



Rail weight transmitter

Instruction Manual

TDA-08B



Suzhou Ouluda Intelligent Technology Co., Ltd.

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Chapter 1: Overview

The TDA-088 single-channel digital transmitter combines weighing and force measurement functions and features simple operation.

Single, high precision, strong anti-interference capability, low temperature drift, and simultaneously supports nonlinear correction for up to 50 sensor segments.

This transmitter comes standard with analog outputs (±10V and 4-20mA) and IO (1 input, 1 output), and features 24-bit high precision.

Using a digital-to-analog converter and mature filtering techniques, the millivolt-level signal output by the sensor is filtered and amplified.

And convert it into a digital signal, which is then transmitted via standard industrial communication protocols to form a weighing system together with a PLC or HMI touch screen.

/Force measurement control system.

Features

◆ Equipped with both RS-232 and RS-485 communication protocols;

◆ A mature filtering algorithm ensures higher accuracy for the product.

◆ The AD conversion speed can be as fast as 1280 Hz;

◆ Supports Modbus-RTU protocol;

◆ Standard analog output (±10V and 4-20mA), standard I/O output (1 input, 1 output).

— 1 —

Precautions

1 Unboxing

- After unpacking, please keep the packing list, certificate of conformity, instruction manual, and accompanying accessories in a safe place.

2 Installation Notes

- This controller is suitable for fixed installation on control panels in electrical cabinets and the like.
- The location for installing the controller should be free from vibration sources and should be equipped with measures to protect against sunlight, high-temperature exposure, freezing, moisture, and rainwater.

3, Wiring Precautions

- All grounding terminals must be properly grounded, and all connections must be accurate, secure, and reliable.
- Do not share the distribution box, power plug, or power lines (including ground wires) with electrical devices that are prone to interference, as such interference could affect the performance of this controller. If it is unavoidable, a power filter should be added to the controller's power supply circuit for isolation.
- The length of the sensor cable should be shortened as much as possible, and it should be kept away from power cables and control lines to avoid potential interference.

4, Usage Precautions

- Try to maintain the stability of the power supply as much as possible, and avoid adverse phenomena such as excessive or insufficient voltage and waveform distortion.
- Under no circumstances should you disassemble this controller yourself, whether it is powered on or off, to avoid endangering your personal safety or damaging the device.

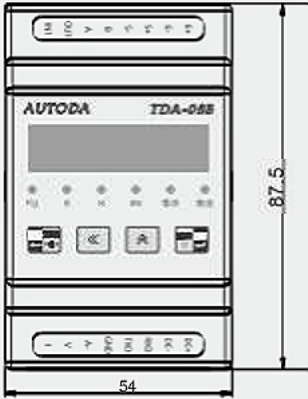
5 Maintenance Precautions

- Individuals who are not employees of this company or are not professionals should not adjust or set up this controller, as doing so may result in inaccurate readings or malfunctions.
- Do not use organic solvents such as hydrocarbons, alcohols, or ketones, or strong acid or strong alkali solutions to clean this controller, as this may damage the controller's casing, panel, and internal components.
- This controller will not be accepted for self-repair or modification. If the device malfunctions, please follow the instructions in this manual to troubleshoot or contact us; otherwise, you will forfeit the benefits of our after-sales service.
- If this controller is left idle, it should be powered on at least once every month for at least one hour each time to eliminate internal moisture.

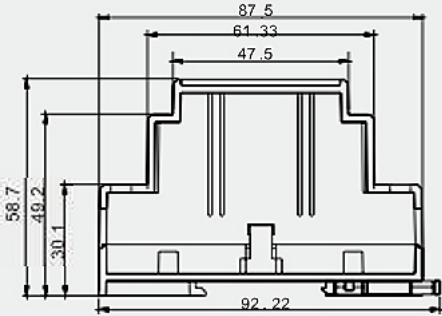
2.1 , Specification Parameters

Parameter	Technical indicators
AD Channel Number	1Road
A/D resolution	2 4 bit-Delta-Sigma (2 4 bits)
A/D conversion speed	12 8 0 Hertz adjustable 140 Hz, 640 Hz)
Supply Voltage	DC 18-30V
Sensor signal range	± 3.6 mV/V
Sensor Excitation Voltage	5VDC ±1% , 100 mA
Sensor input load	1-4 350 Ω sensors per channel
Input sensitivity	0.4 mV/V ~ 6 mV/V
Output linearity	<0.002%
Overall Accuracy	Greater than 0.01%
Analog Output Resolution	16 bit
Analog Output	± 10V, 4-20mA
Input port	1Enter
Output port	1Output (transistor)
Full-scale temperature drift	≤ 10 ppm/°C
Zero-point temperature drift	≤ 10 μV/°C
Total machine power consumption	≤ 0.5W
Communication Method	RS-232 and RS-485
Communication Protocol	Modbus - RTU
Bit rate	48 00 , 96 0 0 (default), 192 0 0 , 38400 , 5760 0 , 1 15 200
External dimensions	54*87.5 × 58.7 mm*
Operating temperature range	-20 ~ 70 °C
Shell material	ABS engineering plastic

2.2 Installation dimensions (unit: mm)

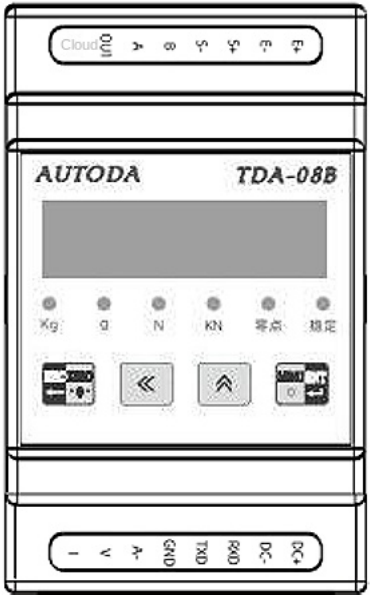


(Bird's-eye view)



