

Product selection guide



STS185T · Series

Applications & Features

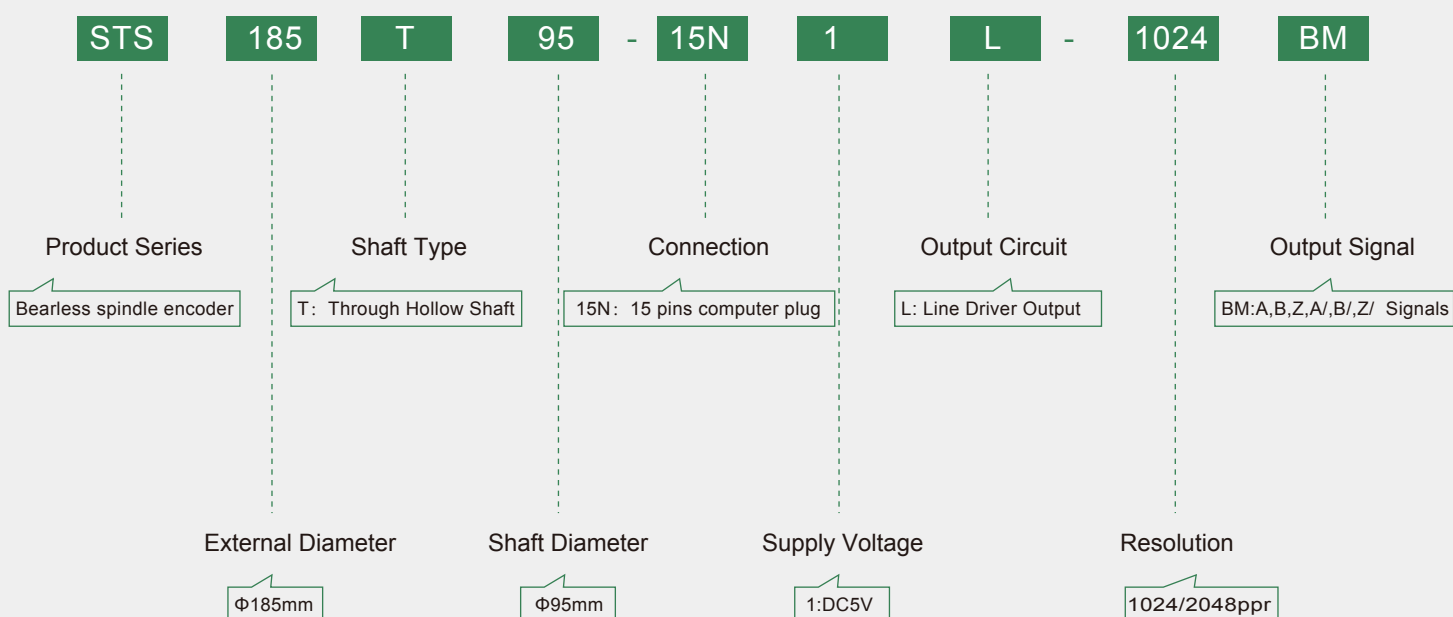


Application: CNC lathe

Features:

1. Long life and saving cost. The Grating component of encoder is directly connected to lathe spindle without the aid of flexible couplings, flange and synchronous pulley, which saves the cost of mounting accessory. The bearingless non-contact design reduces the mechanical loss and ensures higher life.
2. Reliable performance. American original parts and chips, and integrated photoelectric switch module are adopted by STS series encoder to ensure stable and reliable quality. The disc with special material could resist high temperature and three times of vibration than regular encoder.

