



LX3V-2WT-G Manual

V1.0

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1. Operating principle

When the metal material is subjected to tension or strain, the metal material becomes thinner and the electrical impedance increases. On the contrary, when it is compressed, the metal impedance becomes smaller. Applying this method to make a strain gauge is called a weighing module. Such sensing devices can convert pressure in physical phenomena into electrical signal output, so they are often used in applications where load, tension, and pressure are converted.

2. Module introduction

- (1) Thank you for using the Wecon LX3V-2WT-G module. This module is compatible with all the functions of the LX3V-2WT module, and adds the function of flow calculation, which is dedicated to the Mick weight system. The weighing module LX3V-2WT-G provides 24-bit high resolution and can be applied to various eigenvalue weighing modules of 4 or 6-wire type. The response speed can be adjusted according to the needs of customers, and it can easily meet the current load application market. comprehensive needs.
- (2) In order to ensure the correct installation and operation of this product, please read the manual carefully before using the module. This manual is only for LX3V-2WT-G operation guide and reference.
- (3) The LX3V-2WT-G weighing module can read and write data through the LX3V host program with the command FROM/TO.

Note: Disconnect power before installing/removing modules or wiring the modules to avoid contact or product damage.

2.1 Functional Specifications

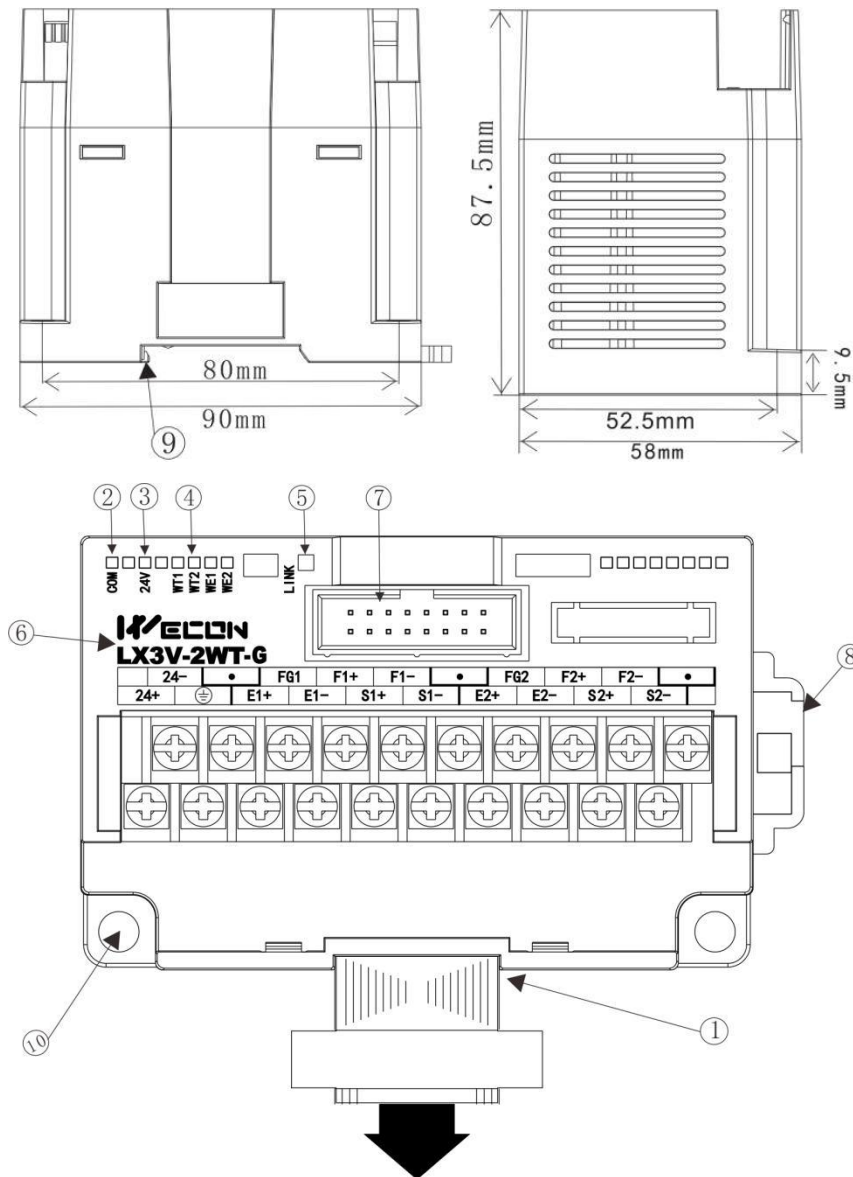
Weighing module	Specifications
Physical channel	Double channel
A/D converter	24-bit $\Delta\Sigma$ A/D
Resolution	24 bits (signed)
Conversion speed	7.5/10/25/50/60/150/300Hz optional
Polarity	Uni-polar and bipolar
Non-linearity	$\leq 0.01\%$ full scale (25°C)
Zero drift	$\leq 0.2\mu\text{V}/^\circ\text{C}$
Gain drift	$\leq 10\text{ppm}/^\circ\text{C}$
Excitation voltage & load	dual channel 5V, single channel load impedance is not less than 200Ω.
Sensor sensitivity	1mV/V to 15mV/V
Isolation	Transformer (power supply) and optical coupler (signal)
Indicator light	Module power supply (24V) light, module internal data communication light (COM), communication indicator between PLC and module (LINK), channel indicator light and channel calibration light
External power supply	24V \pm 20%, 2VA
Operating temperature	0 to 60°C
Storage temperature	-20 to 80°C
Size	90(L)x58(W)x80(H) mm