(Side view)

2.3 , Face sticker schematic diagram

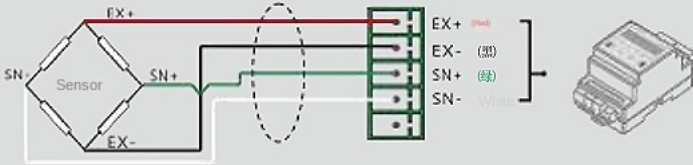


◆ 2.3.1、Terminal and Button Definition Instructions

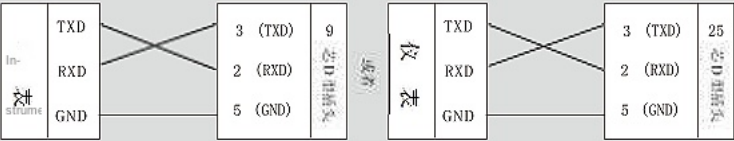
Identifier	Top-row port definitions	Identifier	Lower-row port definitions
E+	Sensor excitation positive	DC+	Power DC+
E-	Sensor excitation negative	DC-	Power supply DC-
S+	Sensor signal is valid.	RXD	RS-2 32 RXD
S-	Sensor signal negative	TXD	RS-232 TXD
B	RS-485 B(-)	GND	RS-2 3 2 GND
A	RS-485 A(+)	A-	Analog Output Common Terminal
OU 1	1 Field-Effect Transistor Output	V	Analog voltage output
IN1	1 Road transistor input	I	Analog current output

2.4Wiring diagram

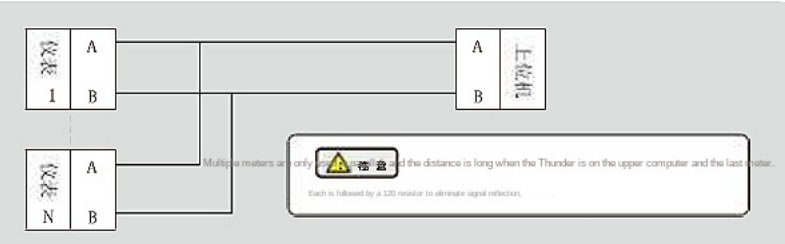
◆ 2.4.1、Wiring Diagram for Four-Wire Sensors



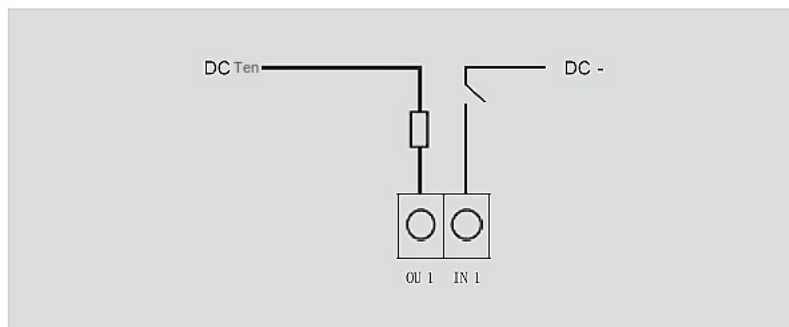
◆ 2.4.2、Connection method for RS232 to connect with the host computer



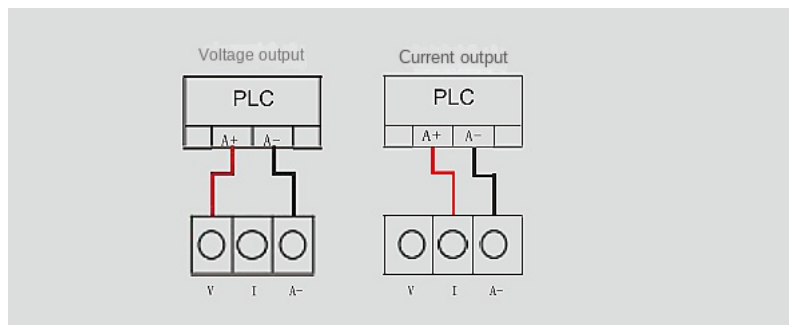
◆ 2.4.3、How to connect the RS485 to the host computer



◆ 2.4.4、IO Input/Output Connection Method (NPN Transistor)



◆ 2.4.5、Analog Output Wiring Method (Voltage and Current)



3.1– Operation Panel Diagram

◆ 3.1.1、Operation Panel and Button Description



Function one: Press the left arrow button to return to the previous menu.

Function two: Adjust the numerical position.



Function one: Return to the previous menu.

Function two: select the menu.



Function one: Return after cancellation or confirmation.

Function two: zero elimination.

Function three: return to the superior menu.



