

※ 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

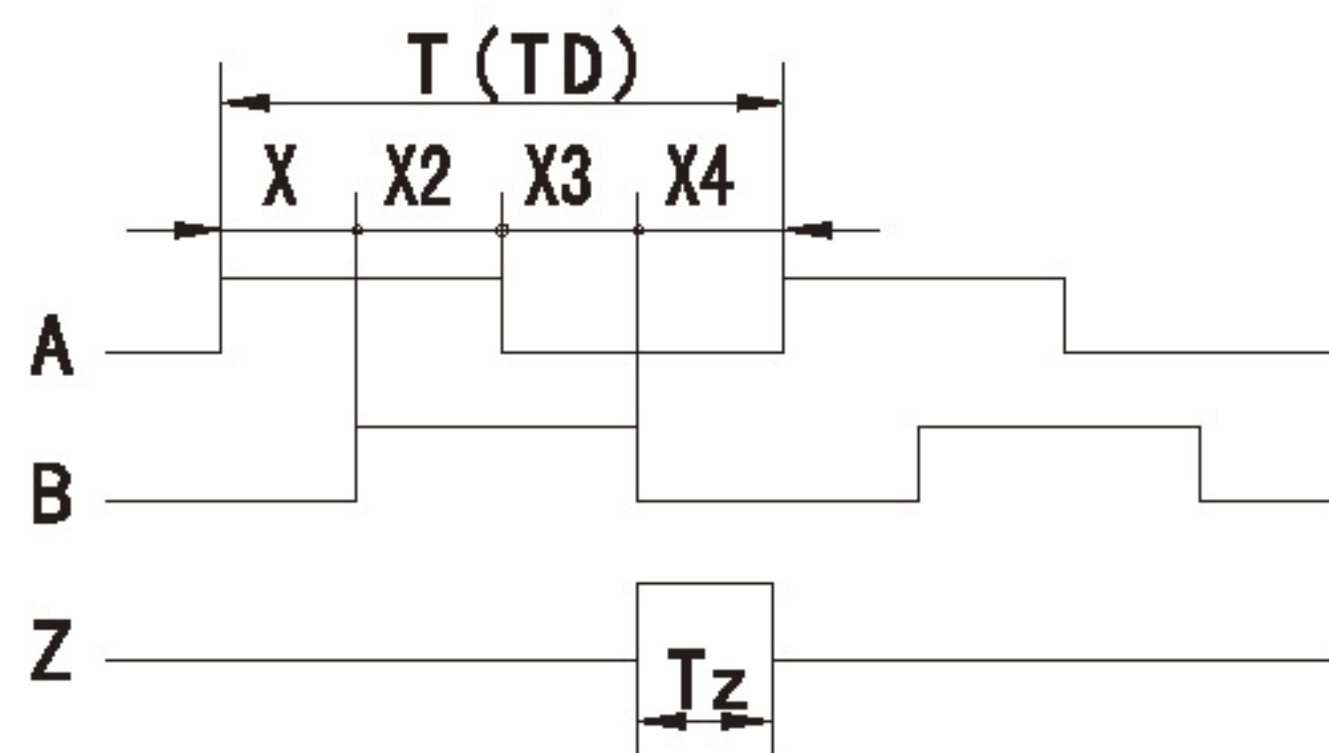


◆ TECHNICAL SPECIFICATIONS

| ELECTRICAL SPECIFICATIONS | |
|---------------------------------|--|
| Output wave | Square wave |
| Output signals | A, B, Z, (Line driver output A, A, B, B, Z, 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 | 980m/s^2 , 6ms, 2 times each on XYZ |
| Vibration proof | 50m/s^2 , 10~200Hz, 2 hours each on XYZ |
| Working life | MTBF $\geq 25000\text{h}$ (+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 |

◆ 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 Ā | SIG B | SIG B̄ | SIG Z | SIG Z̄ | 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