2.2 Valid bits

For details, please refer to "(4) BFM3: Sampling frequency" in "[BFM description](#)" in "Chapter 5" of this manual.

3. Appearance and size

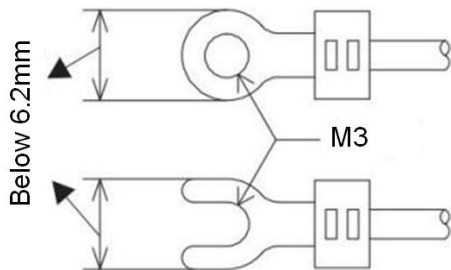
3.1 Dimensions



- | | |
|--|--|
| ① Expansion cable | ⑤ LINK: Communication indicator between PLC and module |
| ② COM light: Module internal data communication indicator | ⑥ Name of the expansion module |
| ③ 24V light: Always on when connected to external DC24V power supply | ⑦ Expansion module interface |
| ④ WT light: Channel input/output indicators
WE light: Channel calibration indicator | ⑧ DIN rail mounting clip |
| | ⑨ Hook for DIN rail |
| | ⑩ Holes for direct mounting: 2 places (φ4.5) |

Name	Description	Light status	Event status
LINK light	Communication indicator between PLC and module	Light flashes	Data is interacting normally (communication is normal)
		Lights off	Data interaction is abnormal, stopped or failed
		Always ON	Abnormal software operation or hardware failure
COM light	Module internal data communication indicator	Light flashes	Data is interacting normally (communication is normal)
		Lights off	Data interaction is abnormal, stopped or failed
		Always ON	Abnormal software operation or hardware failure
WT light	Channel output/input indicator	Light flashes	Analog input is out of range
		Always ON	Analog input is within the range
		Lights off	Channel closed
WE light	Calibration indicator for the channel	Lights off	Calibration succeeded
		Always ON	Calibration failed or not calibrated