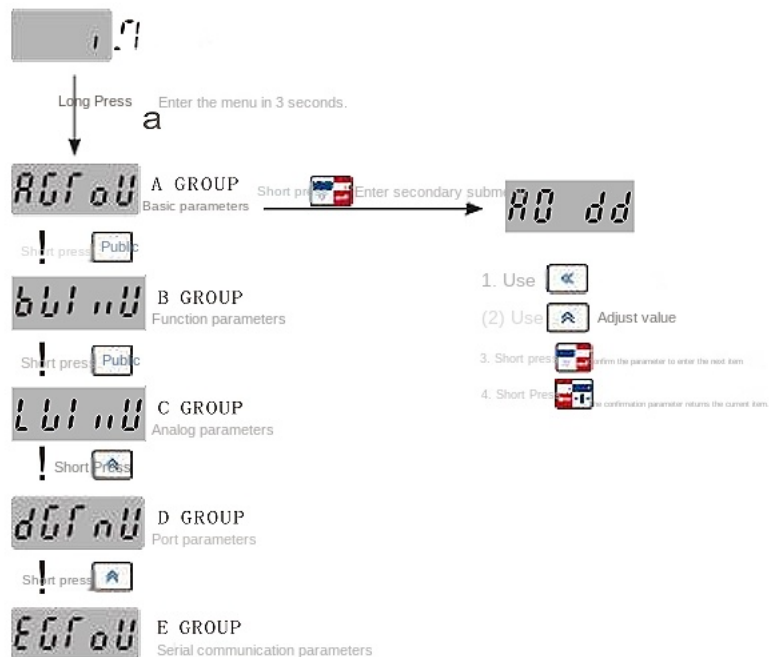
Function one: Confirm the current menu.

Function two: Confirm the current menu.

Function three: 1 confirmation key.

3.2 Operation instructions

◆ 3.2.1 Enter the channel parameter settings.

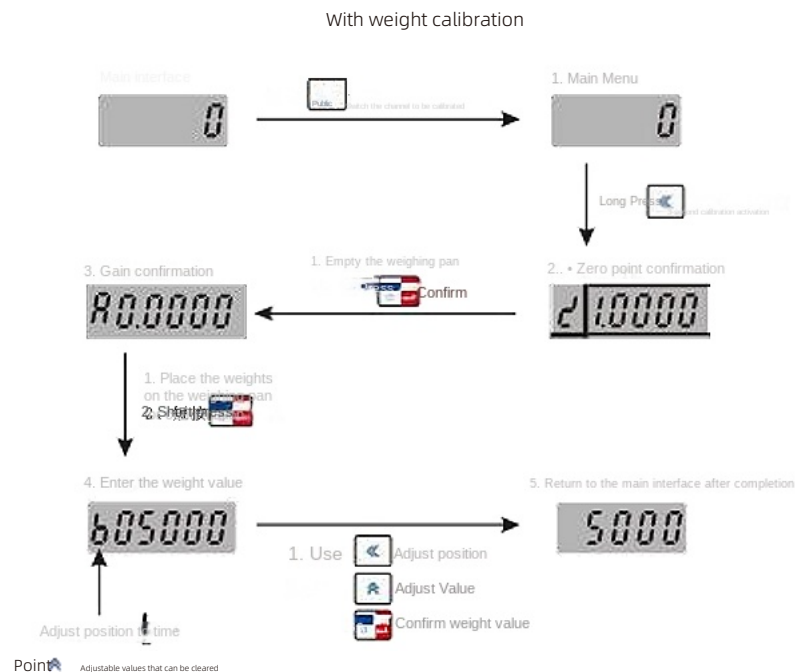


◆ 3.2.2 Enter function parameter settings.

