

Absolute Encoder

绝对式编码器

Operation Manual

使用说明书



RDE58T20 · Series

1.1 Appearance and Features

Appearance:

- 1.Shell Color: Black.
- 2.Surface Treatment: Dye Black, Sandblast Oxidation (Optional) .
- 3.Termination: Radial Output.
- 4.Cable Length: 1m (Can be customized) .
- 5.Color of Cable: Black, Gray (Optional) .

Features:

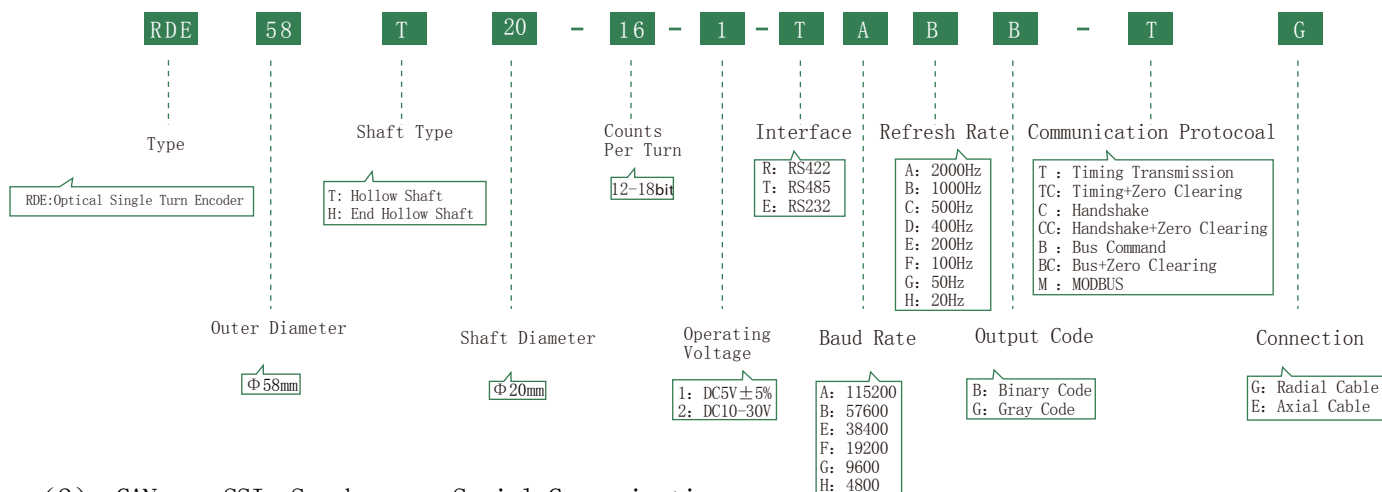
- 1.Widely used in the industrial sector, is a versatile economy encoder products.
- 2.It can achieve a variety of communication protocols.
- 3.Wide temperature range, suitable for all kinds of environments.
- 4.Optimization waterproof design , durable, long life, anti-interference.



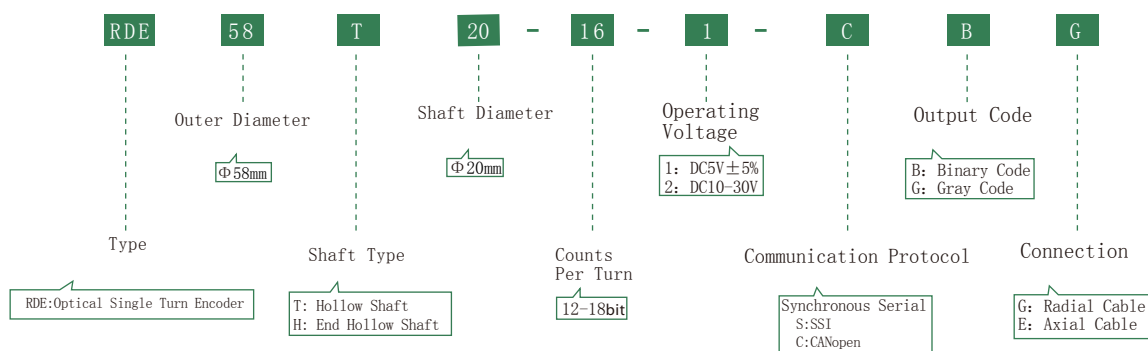
RDE58T20

1.2 Part Number Defined

(1) Asynchronous Serial Communication



(2) CANopen, SSI, Synchronous Serial Communication



1.3 Notes

- 1.Please follow the instructions to use flexible connections for mounting to ensure the accuracy and service life of products.
- 2.Encoders are precise instruments adjusted strictly before leaving factory. Strong impact, dismantlement and changes on encoders are not allowed.
- 3.To guarantee the accuracy and work of encoder, when the operating voltage is DC5V ± 5%:
 - (1) Cable length should not exceed 2 meters.
 - (2) The current of the power supply should not be less than 0.5A.
 - (3) The interference signal of the power supply should be within ± 50mV.
 When operating voltage is 10~30V:
 - (1) The current of the power supply should not be less than 0.3A.
 - (2) The interference signal of the power supply should be within ± 50mV.
- 4.The corresponding supply voltage and connections to the equipment should be paid attention by the professional installation people.
- 5.Please read the instructions carefully before using the product.

2.1 Basic Specifications

| | | | | | | | |
|--------------------|----------|--------|-----------------|------------------------|--------|--------|--------|
| Resolution in Bit | 12~18bit | | Measuring Range | 0 ~ 360° (Single-turn) | | | |
| Resolution in Bit | 12 bit | 13 bit | 14 bit | 15 bit | 16 bit | 17 bit | 18 bit |
| Angular Resolution | 320" | 160" | 80" | 40" | 20" | 10" | 5" |
| Accuracy≤ | ±640" | ±320" | ±160" | ±80" | ±40" | ±20" | ±15" |

2.2 Environment Specifications

| | | | |
|---------------------|-----------|------------------|------|
| Working Temperature | -40℃~+65℃ | Protection Class | IP64 |
| Storage Temperature | -50℃~+70℃ | | |

2.3 Mechanical Specifications

| | | | |
|----------------|-------|-------------------|-----------|
| Outer Diameter | 58 mm | Shaft Diameter | 20 mm |
| Height | 51 mm | Max Speed | 300 r/min |
| Weight | 270 g | Radial Shaft Load | ≤20N |
| Vibration | 2.5 g | Axial Shaft Load | ≤10N |
| Shock | 20 g | | |

2.4 Electrical Specifications

(1) Asynchronous Serial Communication

| | |
|------------------------|---|
| Supply Voltage | DC5V, 10~30V |
| Interface | RS485, RS422, RS232, CAN |
| Communication Protocol | MODBUS, CANopen, Timing Transmission, Timing Transmission+Zero Clearing, Handshake, Handshake+Zero Clearing, Bus Command, Bus+Zero Clearing |
| Baud Rate(b/s) | 115200, 57600, 38400, 19200, 9600, 4800, 2400 |
| Refresh Rate | 2000Hz, 1000Hz, 500 Hz, 400 Hz, 200 Hz, 100 Hz, 50 Hz, 20 Hz |
| Output Code | Binary Code, Gray Code |

(2) Synchronous Serial Communication

| | |
|------------------------|------------------------|
| Supply Voltage | DC5V, 10~30V |
| Communication Protocol | SSI |
| Output Code | Binary Code, Gray Code |

2.5 Installation Instruction

