

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 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

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

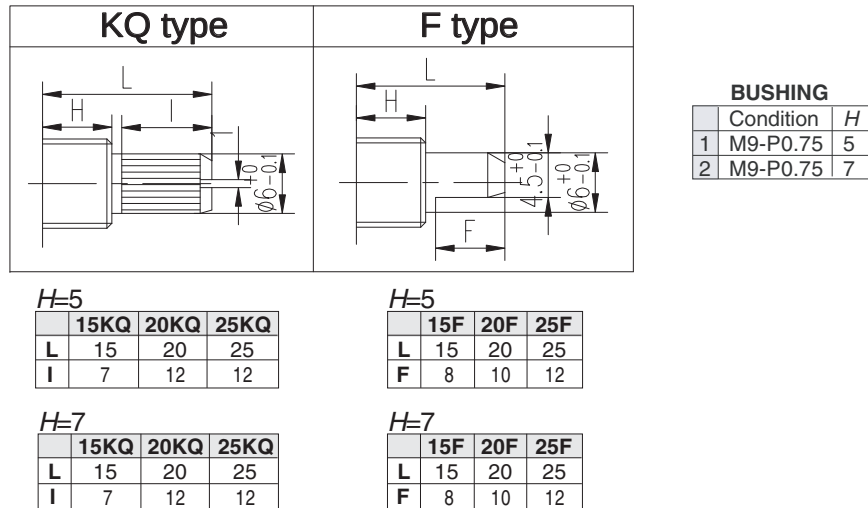
Resolution (ppr):
12 = 12 ppr, no detent
12C = 12 ppr, 12 detent
24 = 24 ppr, no detent
24C = 24 ppr, 24 detent



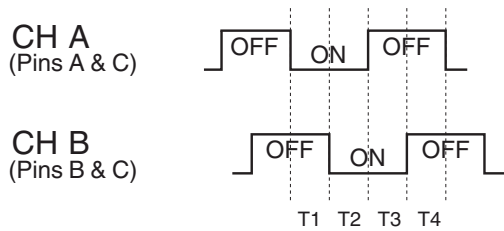
SERIES: ACZ16

DESCRIPTION: mechanical incremental encoder

SHAFT OPTIONS



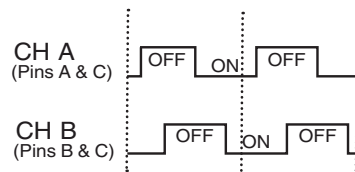
OUTPUT WAVEFORM



CW direction (@ 60 rpm)

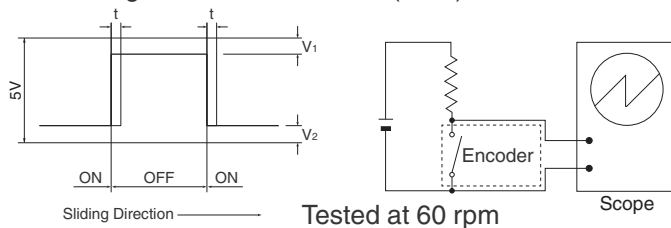
DETENT POSITIONS

Model 12C & 24C

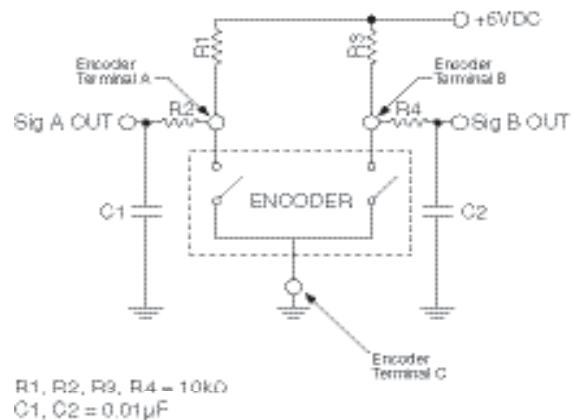


SLIDING NOISE

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



SUGGESTED FILTER





page 3 of 3

DESCRIPTION: mechanical incremental encoder

[illegible]

Technical drawing of a mechanical part showing dimensions and tolerances. The drawing includes a top view and a side view. The top view shows a rectangular part with a width of 16.4 and a height of 3.5. The side view shows a rectangular part with a width of 10 and a height of 8. The part has three holes, labeled A, B, and C, with a diameter of $3-\phi 1.2^{+0.2}_{-0}$. The distance between the centers of the holes is 16.4. The distance from the left edge to the center of the first hole is 3.5. The distance from the center of the first hole to the center of the second hole is 10. The distance from the center of the second hole to the center of the third hole is 10. The distance from the center of the third hole to the right edge is 3.5. The part is labeled with the dimensions 2-2.0X2.1.

Technical drawing of a 1/4 turn ball valve. The drawing includes a front view (left) and a side view (right). Dimensions are provided in millimeters.

Front View Dimensions:

- Overall width: 16
- Top flange thickness: 8
- Distance from top flange to ball center: 9.5
- Ball diameter: 12.5
- Distance from ball center to bottom flange: 9
- Bottom flange thickness: 4
- Overall height: 10
- Radius of the ball: R1.5

Side View Dimensions:

- Overall length: L
- Distance from front flange to ball center: 6.5
- Ball diameter: $\varnothing 6_{-0.08}^{+0}$
- Distance from ball center to rear flange: I
- Rear flange thickness: 0.8
- Distance from front flange to rear flange: H
- Distance from front flange to ball center: 10.5
- Distance from ball center to rear flange: 3.8
- Distance from ball center to rear flange: 2
- Thread specification: M9x0.75

Technical drawing of a mechanical part (Fig. 1.10). The part is a stepped shaft with a total length of 15 units. It has a diameter of 2 units for the first 10 units and a diameter of 1.2 units for the last 5 units. The part is supported by two bearings, A and B, which are 10 units apart. The distance from the left end to bearing A is 5 units, and from bearing B to the right end is 5 units. The part is fixed to a wall on the left. The drawing shows the part in a perspective view with dimensions and tolerances.