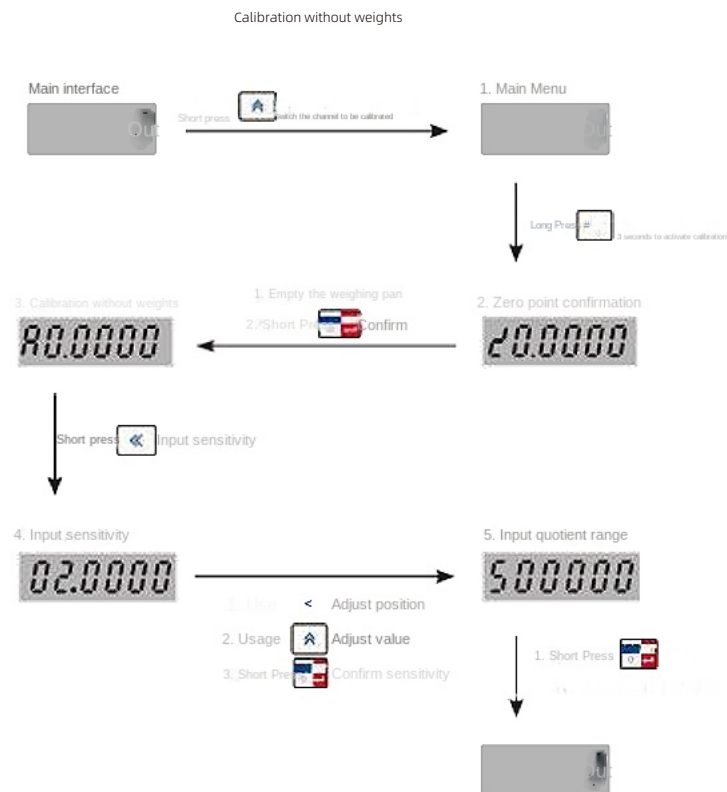


◆ 3.2.3 With weight calibration

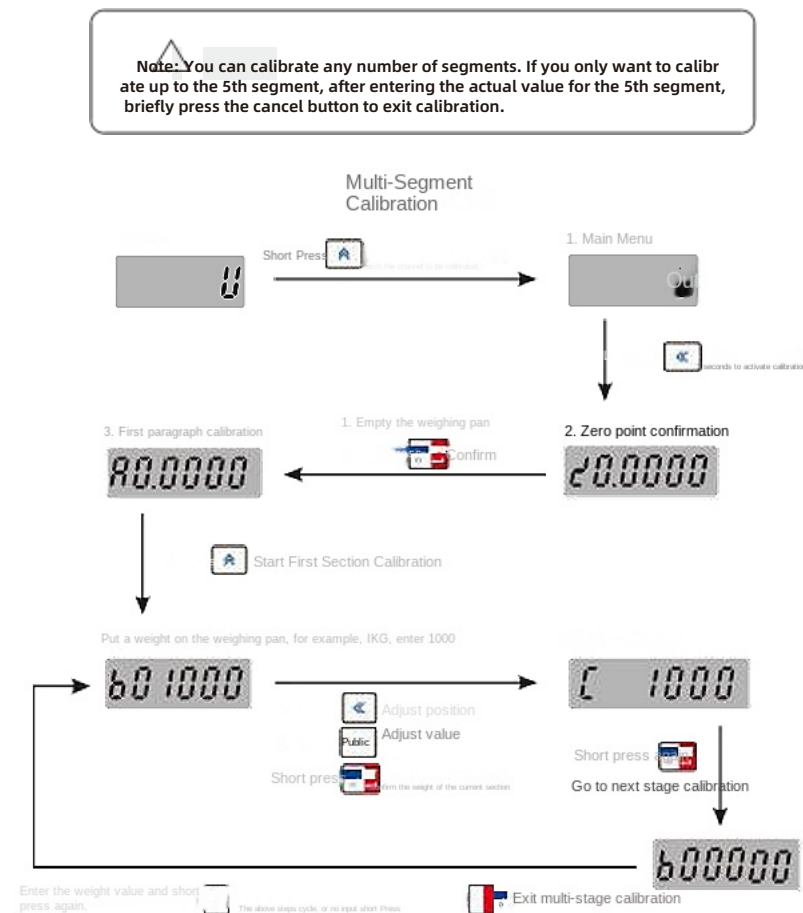
Note that operations such as setting the unit, setting the graduation value, setting the decimal point, and setting the full-scale range are all performed by briefly pressing to adjust the position, briefly pressing to adjust the parameter or value, and finally confirming the input by briefly pressing to proceed to the next step, or briefly pressing to confirm the input and return to the current item.



◆ 3.2.4、Calibration without weights



◆ 3.2.5 Multi-point Calibration (up to 50 calibration points)



4.1, First-level menu

Menu label	Menu Description
	Basic parameters, general parameters
	Functional parameters
	Analog parameter
	Port parameters
	Serial Communication Related Parameters
	View sensor mV value parameters

4.2, Secondary Menu

◆ 4.2.1, (Basic Parameters A-Group)

Code	Parameter	Name	Parameter Explanation	Value range	Initial value
A0 dd	Dividing value	The difference between two adjacent readings	5, 10, 20, 50	1	
A1 doE	Decimal places	Number of decimal places for the indicated value	2, 3, 4, 5	0	
A2FUL	Full scale	Maximum weighing range of the current channel	0-999999	900000	
A3CLF	Zeroing range	The boundary of the zero-setting operation	0-999999	500	
A4ZCL	Power-on zeroing range	Threshold for the power-on zeroing operation	0-999999	0	
A5ZLF	Automatic zeroing range	ZLF automatic zero-setting range, ZLT automatic zero-setting time, set the time to zero, and let the weight value be 0.	0-999	0	
A6ZLE	Auto-zeroing time	When w is continuous or exceeds the automatic zeroing time. Satisfies ZLF > w > -ZLF and is stable, This unit will automatically be set to zero.	0.0-9.9	0.0	

Code	Parameter	Name	Parameter Explanation	Value range	Initial value	
A7 PF	Stability range	Determine the threshold for data stability; exceed this... The boundary is dynamic.		0.0-9.9	3.0	
A8 PE	Stabilization time	Determine the time when the data stabilizes.		0.0-9.9	0.2	
AAFRE	Conversion frequency	Auto conversion frequency		10, 40, 650, 1280	40	
ABFIL	Filter coefficient	The ability to reduce fluctuations in unstable weighing data		0-9	6	
AC F2S	Negative value displayed	Whether to display negative values		ON : On OFF: Off	ON	
AdCLS	Zeroing range	0:	Real-time value ≤ A3 CLF: Out	0-299	4	
			Real-time value ≤ A3 CLF: Automatic zeroing			
		1:	± Real-time value ≤ A3 CLF: Reset to zero			
			Real-time value ≤ A3 CLF: Automatic zeroing			
		128:	Real-time value ≤ A3 ZLF: Zeroing out			
	±Real-time value ≤ A5 ZLF: Auto-zeroing					
	129:	± Real-time value ≤ A3 ZLF: Auto-zeroing				
		±Real-time value ≤ A5 ZLF: Auto-zeroing				
	4:	Equivalent to 0				
AE dU	Unit	The unit is displayed; if the unit is empty, it is not displayed.			KG, GN, LN, None	KG

◆ 4.2.2(Functional Parameter B-Group)

Code	Parameter	Name	Parameter Explanation	Value range	Initial value
b1 Lo	Lower limit value	Lower limit value for price comparison and judgment	0-99999	500	
b2 dJ	Medium limit value	Mid-range value for price comparison and judgment	0-99999	2000	
b3 H1	Upper limit	Upper limit value for price comparison and judgment	0-99999	6000	
b4ZFU	Peak reset value	When the weight is less than this value, get ready to start. New peak measurement	0-59999	10	
b5FFU	Minimum value reversal time	When the weight is greater than the negative value, prepare. Start new valley value measurement	0-59999	10	

