



Absolute rotary encoder CAS60---RC with CAN2.0B output



★Before using the encoder, please read the following instructions and use it correctly!

Mechanical Spec.		Electrical Spec.	
Max Speed	6000 RPM	Power supply	10-30Vdc (5Vdc optional)
Load	Axial 40N, Radial 100N	Current consumption	< 50mA (24Vdc)no load
Shock	1000m/s ² (6ms), 等于 100g	output	CAN 2.0B protocol
Vibration	200m/s ² (10-2000Hz), 等于 20g	Linear resolution	1/65536FS max.
Allow axial runout	±1.5mm		
Allow radial runout	±0.2mm	positioning accuracy	0.1°
Structure	60mmouter, solid shaft or Blind hole	Operating temperature	-40℃~100℃
Connection Type	8-core shielded cable or aviation connector	Storage temperature	-40℃~85℃
IP	IP65		

connection:

function	Vcc	GND	CAN H	CAN L	reset	setting	shield
color	Brown	White	Green	Yellow	Grey	Blue	Thick red

Note: 1. Use of reset line (gray)

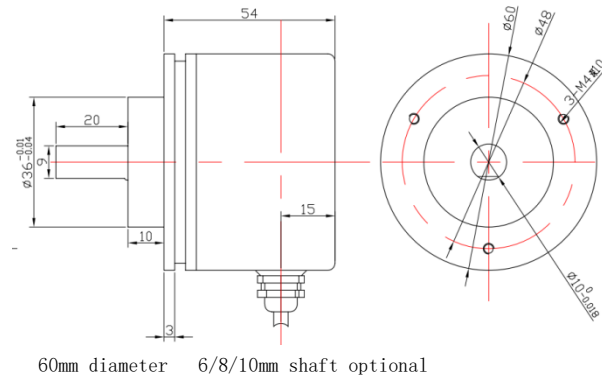
When the reset line (gray) touches Vcc for more than 1 second, the current data of the encoder becomes the reset value (zero point)

Factory specifications:

add	Baud rate	Operating mode	Frame format	direction	resolution	Reset value	Transmission cycle
182	125K	Asynchronous mode	Standard frame	CW	16384	1	16ms

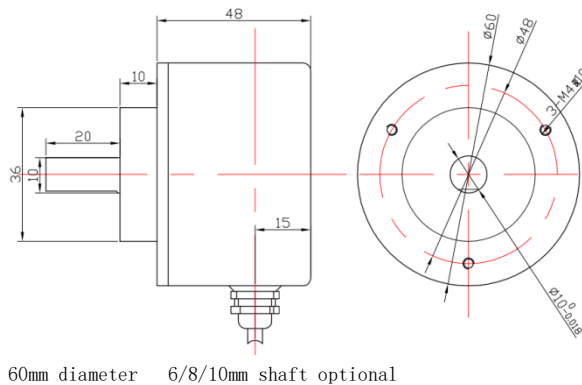
Mechanical drawing:

Clamping synchronous flange (optional cable output or connector output)



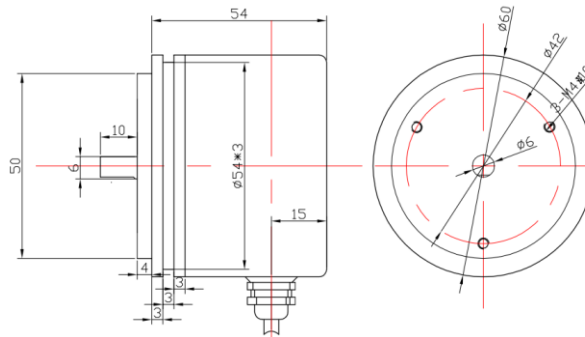
60mm diameter 6/8/10mm shaft optional

Clamping flange (optional cable output or connector output)



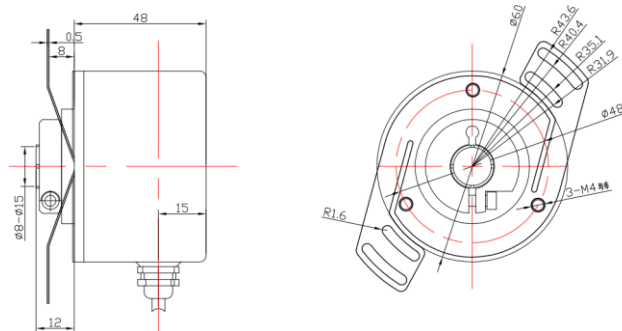
60mm diameter 6/8/10mm shaft optional

Synchronous flange / servo flange (optional cable output or connector output)



60mm diameter 6mm shaft

Blind-hole flange (optional cable output or connector output)



60mm outer diameter 8-15mm aperture optional

Encoder parameter setting: the setting line must be connected to the high level when modifying parameters. The baud rate is fixed at 250K.

