

※ IHA6012 SERIES

Hollow shaft encoder, axis inside diameter $\Phi 12$ mm, ($\Phi 6$ mm, $\Phi 6.35$ mm, $\Phi 8$ mm, $\Phi 10$ mm on order), housing diameter $\Phi 60$ mm.

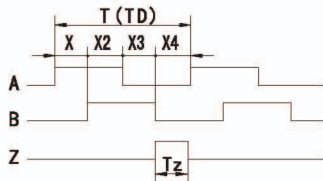
With flex bracket flange, easy for installing, light weight, stable output.

Applications:

Computer numerical control tooling machines

Output waveform

90° Output phase difference, CW rotation (CW rotation as seen from fit surface)



Square-wave accuracy: $X_1 + X_2 = 1/2T \pm 1/12T$

$$X_3 + X_4 = 1/2T \pm 1/12T$$

Pitch error of period: $\pm 0.01T$

Pitch error of phase position: $\leq 1/18T$

Z phase: $T_z = 1/4T$ (1T, 1/2T, 1/4T...)

Period of pulses: $T = 360^\circ / N$ (N : output pulses)

Signal accuracy: $X_n = 1/4T \pm 1/12T$ (n=1, 2, 3, 4)

A leads B clockwise when viewing the encoder shaft end, The position of Z phase against A, B phase is not specified.

Terminal assignment

Signal	+5V	0V	SIG A	SIG \bar{A}	SIG B	SIG \bar{B}	SIG Z	SIG \bar{Z}	Shield
Cable Color	Red	Black	Green	Brown	White	Grey	Yellow	Orange	N.C

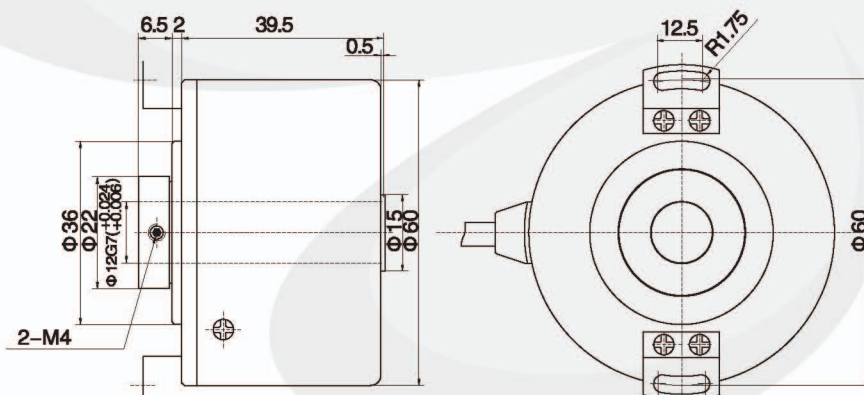
Note: Shield is attached to connector housing, One meter cable lengths (other cable lengths on order).

Ordering code

IHA6012	—	401	G	1024	BZ1	—	5	L
Series		Sequence Number	Connection	Number of Pulses	Output Signals		Supply Voltage	Output Circuit

Series: IHA6012, Radial cable: G, Number of pulses: 1024 p/r, Output signals: ABZ, $T_z = 1T$, Supply voltage: 5V DC, Output circuit: Line driver, Record: IHA6012-401G1024BZ1-5L

Dimensions



TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS	
Output wave	Square wave
Output signals	A, B, Z, (Line driver output A, \bar{A} , B, \bar{B} , Z, \bar{Z} phase)
Current consumption	≤ 150 mA
Response Frequency	0~100KHz
Output phase difference	$90^\circ \pm 45^\circ$
Supply voltage	5V DC, 5-12V DC, 12-24V DC
Signal level	$V_H \geq 85\%V_{CC}$, $V_L \leq 0.3V$
Number of pulses	120, 200, 250, 300, 360, 400, 500, 600, 740, 800, 900, 1000, 1024, 1200, 1500, 1800, 2000, 2048, 2500, 3000, 3600 (Other number of pulse available on request)
Output circuit	Open collector NPN, Push pull, Line driver, Voltage
MECHANICAL SPECIFICATIONS	
Speed without sealing	6000rpm
Rotor moment of inertia	Appr. 4.0×10^{-4} Kg m^2
Starting torque without sealing	$\leq 2.5 \times 10^{-3}$ Nm (+25°C)
Maximum load permitted on shaft	Radial 20N, Axial 10N
Shock resistance	980m/s 2 , 6ms, 2 times each on XYZ
Vibration proof	50m/s 2 , 10~200Hz, 2 hours each on XYZ
Working life	MTBF ≥ 10000 h (+25°C, 2000rpm)
Weight	Appr. 250g (with 1 meter cable)
ENVIRONMENTAL SPECIFICATIONS	
Working humidity	30~85% (No condensation)
Storage temperature	-30°C~85°C
Working temperature	-10°C~70°C
Protection class	IP54