Part Number



Electrical Specifications

| | |
|---------------------------|--------------------------|
| Supply Voltage | DC 5 ± 0.25 V |
| Output Signal | Line Driver (AM26C311) |
| Current Requirement | ≤ 80 mA |
| Frequency Response | 100 kHz |
| High-level Output Voltage | ≥ 2.5 V |
| Low-level Output Voltage | ≤ 0.5 V |
| Rise Time | ≤ 200 ns |
| Fall Time | ≤ 200 ns |
| Resolution | 1024/2048 P/r |

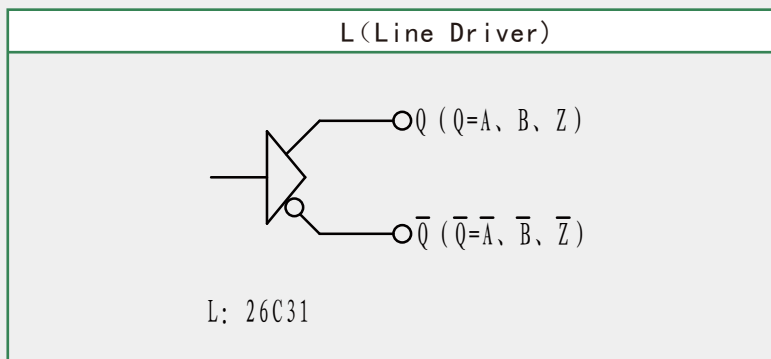
Mechanical Specifications

| | |
|-------------------|---|
| Max Speed | 10000 r/min |
| Radial Load (Max) | 100 N |
| Axial Load (Max) | 50 N |
| Starting Torque | $5 \times 10^{-3} \text{ N}\cdot\text{m}$ |

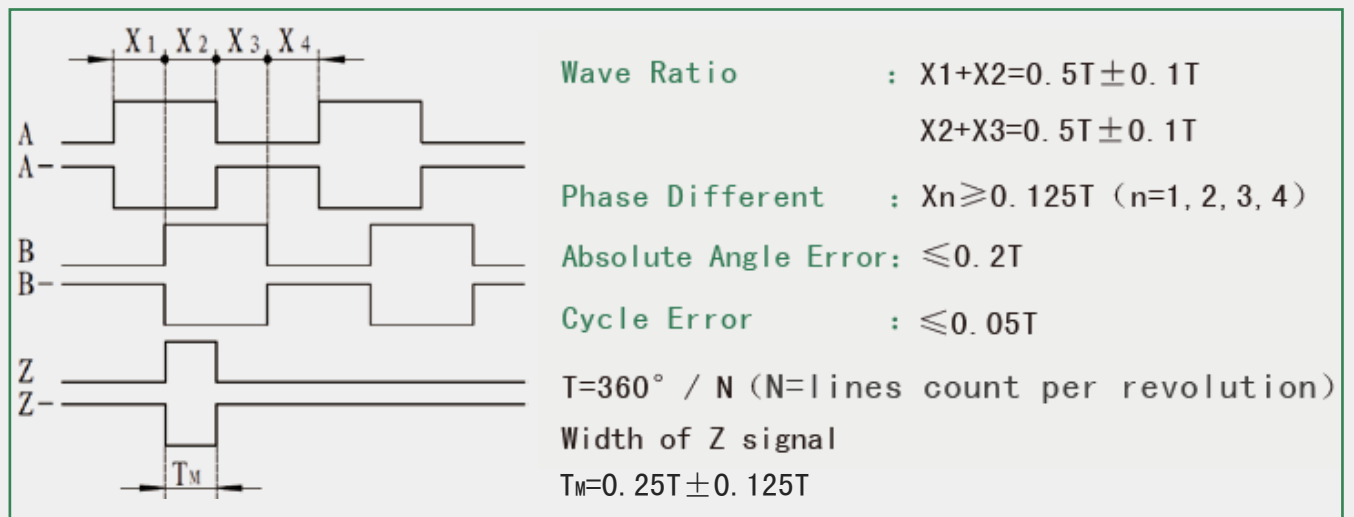
Environmental Specifications

| | |
|-----------------------|--|
| Storage Temperature | $-40^{\circ}\text{C} \sim +80^{\circ}\text{C}$ |
| Operating Temperature | $-30^{\circ}\text{C} \sim +70^{\circ}\text{C}$ |
| Humidity | 30 ~ 85 % (No condensation) |
| Vibration | $98\text{m/s}^2, 10 \sim 200\text{Hz}$ (2 hours on XYZ directions) |
| Shock | $980\text{m/s}^2, 6\text{ms}$ (2 times on XYZ directions) |
| Protection Class | IP64 |
| Weight | Approx. 800g |

