

## ※ ISC5810 SERIES

Shaft diameter  $\Phi 10$  mm, clamping flange, housing diameter  $\Phi 58$  mm.

Made from encoder module, high stability, good anti-interference, long working life.

### Connector:

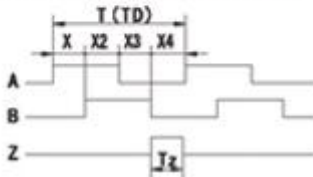
Cable axial, Cable radial, Plug axial, Plug radial.

### Applications:

Control of transport vehicles, print machines, fork truck, CNC- 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 A | SIG B | SIG B | SIG Z  | SIG Z  | Shield |
|-------------|-----|-------|-------|-------|-------|-------|--------|--------|--------|
| Cable Color | Red | Black | Green | Brown | White | Grey  | Yellow | Orange | N.C    |
| 7 pin plug  | 1   | 4     | 3     | -     | 5     | -     | 2      | -      | 6      |
| 9 pin plug  | 1   | 4     | 5     | 7     | 3     | 6     | 2      | 8      | 9      |

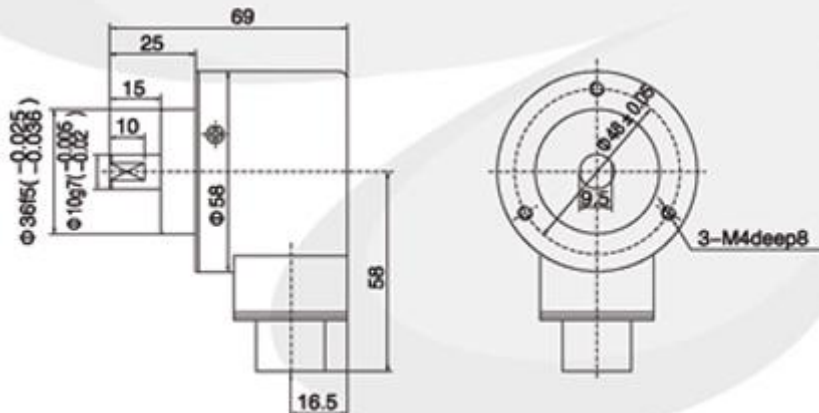
Note: Shield is attached to connector housing, One meter cable lengths (other cable lengths on order).

### Ordering code

|         |   |                 |            |                  |                |   |                |                |
|---------|---|-----------------|------------|------------------|----------------|---|----------------|----------------|
| ISC5810 | — | 401             | C          | 1800             | BZ1            | — | 12-24          | F              |
| Series  |   | Sequence Number | Connection | Number of Pulses | Output Signals |   | Supply Voltage | Output Circuit |

Series: ISC5806, Radial plug: C, Number of pulses: 1800 p/r, Output signals : ABZ,  $T_z=1T$ , Supply voltage: 12-24V DC, Output circuit: Push pull, Record: ISC5810-401C1800BZ1-12-24F

### Dimensions



### 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             | $\leq 180\text{mA}$  |
| Response Frequency              | 0~120KHz   |
| Output phase difference         | $90^\circ \pm 45^\circ$  |
| Supply voltage                  | 5V DC, 5-12V DC, 12-24V DC   |
| Signal level                    | $V_{in} \geq 85\%V_{cc}$ , $V_i \leq 0.3V$   |
| Number of pulses                | 100, 120, 125, 150, 180, 200, 250, 256, 300, 360, 400, 500, 512, 600, 900, 1000, 1024, 1200, 1800, 2000, 2048, 2400, 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. $8.5 \times 10^{-4} \text{Kg} \cdot \text{m}^2$  |
| Starting torque without sealing | $\leq 6.0 \times 10^{-3} \text{Nm}$ (+25°C)  |
| Maximum load permitted on shaft | Radial 35N, Axial 10N  |
| Shock resistance                | 980m/s <sup>2</sup> , 6ms, 2 times each on XYZ   |
| Vibration proof                 | 50m/s <sup>2</sup> , 10-200Hz, 2 hours each on XYZ   |
| Working life                    | MTBF $\geq 30000\text{h}$ (+25°C, 2000rpm)   |
| Weight                          | Appr. 240g (9 pin plug radial)   |
| ENVIRONMENTAL SPECIFICATIONS    |  |
| Working humidity                | 30-85% (No condensation)   |
| Storage temperature             | -40°C~100°C  |
| Working temperature             | -25°C~85°C   |
| Protection class                | IP54   |