The message for modifying the node number is as follows: The default node number of the encoder is 16 # 182, and the sending ID is 182

ID DATA

182 22 00 30 00 83 01 00 00

Encoder feedback:

ID DATA

182 23 00 30 00 83 01 00 00

Set the value to 16#183, then the node number of the encoder after modification is 16#183, and the new node number will take effect immediately after modification.

Modify the baud rate message as follows: the default baud rate of the encoder is 250K,

ID DATA

182 22 01 30 00 03 00 00 00

Encoder feedback:

ID DATA

182 23 01 30 00 03 00 00 00

08	10K
07	20K
06	50K
05	100K
04	125K
03	250K
02	500K
01	800K
00	1000K

Modify the working mode message as follows: The encoder defaults to asynchronous mode 08

ID DATA

182 22 02 30 00 08 00 00 00

08	Asynchronous mode
09	Synchronous mode

Encoder feedback:

ID DATA

182 23 02 30 00 08 00 00 00

Modify the output frame mode message as follows: the encoder default standard frame

ID DATA

182 22 03 30 00 00 00 00 00

00	Standard frame
04	Extended frame

Encoder feedback:

ID DATA

182 23 03 30 00 00 00 00 00

The modification direction message is as follows: the encoder defaults clockwise data increase

ID DATA

182 22 00 60 00 04 00 00 00

04	CW
05	CCW

Encoder feedback:

ID DATA

182 23 00 60 00 04 00 00 00

Modify the encoder single-turn resolution message as follows: encoder default resolution 65536

ID DATA

182 22 01 60 00 01 00 00 00

Encoder feedback:

ID DATA

182 23 01 60 00 01 00 00 00

The message to modify the encoder reset value is as follows: the encoder default encoder setting value 1

ID DATA

182 22 03 60 00 01 00 00 00

Encoder feedback:

ID DATA

182 23 03 60 00 01 00 00 00

Modify the encoder transmission cycle message as follows: the encoder default encoder transmission cycle 16ms

ID DATA

182 22 17 10 00 10 00 00 00

Encoder feedback:

ID DATA

182 23 17 10 00 10 00 00 00

The encoder reads the parameter message as follows: ID is fixed at 601

ID DATA

601 22 18 20 00 00 00 00 00

Encoder feedback:

ID DATA

182 00 10 00 00 00 10 00 00

address + resolution 4 bytes + reset value 4 bytes

182 04 05 08 00 32 00 00 00

address + baud rate + direction + Active/passive mode + Frame format + Output time

Send successful	601	DATA	STANDARD	8	22 18 20 00 00 00 00 00	16
Receive	182	DATA	STANDARD	8	00 10 00 00 00 10 00 00	16
Receive	182	DATA	STANDARD	8	03 04 08 00 10 00 00 00	16

The encoder read data message is as follows:

ID DATA

182 22 00 00 00 00 00 00 00

Encoder feedback:

ID	DATA
182	01 00 00 00 <u>00 00 00 00</u>

Encoder reset message is as follows:

ID	DATA
182	22 06 00 00 22 06 00 00

Encoder feedback:

ID	DATA
182	23 06 00 00 23 06 00 00

Notes for RS485 communication:

1. Communication speed and transmission distance are a pair of contradictions. The higher the rate, the closer the transmission distance, but the more stable, and vice versa.
2. When the external electromagnetic interference is strong, the external setting line needs to be connected to a high level when setting the encoder, but it is recommended to be forced to connect to a low level after the setting is completed to prevent the encoder from suddenly returning to zero due to external interference.
3. When the external electromagnetic interference is strong, it is best to use double-shielded cables for RS485 wiring.
4. When multiple encoders are connected to the upper computer, since the data returned by the encoder does not have a parity check, it is recommended to distinguish the data returned by each encoder in time when the upper computer is programmed.
5. When there is a motor in the system, the encoder power supply needs to be isolated from other power supplies.

Since the RS485 circuit is in a differential form, A+ and B- are both voltage-carrying, and the RS485 circuit will be damaged if it is grounded or connected to a high level for a long time.