

## AAS58...L2 / AAM58...L2



### Main Features:

- 4-20mA output , RS485 output / programming
- Multi-turn tech: Gear Box, no battery
- Zero setting and counting direction setting function

### Extensive Application:

- ✓ Speed sensing, angle, distance, locus, tilt
- ✓ Solar electrical energy generation
- ✓ Day tracking system feedback
- ✓ Iron and steel metallurgical equipment
- ✓ Port lifting and transportation machinery, factory automation
- ✓ Use in non-explosion proof environment

### Mechanical specifications

Material	Shell: Aluminum shell
	Flange: Aluminum flange
	Shaft: Stainless steel
Maximum shaft load	Max 80N Axial
	Max 150N Radial
Levels of protection	IP65
Starting torque	25°C, ≤0.5Nm
Maximum speed	6000RPM
Impact resistance	≤ 100g ,3ms
Anti-vibration	≤ 10g (10Hz—2000Hz)
Weight	≈ 300g
Working temperature	-40°C - +80°C
Storage temperature	-40°C - +85°C

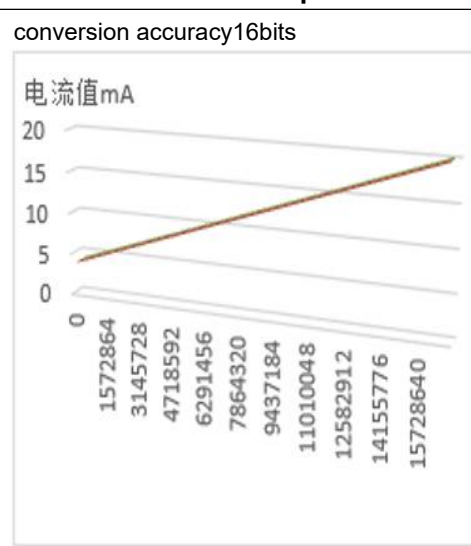
### Qualification

EMC:
Emitted interference: EN61000-6-4
Noise immunity: EN61000-6-2
ISO9001:2015
CE authentication

### Electrical specifications

Interface type 1	4-20mA interface type output
Interface type 2	RS485 output or Analog programming
Output code system	ASCII code
Baud rate	4800 9600 19200 38400 115200
Data response	8ms 4ms 2ms 1.8ms 1.8ms
Allowed addresses range	0 -- 99
No-load current	≤80mA
Steps per revolution	Single-turn max 13bits (8192)
Revolutions (turn)	Multi-turn max 14 bits (16384)
Repeatability precision	±2bits (related to the installation accuracy and the concentricity of the shaft)
Counting direction	Can be set
External position	Can be set, Turn-on delay > 100ms

### 4-20mA Linear correspondence



## RS485 communication instructions

- Baud rate: 4800bps; 9600bps; 19200bps; 38400bps; 115200bps.  
Frame format: data bits:8bits, stop bits:1bit, No Parity, uncontrolled flow

- Encoder for active mode**, encoder sends data to upper computer actively.

Data is 16 bits Hexadecimal ASCII code,

The format is YAB>±DATA↵, that is:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Y	Address		>	±	DATA										↵

“Y”: Leading letter, “>”: separator, “±”: sign bit.

DATA: ASCII format, 10bits, Consisting of 0 / 9, Range: -9,999,999,999 ~ +9,999,999,999. The last is carriage return.

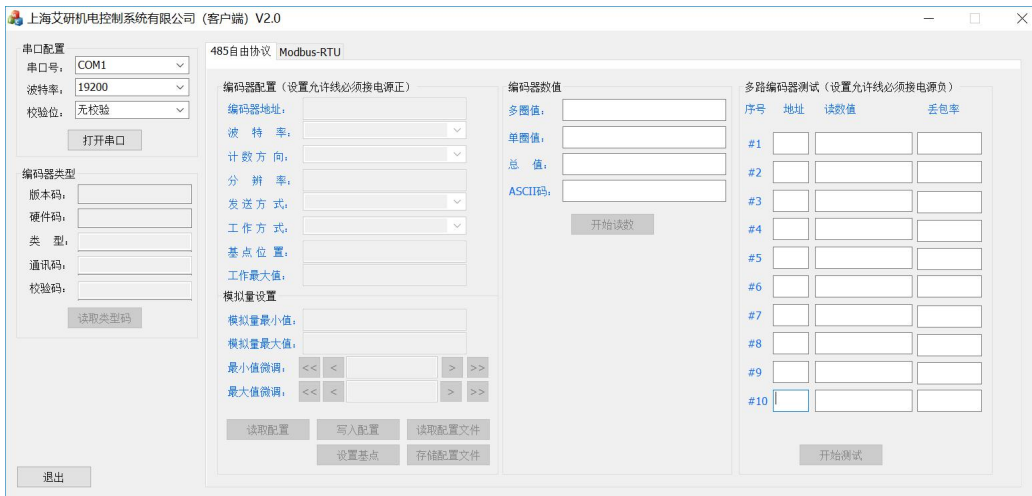
- Encoder for passive mode**, question and answer mode.

