

※ ISC3004 SERIES



Shaft diameter $\Phi 4$ mm or $\Phi 6$ mm , clamping flange, housing diameter $\Phi 30$ mm.

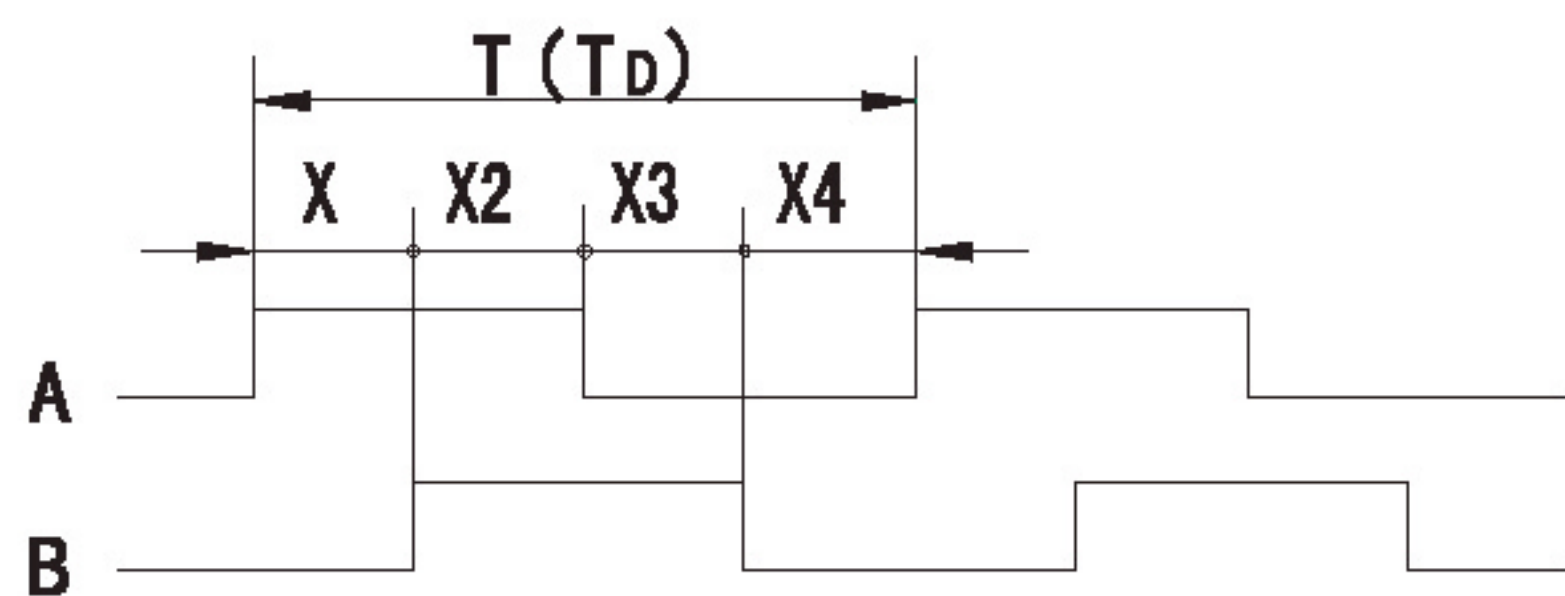
Low price at high performance, small volume, light weight, easy for installing,

Applications:

Measure the speed, and measure the distance, shoe making machines, molding 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: $\leq 1/18T$

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,
Usually, ISC3004 don't have Z phase.

