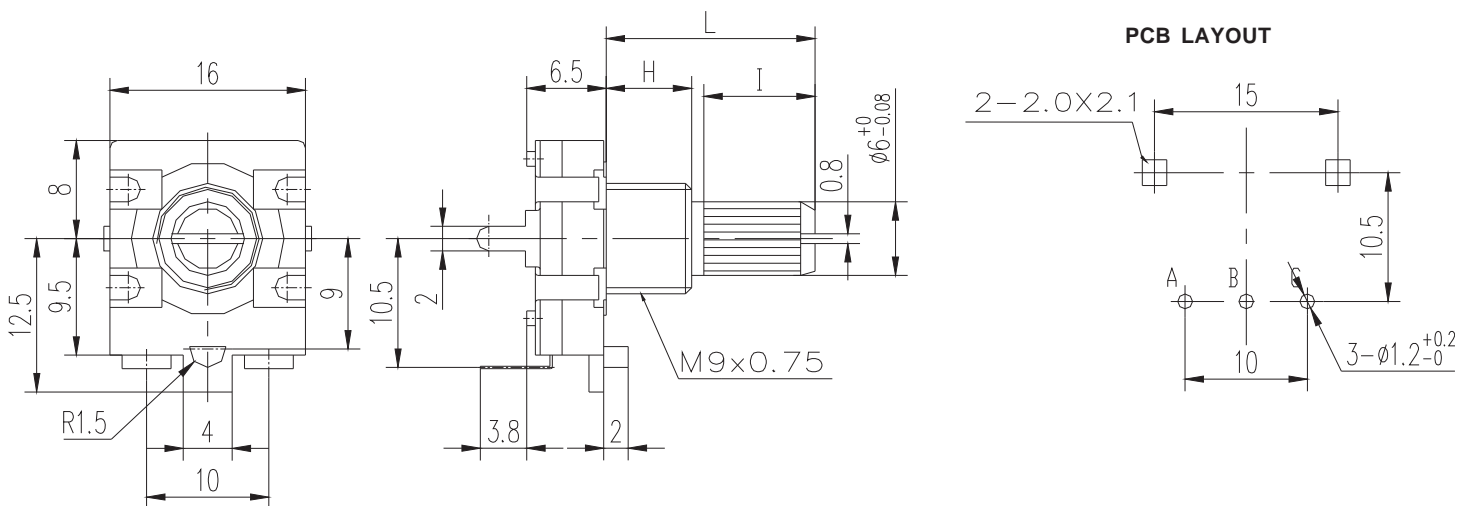
DETENT POSITIONS
Model 12C & 24C


CW direction →

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

SUGGESTED FILTER


SERIES: ACZ16

DESCRIPTION: mechanical incremental encoder

MECHANICAL DRAWING (horizontal)

MECHANICAL DRAWING (vertical)


SERIES: ACZ16

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MECHANICAL DRAWING (vertical, push switch)