◆ 4.2.3(Analogue parameter C-Group)

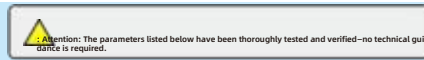
Code	Parameter Name	Parameter Explanation	Value range	Initial value
C2 AFE	Analog quantity Output method	Switch between output voltage $\pm 10\text{V}$ or current $4\sim 20\text{mA}$. Output. With different settings, the displayed menu will... There are differences; see the initial values.	-10V10 4-20	-10V10
C3 A02	Analog quantity Zero-point output	Analog quantity Weight value corresponding to zero point	± 99999	0
C4 AFE	Analog quantity Full-scale output	Analog quantity Weight value corresponding to full scale	0-999999	50000

When C2 is set to -10V10, the following parameter settings are displayed:



C0 C11	Voltage 0V output DA value	For 0V point calibration	0-59999
C1 111	Voltage 10V output DA value	For 10V point calibration	0-59999
C5 -10	Voltage -10V output DA value	For calibration at the -10V point	0-49999
C6 02E	Zero-point voltage output value	The voltage output corresponding to the point (default: 0)	0-99999
C7 0FU	Full-scale voltage output value	The voltage corresponding to the output at full scale, full scale. The voltage of the circuit cannot be set below 0.02V output. The voltage (default 10)	0-99999

C2 is set to: Display the following parameter settings when 4-20 is selected.



C0 A04	Current zero-point DA value	For 4mA point calibration	0-59999
C1 A20	Full-scale current DA value	For 20 mA point calibration	0-69999

◆ 4.2.4(Port parameter D-Group)

Code	Parameter Name	Parameter Explanation	Value range	Initial value
d1 in1	IN1 Function	1Zeroing out 2: Zero mark 3: Qing Feng Peak	1,2,3	1
d2 ou1	OUT 1 Function	1: Real-time value < Lower limit (Lower limit) 2Lower limit $\leq$ Real-time value $\leq$ Upper limit (Mid-limit) 3Real-time value > Upper limit (upper limit) 4: Resettable 5: Failure 7Stable	1,2,3,4,5,7	1

◆ 4.2.5(Communication Parameter E-Group)

Code	Parameter Name	Parameter Explanation	Value range	Initial value
E0 bDL	Baud rate	Serial communication bit data transmission rate	1200,2400,4800,9600,19200,38400,57600,115200	9600
E1 5JG	Data format	Data bits Stop bit Check digit	8N1, 8O1, 8E1, 7O1, 7E1, 8N2	8N1
E2 EFC	Communication protocol	0: Mod bus 1: CB920 sends continuously	0~1	0
E3 Adf	Mailing address	Slave address in MODBUS communication	1~199	1
E4 FJG	CB920 Communication Settings	CB920 Continuous Transmission Interval Time	0~1999	100

◆ 4.2.6 (View the sensor's current mV value – F-Group)



You can view the sensor's current mV value; press the left arrow and the up arrow to switch.

The displayed channel;

5. 1 Modbus-RTU communication

1This controller supports register read and write functions in the standard Modbus-RTU serial communication protocol, which operates in master-slave mode (supports function codes 0x03 and 0x10). It is typically used as a slave device in a bus network to exchange data with the master device.

2Format: Default: 8N1, 9600 baud rate

Display format	Say Bright
8N1 (default)	8 data bits, no parity, 1 stop bit
8The 1	8 data bits, odd parity, 1 stop bit
8E1	8 data bits, even parity, 1 stop bit
8N2	8 data bits, no parity, 2 stop bits
7The 1	7 data bits, odd parity, 1 stop bit
7E1	7 data bits, even parity, 1 stop bit
Baud rate: 4800, 9600 (default), 19200, 38400, 57600, 115200	

5.2 Instructions 0x03 and 0x10—Description

◆ 5.2.1、Read Register 0x03 Function Code(Example)

◇ Read format

Byte	Module address	Function code	Register to be read		Register to be read		CRC-1 6 Checksum	
			Starting address		Number of items		Note: Low-order byte	
Definition	Address	0x03	High 8 bits	Low 8 bits	High 8 bits	Low 8 bits	Low 8 bits	High 8 bits
Example	01	03	00	01	00	02	95	CB

◇ Module return format

Byte	Module Address	Indicates the following				Data				CRC-1 6 Checksum	
		Function code	Data byte	The number of						Note: Low-order byte	
Definition	Address	0x03	N	Data 1	Data 2	Data N-1	Data N	Low 8 bits	High 8 bits		
Example	01	03	04	00	03	00	00	0A	33		

Note 4: The data returned in the example is 4 bytes.

◆ 5.2.2、Write Register 0x10 Function Code (Example)

◇ Write format

Byte	Module Address	Function code	Register to be written to		Register to be written to	Indicates the Data to be written		CRC-16 checksum	
	Address	0x10	High 8 bits	Low 8 bits	High 8 bits	Low 8 bits	N	Data byte	Low 8 bits
Definition	Address	0x10	High 8 bits	Low 8 bits	High 8 bits	Low 8 bits	N	Data byte	Low 8 bits
Example	01	10	00	01	00	02	04	00000000	32

◇ Module return format

Byte	Module Address	Function code	Register start address		Number of registers		CRC-16 Checksum	
	Address	0x10	High 8 bits	Low 8 bits	High 8 bits	Low 8 bits	Low 8 bits	High 8 bits
Definition	Address	0x10	High 8 bits	Low 8 bits	High 8 bits	Low 8 bits	Low 8 bits	High 8 bits
Example	01	10	00	01	00	02	10	08



1 Modbus-RTU uses the CRC method to calculate the checksum, with the checksum covering all bytes of the data frame and ignoring the parity check method for individual character data within the message.