The upper computer sends an inquiry to the encoder. Instruction is 4-bit hexadecimal ASCII code.

The format is: A+AB↵. AB is Allowed addresses range : 0~99.

The data format the encoder answers to the host computer is the same as the data format sent in active mode.

- Client setup software (The parameters of the encoder require software instructions to set the encoder.)



Shanghai AYAN Industry system co., Ltd. provides RS485 client software for customers to debug and test directly.

If you need details, please refer to **C\_2.0 edition L2&R4 series handbook for user**, or Contact directly our technical support +86-21-56322427.

## Mode of connection & Attention

Signal	VCC	0V	RS485 A	RS485 B	P-set	4-20mA+	Set-Allow	4-20mA-
Cable	Brown	White	Green	Yellow	Gray	Pink	Blue	Red
Seat	2	1	3	4	5	6	7	8

### 1. Wiring definition

#### 1) P-set: External position line:

After a short contact with the VCC, the current position data is output to the base point position of the encoder. The base point value is 0 by default, but can be set to any value in the whole range by software.



#### 2) Set-Allow Setting permissible line:

When connecting the working power supply VCC, baud rate is 19200 BP by default, function parameters can be set.

M23 Plug( 12pin)

#### 3) Shielding Line (Shield) default suspension.

### 2. Attentions

- Communication rate and transmission distance are a pair of contradictions. The higher the rate, the closer the transmission distance is, but the more stable it is, and vice versa.
- When the external electromagnetic interference is strong, the external bit line needs to connect the VCC, to the encoder but after the end of the position, it is suggested that the encoder should be forced to connect with 0V so as to prevent the encoder from suddenly returning to zero because of the external interference.
- When external electromagnetic interference is strong, it is best to use double shield cable for the extension line of encoder.
- When there is a motor in the system, the encoder power supply needs to be isolated from other power sources, and the encoder cable and power cable need to be wired separately.
- As the circuit of RS485 is in the differential form, A+ and B- are all with voltage, and the internal circuit will be damaged due to ordinary time grounding or high voltage.

### Selection data

<b>A</b>	<b>A</b>	<b>58</b>	<b>—</b>	<b>—</b>	<b>C</b>	<b>L2</b>	
<b>Functional type</b> S =single-turn M =multi-turn		<b>Revolution(turn)</b> 00 =1 turn 12 =4096 turns 14 =16384 turns		<b>Supply Voltage</b> A=5VDC D=10-30VDC		<b>Special</b>	
<b>Installation mode*</b> A10=shaft diameter 10mm T06 =shaft diameter 06mm B08 =blind hole08mm B10 =blind hole10mm B12 =blind hole12mm B15 =blind hole15mm		<b>Step per revolution</b> 12 =4096 steps 13 =8192 steps		<b>Signal type</b> L2 =4-20mA output		<b>Electrical connections</b> GR = radial, 1 meters of cable CR = radial, M23 Plug GA = axial, 1 meters of cable CA = axial, M23 Plug	