3.2 Use of blade terminals

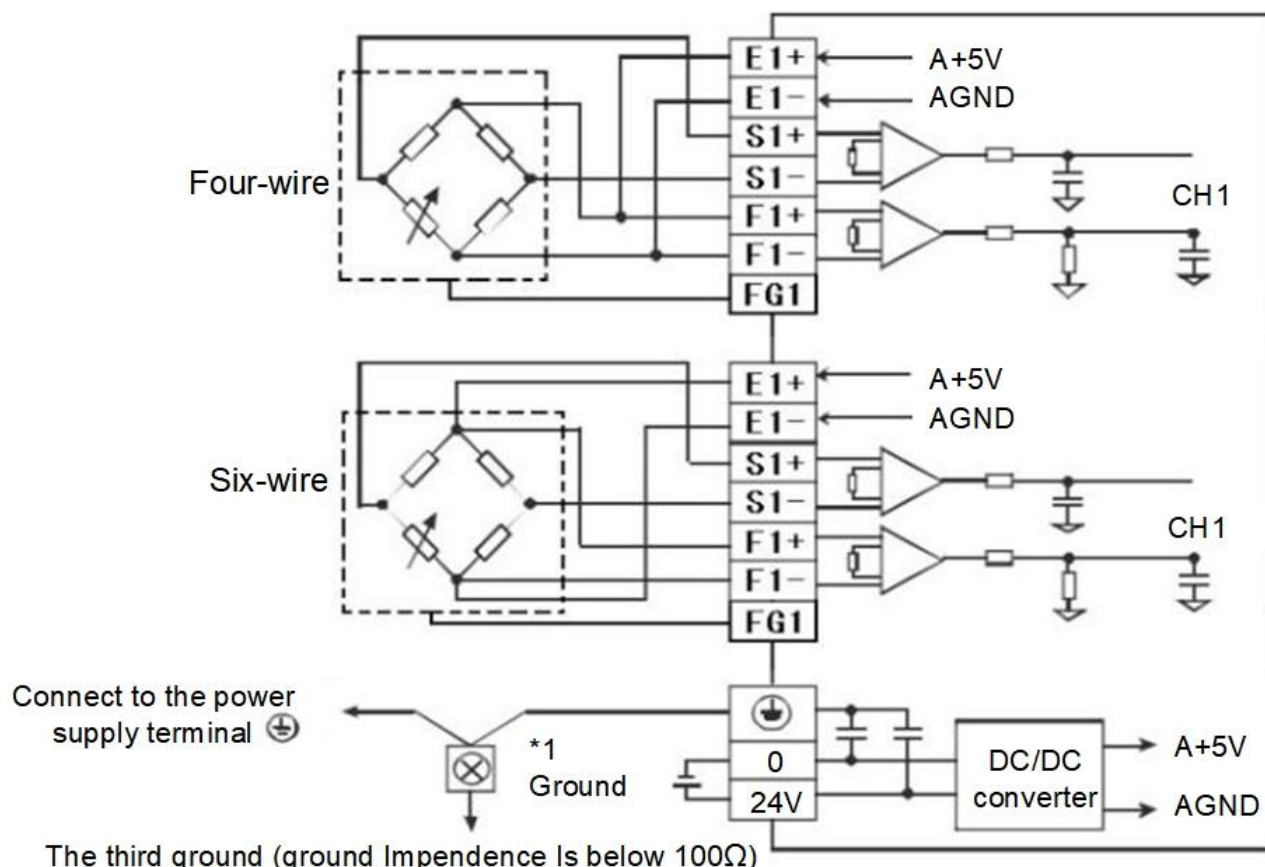


Use crimp terminals of the size shown in the figure. Terminal tightening torque is 0.5 to 0.8N.m. Be sure to tighten the screws so as not to cause malfunction.

3.3 Terminal Description

Terminal	Terminal Instructions
24V+	Power supply+
24V-	Power supply-
Ground	Grounding
FG1	Sensor housing
E1+	Power supply + (5V) for the first sensor
E1-	Power supply- (5V) for the first sensor
F1+	Feedback + of the first sensor
F1-	Feedback - of the first sensor
S1+	Signal output + of the first sensor
S1-	Signal output - of the first sensor
E2+	Power supply + (5V) for the second sensor
E2-	Power supply - (5V) for the second sensor
F2+	Feedback + of the second sensor
F2-	Feedback - of the second sensor
S2+	Signal output + of the second sensor
S2-	Signal output - of the second sensor
FG2	The second channel sensor shell
Other empty terminals	Empty pin, do not connect any line

4. Wiring



Note:

The impedance of the load cell is greater than 200Ω.

The four-wire sensor requires E1+ to be connected to F1+, E1 to be connected to F1-.