2 If the address sent to the meter does not match or the CRC check fails, the meter will not respond.

5.3 , Instruction example

◆ 5.3.1、Instruction for reading real-time values

Send	Module address	Function code	Register start address		Number of registers		CRC-16 checksum	
	01	03	00	0B	00	02	B5	C9
	01 03 00 0B 00 02 B5 C9				Read the real-time value of one channel from register 11, and read a total of two registers.			

Return	Module Address	Data Byte	Data (big-endian mode)		CRC-16 checksum	
	01	03	04	00 00 0A 0B	BD	54

Feedback parsing: For example: The real-time measurement value of Channel 1, 00 00 0A 0B

Calculation method: $00 \times 256^3 + 00 \times 256^2 + 0A \times 256 + 0B = 2571$

◆ 5.3.2– Instruction for reading the peak value

Send	Address	Function code	Starting address		Number of registers		CRC-16 checksum	
	01	03	00	2B	00	02	B4	03
	01 03 00 2B 00 02 B4 03				Read the peak value of one channel from register 43, for a total of 2 registers read.			

Return	Module Address	Data Byte	Number of items	Data (big-endian mode) 4one-byte data	CRC-16 checksum	
	01	03	04	00 00 0A 0B	BD	54

Feedback parsing: For example: The real-time measurement value of Channel 1, 00 00 0A 0B

Calculation method: 00 × 256³ + 00 × 256² + 0A × 256 + 0B = 2571

◆ 5.3.3– Instruction for reading the minimum value

Send	Address	Function code	Starting address	Number of registers		CRC-16 checksum	
	01	03	00	4B	00	02	B4 1D
	01 03 00 4B 00 02 B4 1D			Read the minimum value of one channel from register 75, reading a total of 2 registers.			

Return	Module Address	Data Byte	Number of items	Data (big-endian mode) 4one-byte data	CRC-16 checksum	
	01	03	04	00 00 0A 0B	BD	54

Feedback parsing: For example: The real-time measurement value of Channel 1, 00 00 0A 0B

Calculation method: 00 × 256³ + 00 × 256² + 0A × 256 + 0B = 2571

5.4 Modbus Communication Standard Procedure Description

◆ 5.4.1、 Calibration Procedure with Weights (Calibration of Channel 1) – See Section 5.5 for instructions.

11. Write 1 to register 107 (the channel to be operated is Channel 1, so write 1; if you want to calibrate Channel 2, write 2, and so on for other channels).

2After emptying the weighing pan, write 1 into register 113 to calibrate the zero point.

3Place a 1000g weight on the weighing pan, and write 1000 into register No. 108.

4Write 2 to register 113 to confirm the gain.

5Calibration completed.

◆ 5.4.2– Calibration procedure without weights (Calibration of Channel 1) Instruction reference 5.5

Festival

11. Write 1 to register 107 (the channel to be operated is Channel 1, so write 1; if you want to calibrate Channel 2, write 2, and so on for other channels).

2After clearing the weighing pan, write 1 into register 113 to calibrate the zero point.

3Write the sensor full-scale value into register 111 (4 bytes).

4110. Write sensor sensitivity to register (2 bytes)

5Write 8 to register 113 for confirmation.

6Complete calibration

◆ 5.4.3. Multi-stage Calibration Procedure (Calibration of Channel 1) – See Section 5.5 for instructions.

11. Write 1 to register 107 (the channel to be operated is Channel 1, so write 1; if you want to calibrate Channel 2, write 2, and so on for other channels).

2After clearing the weighing pan, write 1 into register 113 to calibrate the zero point.

3Write the segment to be calibrated into register 194—for example, write 1 to calibrate the first segment, 2 to calibrate the second segment, and so on for other segments.

4Place weights on the weighing pan and write the current segment's weight value into register 195.

5If register 199 is written with the value 100, then segment 1 will take effect.

6Repeat steps 2, 3, and 4 to complete the calibration of the other segments.

 **Note.** If only 5 segments are calibrated, the 6th segment must be set to 0, and writing 100 to register No. 199 will take effect. Any single segment can be calibrated independently without affecting other segments.

5.5– Common command reference

◆ Register No. 107 (to set the channel to be operated) – Write instruction (example)

107Register write-1 instruction	01 10 00 6B 00 01 02 00 01 6F 4B
107Register Write 2 Instruction	01 10 00 6B 00 01 02 00 02 2F 4A
107Register Write 3 Instruction	01 10 00 6B 00 01 02 00 03 EE 8A
107Register write 4 instruction	01 10 00 6B 00 01 02 00 04 AF 48

◆ Instruction for writing to Register No. 113 (Calibration Operation) (Example)

113Register write-1 instruction	01 10 00 71 00 01 02 00 01 6D 71 (Zero Point)
113Register Write 2 Instruction	01 10 00 71 00 01 02 00 02 2D 70 (Standard Gain)
113Register write 4 instruction	01 10 00 71 00 01 02 00 04 AD 72 (Reset to zero)
113Register write 8 instruction	01 10 00 71 00 01 02 00 08 AD 77 (rated sensitivity)

◆ 199Register Write Instruction (Example)