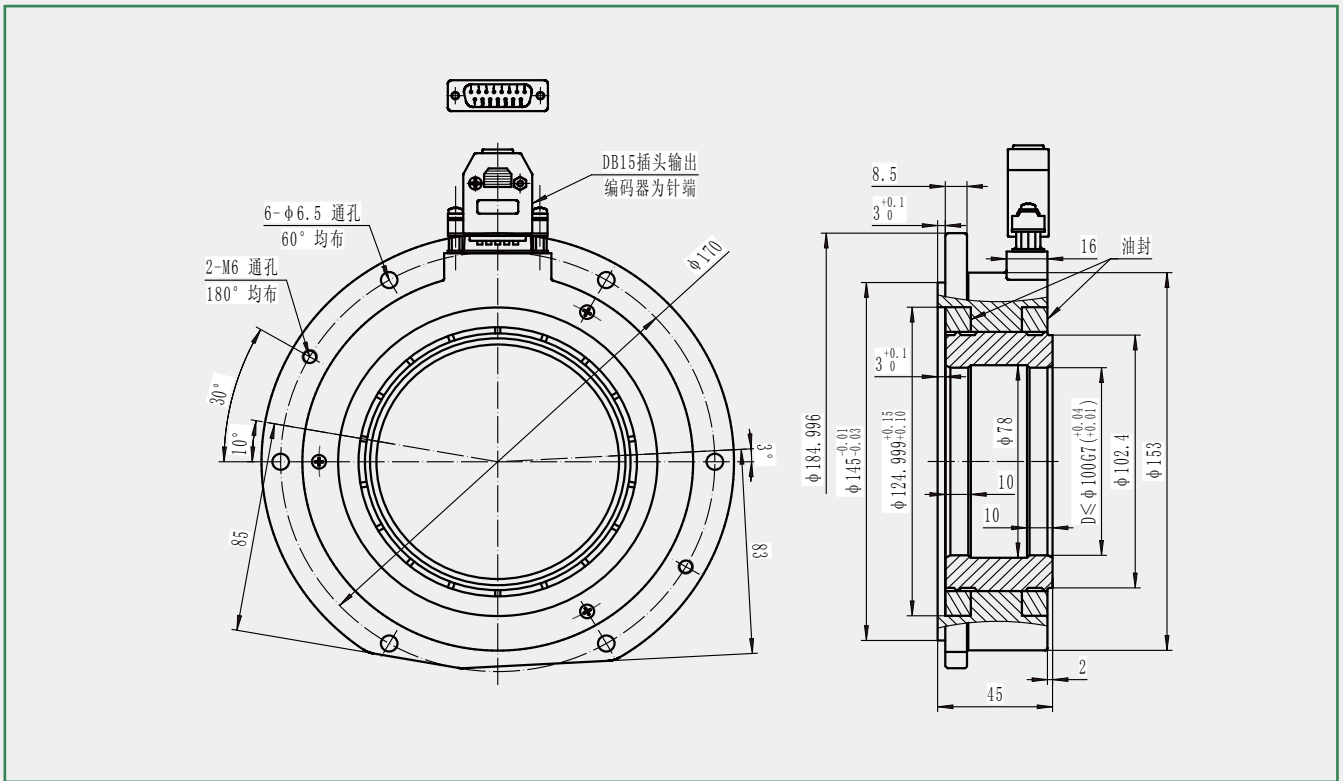
Output Circuit



Output Waves



Dimensions



Connections

| | | | | | | | | | | |
|---|-------------|-----|-------|-------|-------|-------|------|--------|--------|--------|
|  | Signals | Vcc | 0V | A | A- | B | B- | Z | Z- | G |
| | Pins No | 1 | 2 | 3 | 4 | 5 | 6 | 8 | 9 | 7 |
| | Cable Color | Red | Black | Green | Brown | White | Gray | Yellow | Orange | Shield |