5. Buffer register (BFM)

5.1 BFM list

BFM number		Power-off hold	Read/write	Register name	Default	Range	Illustrate
CH1	CH2						
#0		0	R	Model type	5016	—	System default. LX3V-2WT-G model number
#1		0	R	Software version	15004	—	Software version number
#2	#42	0	R/W	Unipolar/Bipolar	0	0 to 1	0: Bipolar 1: Unipolar
#3	#43	0	R/W	Sampling frequency	1	0 to 4800	0: 7.5HZ 1: 10HZ 2: 25HZ 3: 50HZ 4: 60HZ 5: 150HZ 6: 300HZ 7: 600HZ 8: 960HZ 9: 2400HZ 10 to 4800: 10Hz to 4800Hz

BFM number		Power-off hold	Read/write	Register name	Default	Range	Illustrate
CH1	CH2						
#4	#44	X	R	Status code	0	—	For details of each status code, refer to "Buffer Register BFM Description"
#5	#45	X	R	Error code	0	—	A data register that stores all error states. Each error state is determined by the corresponding bit. It is possible to generate more than two error states at the same time. 0 means normal without error, 1 means there is an error state. #45: Reserved b0: Abnormal power supply b1: Hardware failure b2: CH1 conversion error b3: CH2 conversion error b4: CH1 input calibration parameter error b5: CH2 input calibration parameter error Others: Reserved
#6	#46	X	R/W	Tare reading	0	0 to 1	Read the current average value as the tare weight value: 0: Normal (invalid). 1: Execute tare setting, then reset to 0. Others: Invalid.
#7	#47	0	R/W	Gross weight/ net weigh display	0	—	Choose to display the current weight as gross weight (K0) or net weight (K1). 0: display gross weight. 1: Display net weight. 0xF: Channel closed

BFM number		Power-off hold	Read/write	Register name	Default	Range	Illustrate
CH1	CH2						
#8	#48	X	R/W	Adjust	0	—	<p>The calibration is to make the module match the weight value of the load cell of the weighing module. The default value is 0.</p> <p>0x0001: zero instruction.</p> <p>0x0002: Weight base point instruction.</p> <p>0x0003: No weight calibration instruction.(supported by 15004 and above)</p> <p>0x0004: Modify calibration parameter command. (supported by version 15004 and above)</p> <p>Note: When a value is written to BFM#8 or BFM#48 using the device monitor, it is automatically reset to 0.</p>
#9	#49	X	R/W	Reset	0	0 to 3	<p>#49: Reserved</p> <p>1: Reset CH1</p> <p>2: Reset CH2</p> <p>3: Reset all channels</p> <p>Others: no action</p>
#10	#50	0	R/W	Filtering method	0	0 to 1	After the data is modified, it needs to be re-calibrated
#11	#51	0	R/W	Filter strength	0	0 to 7	After the data is modified, it needs to be re-calibrated
#12	#52	0	R/W	Zero tracking Intervals	0	0 to 20000	When the zero tracking function is enabled, the minimum interval between two consecutive zero resets, The unit is 1ms.
#13	#53	0	R/W	Zero tracking range	0	0 to 100	<p>0: Disable the zero tracking function</p> <p>Others: Set the zero tracking range (absolute value)</p>
#14	#54	0	R/W	Automatically reset after boot	0	0 to 4	<p>0: Disable automatic reset at startup</p> <p>1: $\pm 2\%$MAX 2: $\pm 5\%$MAX</p> <p>3: $\pm 10\%$MAX 4: $\pm 20\%$MAX</p>

