

## ※ IHC3808 SERIES

Blind and hollow shaft encoder, axis inside diameter  $\Phi 8\text{mm}$ ,  $\Phi 6$  &  $\Phi 6.35\text{mm}$ (Option), housing diameter  $\Phi 38\text{mm}$ .

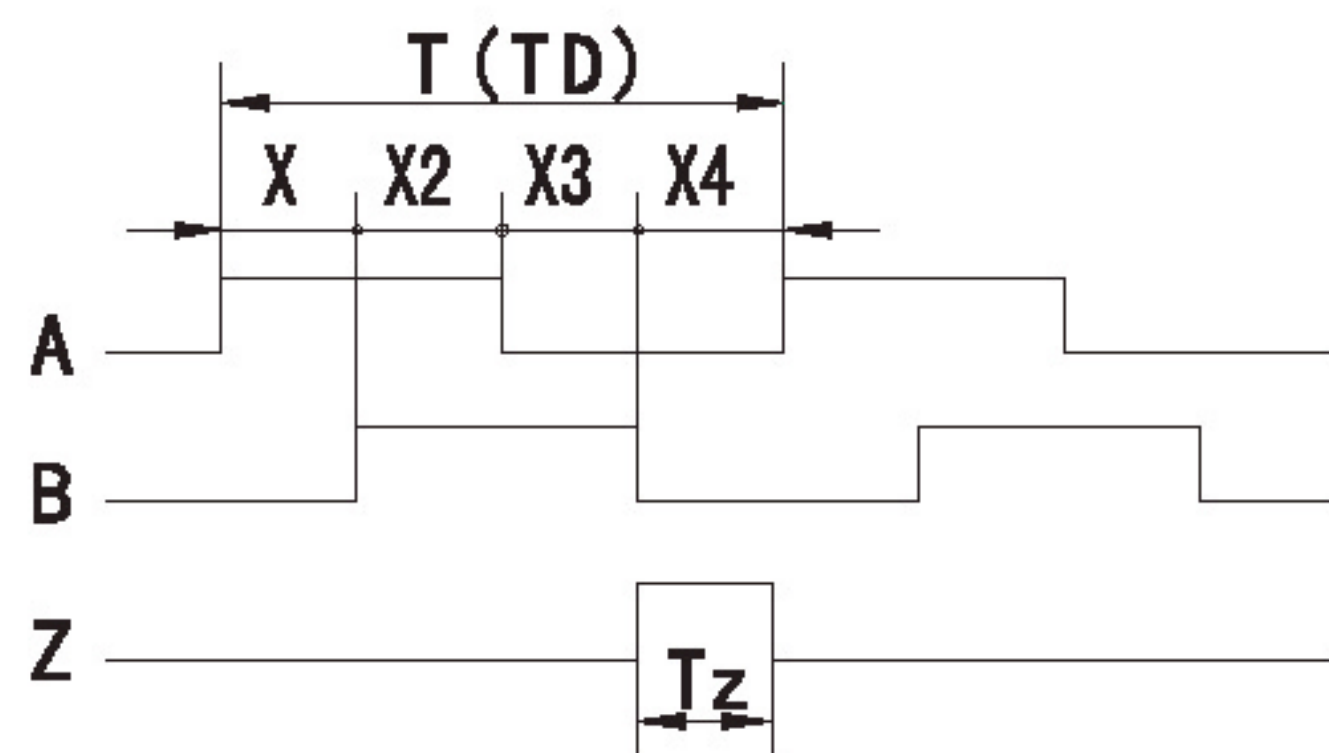
With flex bracket flange, easy for installing, small volume, light weight, stable output.

### Applications:

Computerized embroidery punching machine, textile 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