\* A = Clamping synchronous flange, T = Synchronous flange, B = blind hole

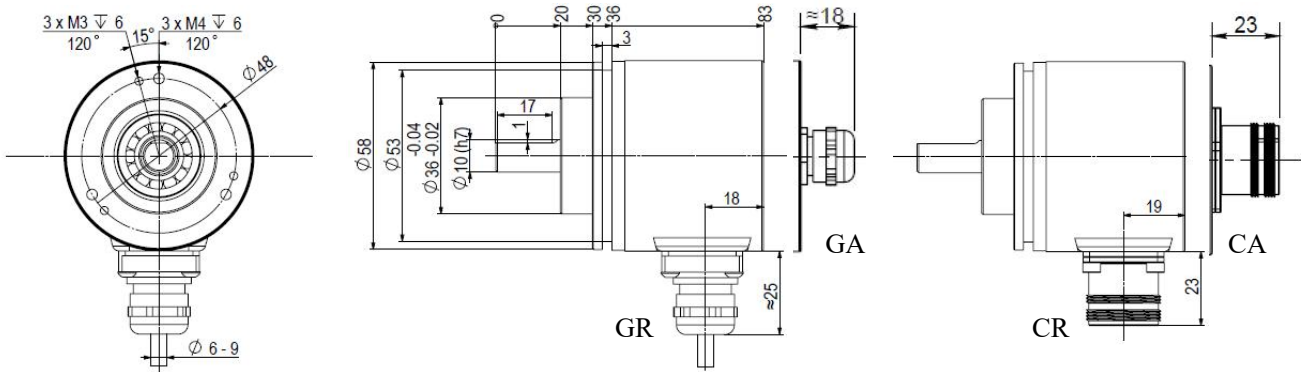
# Absolute Encoder

# 4-20mA&RS485

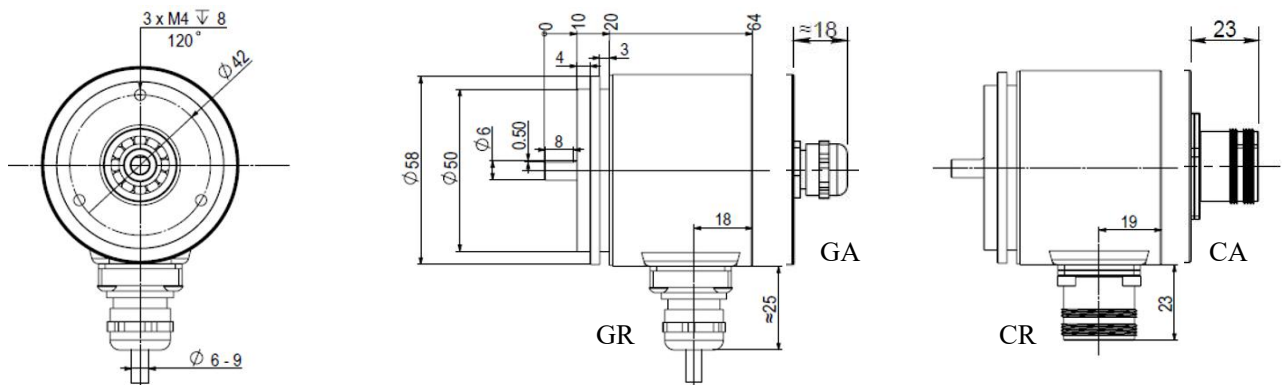
## Mechanical dimension

Unit: mm

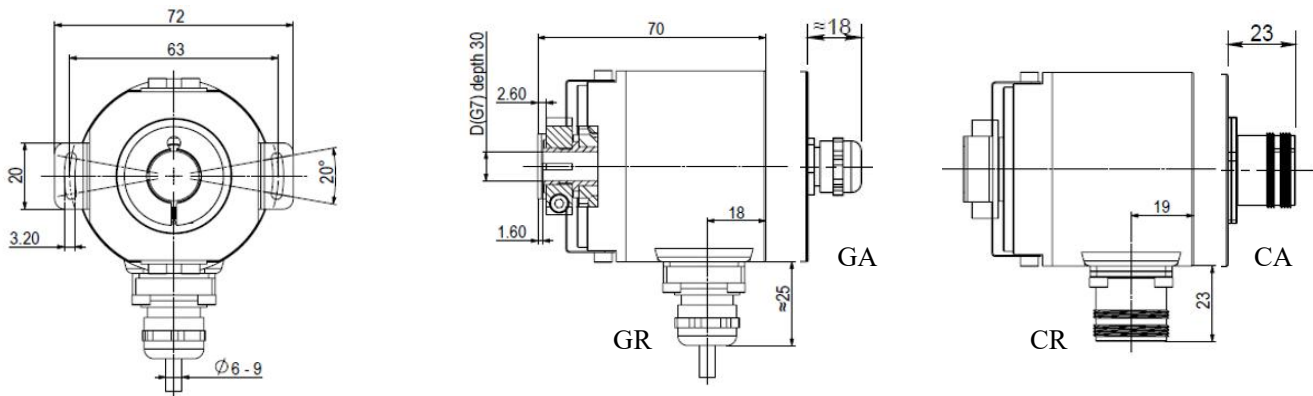
Clamping synchronous flange (58A10) ↓	Cable output	M23 plug output
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Synchronous flange (58T06) ↓	Cable output	M23 plug output
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Blind hole (58B) ↓	Cable output	M23 plug output
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## Accessories (Please refer to the attached information for more information)

Mounting brackets	Stainless steel couplings	Spring steel couplings	M23 plug
<b>MODEL</b> AZJ80	AL4A-B	AL3B	C12C
<b>Apply to</b> 58A	58A&58T	58A&58T	M23 plug