

Absolute Encoder

绝对式编码器

Operation Manual

使用说明书



RDE38BS6 · Series

长春荣德光学有限公司

CHANGCHUN RONGDE OPTICS CO.,LTD

www.roundssencoder.com

1.1 Appearance and Features

Appearance:

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

Features:

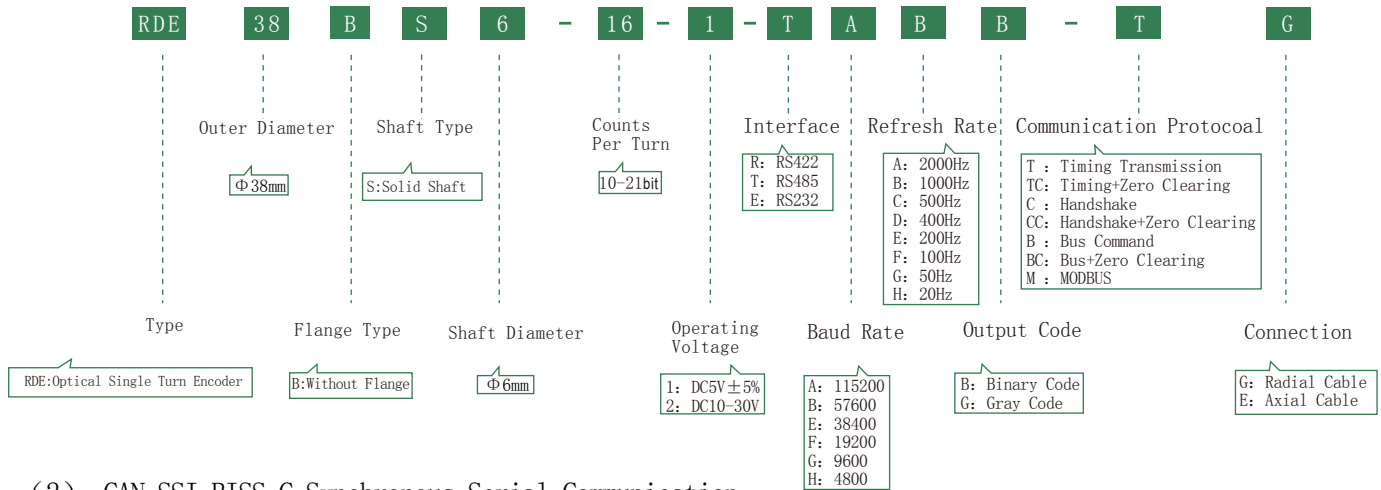
- 1.Universal mounting size, international standard flanges.
- 2.Reserve multiple mounting holes.
- 3.It can achieve a variety of communication protocols.
- 4.Optimization waterproof design, durable, long life, anti-interference.



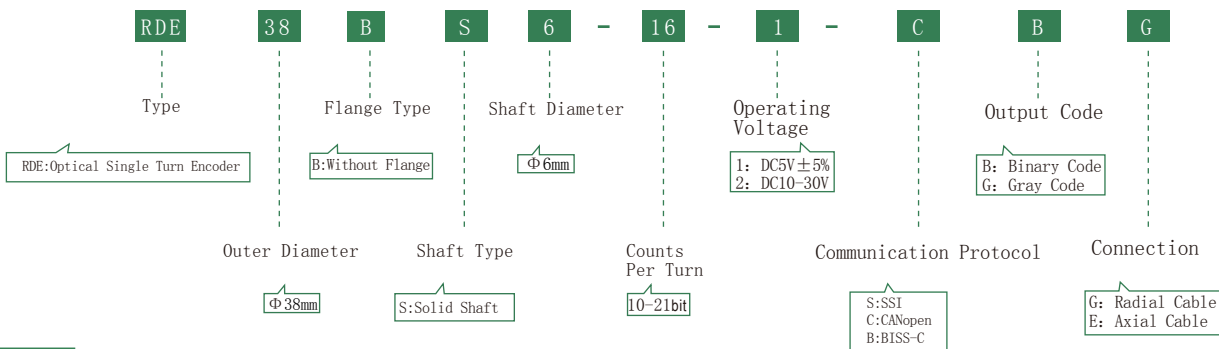
RDE38BS6

1.2 Part Number Defined

(1) Asynchronous Serial Communication



(2) CAN, SSI, BISS-C 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 $\pm 5\%$:
 - (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 $\pm 50\text{mV}$.
- 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 $\pm 50\text{mV}$.
- 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	10~21bit			Measuring Range		0 ~ 360° (Single-turn)						
Resolution in Bit	10 bit	11 bit	12 bit	13 bit	14 bit	15 bit	16 bit	17bit	18bit	19bit	20bit	21bit
Angular Resolution			320"	160"	80"	40"	20"	10"	5"	2.5"	1.25"	0.6"
Accuracy \leq			$\pm 640''$	$\pm 320''$	$\pm 160''$	$\pm 80''$	$\pm 40''$	$\pm 20''$	$\pm 20''$	$\pm 20''$	$\pm 20''$	$\pm 20''$

2.2 Environment Specifications

Working Temperature	-40°C~+65°C	Protection Class	IP64
Storage Temperature	-50°C~+70°C		

2.3 Mechanical Specifications

Outer Diameter	38 mm	Shaft Diameter	6 mm
Height	42 mm	Shaft Length	12.5 mm
Weight	130 g	Max Speed	3000 r/min
Vibration	2.5 g	Radial Shaft Load	≤20N
Shock	20 g	Axial Shaft Load	≤10N

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, BISS-C
Output Code	Binary Code, Gray Code

2.5 Installation Instruction