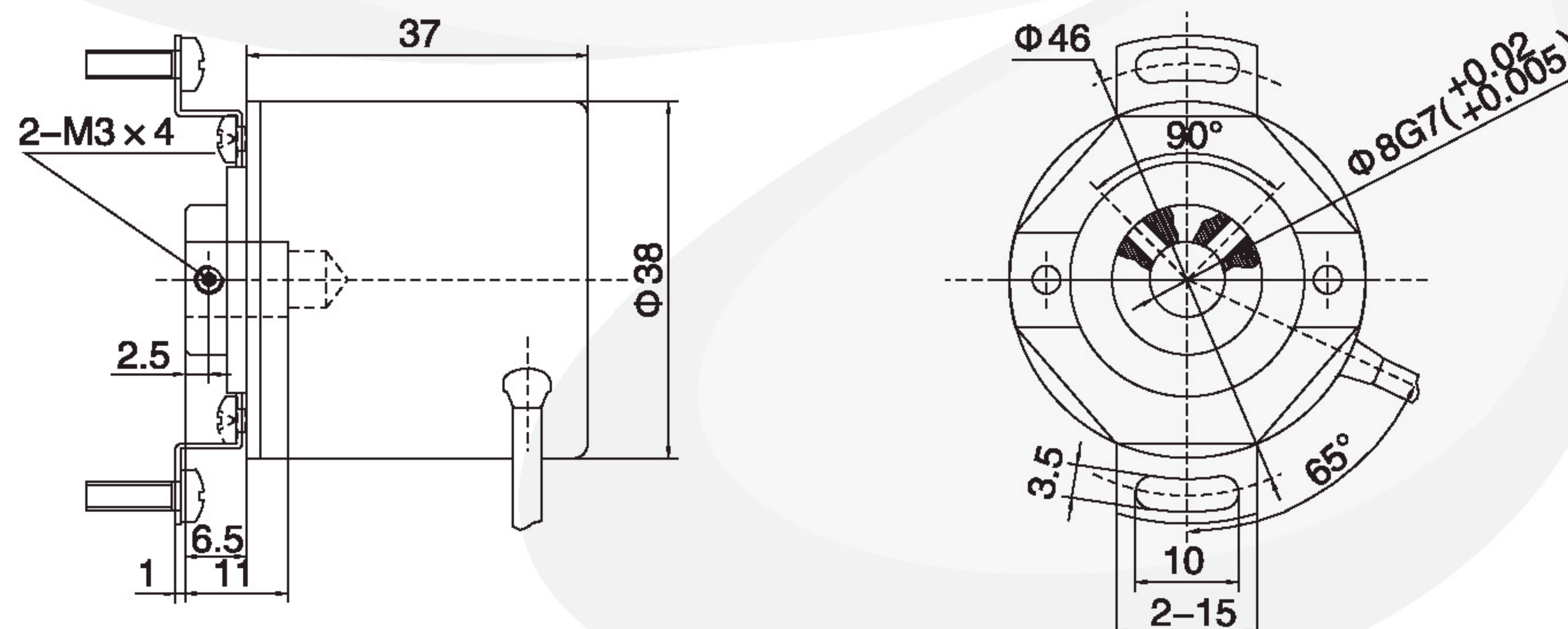
Note: Shield is attached to connector housing, One meter cable lengths (other cable lengths on order).

### Ordering code

IHC3808	—	401	G	600	BZ1	—	12-24	C
Series		Sequence Number	Connection	Number of Pulses	Output Signals		Supply Voltage	Output Circuit

Series: IHC3808, Radial cable: G, Number of pulses: 600 p/r, Output signals: ABZ,  $T_z = 1T$ , Supply voltage: 12-24V DC, Output circuit: Open collector NPN, Record: IHC3808-401G600BZ1-12-24C

### 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	$\leq 120\text{mA}$
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	100, 120, 125, 150, 180, 200, 240, 250, 300, 360, 400, 500, 600, 720, 800, 900, 960, 1000, 1024, 1200, 1250, 1440, 1500, 1800, 2000, 2048, 2500 (Other number of pulse available on request)
Output circuit	Open collector NPN, Push pull, Line driver, Voltage
MECHANICAL SPECIFICATIONS	
Speed without sealing	4500rpm
Rotor moment of inertia	Appr. $3.5 \times 10^{-8} \text{Kgm}^2$
Starting torque without sealing	$\leq 5.0 \times 10^{-4} \text{Nm}$ (+25°C)
Maximum load permitted on shaft	Radial 20N, Axial 10N
Shock resistance	$980\text{m/s}^2$ , 6ms, 2 times each on XYZ
Vibration proof	$50\text{m/s}^2$ , 10~200Hz, 2 hours each on XYZ
Working life	MTBF $\geq 25000\text{h}$ (+25°C, 2000rpm)
Weight	Appr. 140g (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