199Register write 100 instruction	01 10 00 C7 00 01 02 00 64 B7 0C (Confirmation segment activation command)
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5.6 Register Address and Data Reference Table

Register Address	PLC Address	Data Type	Name	Instructions	Scope (Decimal)	Attribute	Default value (Decimal)
0	40001	2Byte Integer	With Modbus Slave address	If you forget the address, you can use address 255. Communicate, then modify the address.	0: 254	Reading and writing	
1	40002	2Byte Integer	Communication baud rate	The baud rate of serial communication	0 1200 1 2400 2: 4800 3 9600 4 19200 5: 38400 6 : 57600 7 115200	Reading and writing	
2	40003	2Byte Integer	Data format	Serial communication protocol address	0 8N1 1 3 701 2 : 8E1 3 4 7E1 5 8N2	Reading and writing	
3	40004	2Byte Integer	Communication protocol	-	0 Modbus-RTU 1 : CB920	Reading and writing	
4	40005	2Byte Integer	Send interval	CB920 continuous transmission interval	0 11992	Reading and writing	
5	40006	2Byte Integer	Number of channels	Number of device channels	-	Read-only	Currently number of channels
6	40007	2Byte Integer	Restore Factory settings	Write 111 to restore factory settings, restore. The sensor needs to be recalibrated afterward.		Just write.	-
7	40008	4Byte Integer	Version number	Firmware Version	-	Read-only	Currently version number
9	40010	2Byte Integer	1-16Road Sensor Steady state	The least significant bit corresponds to channel 1. The highest bit corresponds to the 16-channel. Steady state 0Unstable 1Stable	0-65535	Read-only	0

Register Address	PLC Address	Data Type	Name	Say Bright	Scope (Decimal)	Attribute	Default value (Decimal)
10	40011	2Byte Integer	1-16Road Sensor Online status	The least significant bit corresponds to channel 1. The highest bit corresponds to the online status of the 16 channels. 0: Offline 1: Online	0-65535	Read-only	0
11	40012	4Byte Integer	1Channel Real-time value	Write 0 to zero out.	-	Reading and writing	
43	40044	4Byte Integer	1Channel Peak	Write 0 to zero out.	-	Reading and writing	
75	40076	4Byte Integer	1Channel Valley value	Write 0 to zero out.	-	Reading and writing	
107	40108	2Byte Integer	To be operated Channel Number	When operating the calibration using register number 113, first, write the channel number to be operated to this address.	1-16	Reading and writing	
108	40109	4Byte Integer	Weight value	Weight values during calibration operation	0-9999	Reading and writing	
110	40111	2Byte Integer	Sensor Sensitivity	Used for sensitivity calibration, intended for actual sensitivity. Degree value × 10000 Example: If the sensitivity is 1.9000, then you should enter: Enter 19000	1000-64999	Readable and writable	
111	40112	4Byte Integer	Sensor Full scale	Sensor range during zero-weight calibration	0-9999	Readable and writable	

Register Address	PLC Address	Data Type	Name	Say Bright	Scope (Decimal)	Attribute	Default value(Decimal)
1 13	40 1 14	2Byte Integer	Calibration	(Use this address to write 1 to confirm the zero point of the channel to be calibrated. Register marking Before calibration, the corresponding weighing platform must be emptied. Scheduled, required Write 2 to confirm the gain of the channel requiring calibration. First to number 107. Before calibration, place it on the corresponding weighing platform. Register write Place the weight, and write the weight value into the previous one. To be calibrated. Instruction reference See the steps just write. Road number) 5.5Chapter Write 4 to calibrate the pass-through within the zeroing range. With weight calibration The weight value of the Dao; See the steps. 1.4.1Chapter Write 8 to calibrate the sensitivity of the channel to be calibrated. Calibration without weights Confirm that the sensor must be entered before calibration. See the steps. the sensitivity and the corresponding full-scale value; 1.4.2Chapter			
1 14	40 1 15	2Byte Integer	Input port status	-	-	Read-only	-
1 15	40 1 16	2Byte Integer	Output port status	-	-	Read-only	-
1 17	40 1 18	2Byte Integer	Write lock	0: Not writable 1: Writable	Power loss does not read data loss	Read-only	-

Register Address	PLC Address	Data Type	Name	Say Bright	Scope (Decimal)	Attribute	Default value(Decimal)
194	40195	2Byte Integer	Section number	Segment number to be calibrated	1-50	Readable and writable	-
195	40196	4Byte Integer	N segment actual Weight value	The actual weight value of the Nth segment to be calibrated.	00000-99999	Readable and writable	-
197	40198	4Byte Integer	N-segment MV value	The millivolt value of the Nth segment to be calibrated.	00000-99999	Readable and writable	-
199	40200	2Byte Integer	Calibration segment number	For example, in paragraph 3, set 107 to be the operation target. Route number, then set the segment number to 3, segment actual. Write the actual weight into the interweight value register. Then, write 100 into this register—the first segment. Calibration takes effect. Perform the same operation for other segments as well.	0-100	Readable and writable	-

Register Address	PLC Address	Data Type	Name	Say Bright	Scope (Decimal)	Attribute	Default value (Decimal)
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The following parameters are for each sensor channel, and each channel can be configured independently.
Let n be the channel number of the sensor to be operated. Then, the address of the parameter register to be operated = (address of the first channel's parameters) + (n-1) × 100. For example:

- ◆ Measurement status register address for Channel 2 = 200 + (2 - 1) × 100 = 300
 - ◆ PLC address: 40201 + (2 - 1) × 100 = 40301
 - ◆ Real-time value register address for Channel 3 = 203 + (3 - 1) × 100 = 403
 - ◆ PLC address: 40204 + (3-1) × 100 = 40404
- Other parameters can be calculated in the same way as in this example.

