

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

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

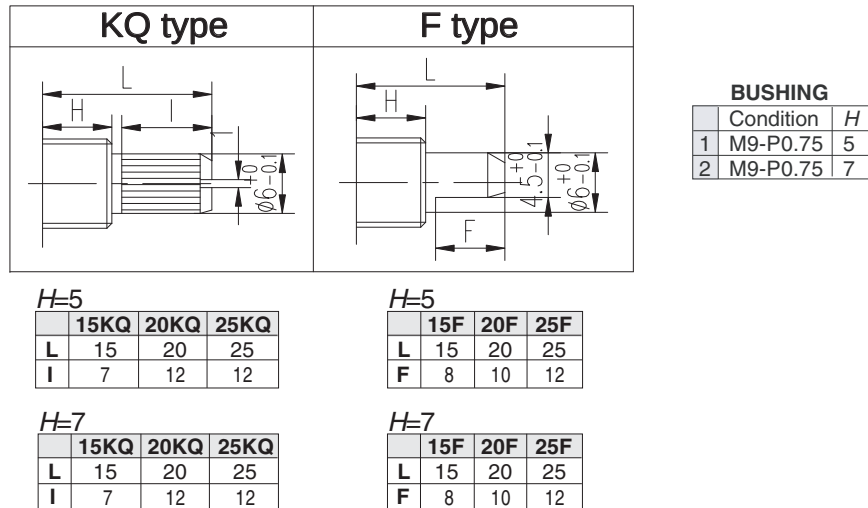
Resolution (ppr):
12 = 12 ppr, no detent
12C = 12 ppr, 12 detent
24 = 24 ppr, no detent
24C = 24 ppr, 24 detent



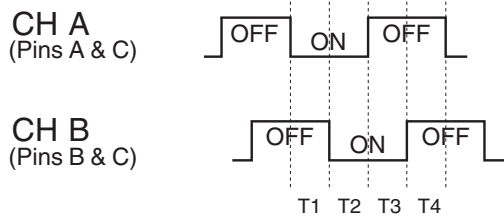
SERIES: ACZ16

DESCRIPTION: mechanical incremental encoder

SHAFT OPTIONS



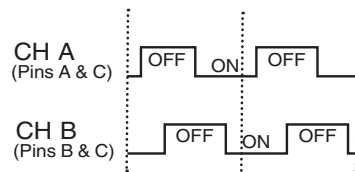
OUTPUT WAVEFORM



CW direction (@ 60 rpm)

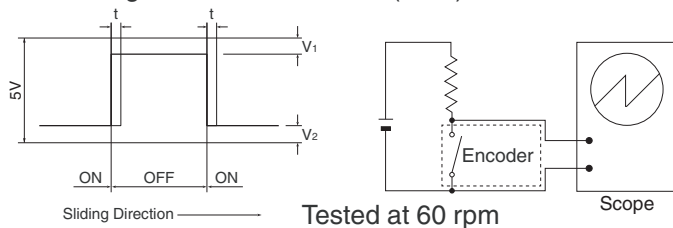
DETENT POSITIONS

Model 12C & 24C

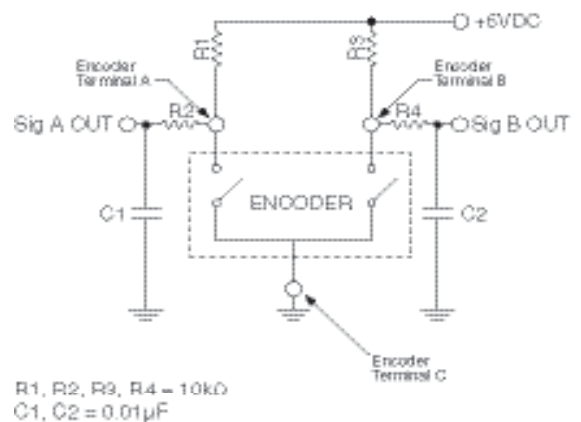


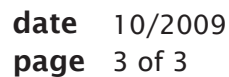
SLIDING NOISE

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



SUGGESTED FILTER





DESCRIPTION: mechanical incremental encoder

Technical drawing of a mechanical part, showing front and side views with dimensions.

Front View (Left):

- Overall width: 16
- Overall height: 12.5
- Top flange thickness: 8
- Distance from top flange to center of mounting holes: 9.5
- Distance from center of mounting holes to center of bottom flange: 9
- Radius of bottom flange: R1.5
- Distance from center of mounting holes to center of bottom flange (horizontal): 4
- Distance from center of mounting holes to center of bottom flange (horizontal): 3-1
- Overall width of bottom flange: 10

Side View (Right):

- Overall height: 12.5
- Distance from top flange to center of mounting holes: 8
- Distance from center of mounting holes to center of bottom flange: 6.5
- Distance from center of mounting holes to center of bottom flange: H
- Distance from center of mounting holes to center of bottom flange: L
- Distance from center of mounting holes to center of bottom flange: 4.5⁺⁰_{-0.1}
- Distance from center of mounting holes to center of bottom flange: $\phi 6_{-0.1}^{+0}$
- Distance from center of mounting holes to center of bottom flange: F
- Thread specification: M9x0.75
- Distance from center of mounting holes to center of bottom flange: 2
- Distance from center of mounting holes to center of bottom flange: 2.6
- Distance from center of mounting holes to center of bottom flange: 3.5

[illegible]

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.