BFM number		Power-off hold	Read/write	Register name	Default	Range	Illustrate
CH1	CH2						
#15	#55	0	R/W	Sensor sensitivity setting (inside the module)	4	0 to 5	0:<1V/V 1:<125mV/V 2:<62.5mV/V 3:<31.25V/V 4:<15.625mV/V 5:<7.812mV/V Note: Recalibration is required after setting. (Only supported by version 13904 and above)
#16	#56	X	R	Average weight L	0	-2147483648 to 2147483647	Average weight display value (low word)
#17	#57			Average weight H	0		Average weight display value (high word)
#18	#58	0	R/W	Moving average	5	1 to 50	The setting range is K1 to K50, and the default value is K5. When the set value exceeds the range, it is automatically changed to the critical value K1 or K50.
#19	#59	0	R/W	Tare weight value L	0	-2147483648 to 2147483647	You could write or read the tare weight #7 by instruction.
#20	#60		R/W	Tare weight value H			
#21	#61	0	R/W	CH1 Stability Check Time	200	0 to 20000	Stability check time, used in conjunction with the stability check range. Unit: ms.
#22	#62	0	R/W	Stability check range	1	1 to 100	If the stability check range is set to 100 and the stability check time is set to 200ms, the value is considered to be stable if the current weight bounce range is within 100 for 200ms. In other cases, it is considered unstable, and the stability flag is displayed in BFM#4.
#23	#63	0	R/W	Weight value Adjust L	1000	-2147483648 to 2147483647	see #8 Input weight base point weight with calibration weight Input sensor range without calibration weight
#24	#64		R/W	Weight value Adjust H			
#25	#65	0	R/W	Weight upper limit L	32767	-2147483648 to 2147483647	You could set the maximum weight value. When the measured value exceeds the set value, an error code will be recorded.
#26	#66		R/W	Weight upper limit H			
#27	#67	0	R/W	Zero judgment Check the upper limit L	10	-2147483648 to	Zero point judgment function: You could use the zero point judgment

BFM number		Power-off hold	Read/write	Register name	Default	Range	Illustrate
CH1	CH2						
#28	#68		R/W	Zero judgment Check the upper limit H		2147483647	function to know that the item has been removed from the weighing module. You could judges that the measurement value is stable and the Bit is 1, which means that the item has been removed from the weighing module, and you could perform the next step at this time. (The zero point weight Bit in the zero point judgment range is 1)
#29	#69	0	R/W	Zero judgment Check the lower limit L	-10	-2147483648 to 2147483647	
#30	#70		R/W	Zero judgment Check the lower limit H			
#31	#71	X	R/W	Additional function options	0	0 to 1	0: Default value. Additional functions are not enabled 1: Enable filter reset function. Others: Reserved
#32	#72	X	R/W	Additional functions Parameter 1	0	0 to 100	Enable filter reset function: 0: The default value does not work 0 to 100: The number of sampling cycles to wait to restart filtering. The values collected during the period are accumulated and averaged as the initial value of filtering.
#33	#73	X	R	Digital value L	0	-	Digital quantity collected by ADC
#34	#74	X	R	Digital value H			
#35	#75	0	R/W	Calibration parameter A	1	-3.402823E+38 to 3.402823E+38	Described in CH1: After modifying the calibration parameters, #8 does not write 4, it is only displayed, and not used for weight value calculation, and will not be saved when power off. After #8 is written to 4, if the parameter range is correct, write and save it for weight value calculation, # 4 error code Bit4 is set to 0. If the parameter range is wrong, no write operation is performed, and #4 error code Bit4 is set to 1.
#36	#76						
#37	#77	0	R/W	Calibration parameter B	0	-3.402823E+38 to 3.402823E+38	
#38	#78						

BFM number		Power-off hold	Read/write	Register name	Default	Range	Illustrate
CH1	CH2						
#39	#79	0	R/W	Sensor sensitivity (specification)	2000	0 to 32767	The default setting of 2000 means 2mV/V. For calibration without weights, you need to set the sensitivity and accuracy of the sensor. The sensitivity range is 0 to 32.767mV/V, the sensor sensitivity BFM#39 input negative value, directly convert it to 32767 and execute. For example: Modified to 1942 represent 1.942mV/V.
#40	#80	X	R/W	Sensor feedback Voltage L	0	—	Write: 0: not displayed 1: Display the current sensor feedback voltage in real time 2: Display the zero-point voltage during calibration 3: Display the voltage reading of the applied weight during calibration: Displays the low bit of the voltage value. Unit: uV.
#41	#81	X	R	Sensor feedback Voltage H	0	—	Read: Displays the low bit of the voltage value. Unit: uV.
#82	#92	X	R/W	Flow Switch	1	0 to 1	0: Turn off flow calculation 1: Turn on flow calculation
#83	#93	X	R	Low flow	0	0 to 2147483647	Filtered flow display (0.01g/s)
#84	#94	X	R	High flow			
#85	#95	X	R	Current low flow	0	0 to 2147483647	Unfiltered flow display for testing. (0.01g/s)
#86	#96	X	R	Current high flow			
#87	#97	X	R/W	Flow filter reset	0	0 to 32767	It is used for flow fast tracking. It must be enabled when flow calculation is enabled. Set a non-zero number to start flow fast tracking, and automatically return to 0 after setting.