200	40201	2Byte Integer	Measurement status	03Position: 0: Unstable Stable Status: 0: Sensor normal 1: Sensor error 05-15The value is fixed at 0.	-	Read-only	-
201	40202	2Byte Integer	Decimal point	Number of decimal places for the indicated value	0 : 0.00000 1: 0.0000.0 2 : 0.000.00 3 0.00.000 4 : 0.00.0000 5 : 0.000000	Readable and writable	0
202	40203	2Byte Integer	Dividing value	The difference between two adjacent readings	1, 2, 5, 10, 20, 50	Readable and writable	-
203	40204	4Byte Integer	Current real-time measured value	(Write 0 to zero)	-	Readable and writable	-
205	40206	2Byte Integer	Current real-time measured value	Same as the data in register 203, except... The provided data range is smaller; (Small scope) Range: -32767 to 32767	-	Read-only	-
209	40210	4Byte Integer	Sampling code	AD output: Unfiltered sampled code	-	Read-only	-
211	40212	4Byte Integer	Peak	Write 0 to zero out.	-	Reading and writing	-

Register Address	PLC Address	Data Type	Name	Say Bright	Scope (Decimal)	Attribute	Default value (Decimal)
213	40214	4Byte Integer	Valley value	Write 0 to zero out.	-	Reading and writing	-
215	40216	2Byte Integer	Peak Reset threshold	When the weight is less than this value, get ready to start a new peak measurement	0~6 5530	Reading and writing	0
219	40220	2Byte Integer	Valley value Reset threshold	When the weight is greater than the negative value, prepare to start a new valley measurement.	0~6 5530	Reading and writing	0
223	40224	4Byte Integer	Zeroing range	The boundary of the zero-setting operation	0~99999	Readable and writable	500
225	40226	4Byte Integer	Power on Zeroing range	The threshold for the power-on zeroing operation when it is zeroed	0~99999	Readable and writable	500
227	40228	2Byte Integer	Automatic Zeroing range (ZLF)	Let the current measured value be w, and let w be continuous. Or exceed the automatic zero-setting time to meet the requirement.	0~999	Readable and writable	0
228	40229	2Byte Integer	Automatic Zeroing time (ZLT)	ZLF > w > - ZLF, and stable, This unit will automatically be set to zero. The unit of time is 0.1s	0~249	Readable and writable	0
230	40231	2Byte Integer	Stability range	Determine the threshold for data stability—exceeding this, the boundary is dynamic.	0~199	Readable and writable	0
231	40232	2Byte Integer	Stabilization time	Determine the time when the data stabilizes. The time unit is 0.1 s.	0~199	Readable and writable	0
234	40235	2Byte Integer	AD conversion speed	0 10 Hz 2 650 Hz 1 40 Hz 3 128 0 Hz	0~3	Readable and writable	0
236	40237	2Byte Integer	Filter coefficient	The larger the value, the stronger the filtering effect.	0~99	Readable and writable	0

Register Address	PLC Address	Data Type	Name	Say Bright	Scope (Decimal)	Attribute	Default value (Decimal)
237	40238	2Byte Integer	Sensor Sensitivity	Used for sensitivity calibration, for actual sensitivity. Degree value × 10000 Example: If the sensitivity is 1.9000, then you should enter: Enter 19,000	1000-64999	Readable and Writable	0
238	40239	4Byte Integer	Sensor Full scale	Sensor range during zero-weight calibration	1000-99999	Readable and Writable	0
240	40241	4Byte Integer	Weight value	The value of the weights used during calibration is not considered. Consider the decimal point; for example, if the weight is 10.50, just write 1050.	1000-99999	Readable and Writable	0
242	40243	2Byte Integer	Calibration Method, only can Operation corresponding to of the channel Sensor)	Write 1 to calibrate the zero point of the channel to be calibrated. Confirm that you need to clear the pairing before calibration. Weighing platform; Write 2: To calibrate the gain of the channel to be calibrated. Calibration Yes, before calibration, you need to place it on the corresponding scale. (This type of calibration Method, only can Operation corresponding to of the channel Sensor) Place the weights on the platform, and set the weight values. Write to the previous weight value register; Write 4 to calibrate the required markings within the zeroing range. Channel weight value; Write 8 to calibrate the sensitivity of the channel. Calibration confirmation: Before calibration, you need to enter... The sensitivity of the sensor and its corresponding ... The full-scale value;	1000-99999	Readable and Writable	0

Chapter 6: Other Notes

6.1, Note and Explanation

Communication Data Type Explanation

2 All byte integer data are 16-bit unsigned integer data; all 4-byte long integers are 32-bit signed long integer data.

6.2 Fault alarm information and troubleshooting

ERR01: Overload fault—please check whether the sensor is overloaded, or increase the full-scale range.

ERR02: Sensor failure or wiring error—please check whether the sensor or wiring is connected correctly.

Is the contact good?

ERR03: This error message indicates a hardware failure. Please contact us.

6.3Digital and Letter Display Reference Table

0	0	G	G
1	1	H	H
2	2	I	I
3	3	J	J
4	4	K	K
5	5	L	L
6	6	N	n
7	7	O	o
8	8	P	P
9	9	Q	q
A	A	R	r
B	b	S	S
C	C	T	t
D	d	U	U
E	E	W	W
F	F	Z	Z



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