◇ **Terminal assignment**

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

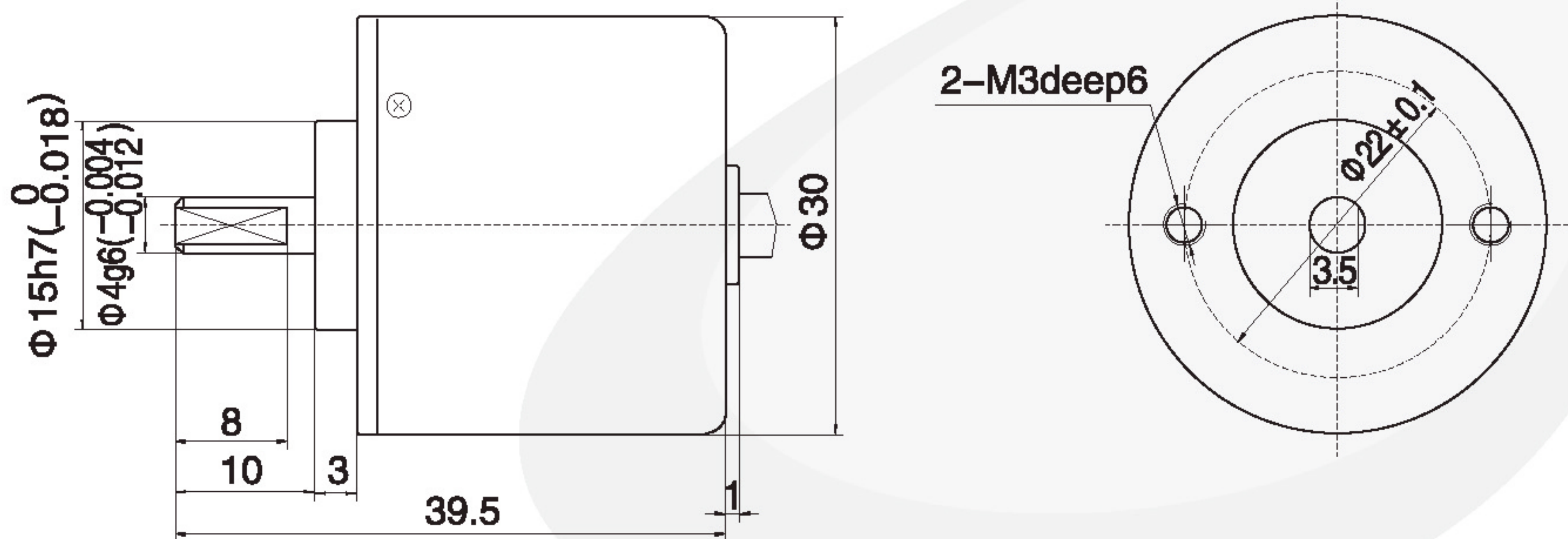
Note: Shield is attached to connector housing, 0.5 meter cable lengths (other cable lengths on order).

◇ **Ordering code**

ISC3004	—	901	E	360	B	—	5	L
Series		Sequence Number	Connection	Number of Pulses	Output Signals		Supply Voltage	Output Circuit

Series: ISC3004, Axial cable: E, Number of pulses: 360 p/r, Output signals: A $\bar{A}$ B $\bar{B}$, Supply voltage: 5V DC, Output circuit: Line driver, Record: ISC3004-901E360B-5L

◇ **Dimensions**



◇ **TECHNICAL SPECIFICATIONS**

ELECTRICAL SPECIFICATIONS	
Output wave	Square wave
Output signals	A, B, (Line driver output A, $\bar{A}$, B, $\bar{B}$ phase)
Current consumption	$\leq 120\text{mA}$
Response Frequency	0~80KHz
Output phase difference	$90^\circ \pm 45^\circ$
Supply voltage	5V DC, 7-12V DC, 12-24V DC
Signal level	$V_H \geq 85\%V_{CC}$, $V_L \leq 0.3V$
Number of pulses	100, 200, 300, 360, 500 (Other number of pulse available on request)
Output circuit	Open collector NPN, Push pull, Voltage, Line driver(5V DC only)
MECHANICAL SPECIFICATIONS	
Speed without sealing	3000rpm
Rotor moment of inertia	Appr. $3.5 \times 10^{-6} \text{Kg} \cdot \text{m}^2$
Starting torque without sealing	$\leq 2.0 \times 10^{-3} \text{Nm}$ (+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 $\geq 20000\text{h}$ (+25°C, 2000rpm)
Weight	Appr. 60g (with 0.5 meter cable)
ENVIRONMENTAL SPECIFICATIONS	
Working humidity	30~85% (No condensation)
Storage temperature	-40°C~100°C
Working temperature	-25°C~85°C
Protection class	IP54