BFM number		Power-off hold	Read/write	Register name	Default	Range	Illustrate
CH1	CH2						
#88	#98	0	R/W	High eight: Threshold growth factor (*0.0002) Lower eight: Parameter change confirmation flag	0x0500	High eight: 0x01 to 0xFF Lower eight: 0x01 or 0x00	Internal parameters for filter setting
#89	#99	0	R/W	High eight: Number of normal tracking windows (*2) Lower eight: Number of fast track windows	0x9605	High eight: 0x32 to 0x96 Lower eight: 0x05 to 0x0F	Internal parameters for filter setting
#90	#100	0	R/W	High eight: Adaptive coefficient (*5) Lower eight: Fast tracking lag coefficient (*0.004)	0x024B	High eight: 0x01 to 0xFF Lower eight: 0x00 to 0xFA	Internal parameters for filter setting
#91	#101	0	R/W	High eight: Debounce threshold 5 minutes ago Lower eight: Debounce threshold after 5 minutes	0x3C64	High eight: 0x01 to 0xFF Lower eight: 0x01 to 0xFF	Internal parameters for filter setting

Note: Symbol Description

- ① O means retentive type.
- ② X means non-retentive type.
- ③ R means readable data.
- ④ W means writable data.

5.2 BFM description

(1) BFM0: Module model code

The model code for the LX3V-2WT-G module is 5016.

(2) BFM1: Software version

The software version is displayed in decimal, which is used to indicate the software version of the expansion module.

(3) BFM2: Unipolar

Bipolar means that the signal passes through zero in the process of changing, and unipolar does not pass zero. Since the conversion of analog quantity to digital quantity is a signed integer, the value corresponding to the bipolar signal will have a negative number.





(4) BFM3: Sampling frequency

The module collects the frequency of the input signal. The lower the frequency, the more stable the

value and the higher the accuracy, but the rate is reduced. The setting value corresponds to the sampling frequency as follows:

Settings	Sampling frequency (Hz)	Sampling accuracy (bit)
0	7.5	23.5
1	10	23.5
2	25	23
3	50	22
4	60	22
5	150	21.5
6	300	21
7	600	20.5
8	960	20
9	2400	17.5

(5) BFM4: Status code

Bit NO.	Status code	
	1	0
Bit0	CH1 zero weight (no load)	CH1 is not empty
Bit1	CH2 zero weight (no load)	CH2 is not empty
Bit2	CH1 exceeds upper weight limit (overload)  Note: The upper limit weight is set by #27 and #28.	CH1 is not overloaded
Bit3	CH2 exceeds upper weight limit (overload)  Note: The upper limit weight is set by #27 and #28.	CH2 is not overloaded
Bit4	CH1 measurement value is stable	CH1 measurement value is unstable
Bit5	CH2 measurement value is stable	CH2 measurement value is unstable
Bit6	CH1 uncalibrated / calibrated error	CH1 calibrate successfully
Bit7	CH2 uncalibrated / calibrated error	CH2 calibrate successfully
Bit8	00: no error	01: No-load calibration
Bit9	10: The weight of the base point of weight is too large	11: Uncalibrated
Bit10	00: no error	01: No-load calibration
Bit11	10: The weight of the base point of weight is too large	11: Uncalibrated
Bit12	CH1 exceeds the sensor range  Note: Determined by sensor feedback voltage	CH1 is within the sensor range
Bit13	CH2 is out of sensor range  Note: Determined by sensor feedback voltage	CH2 is within the sensor range
Bit14	CH1 enters the calibration without weights	CH1 has not entered the calibration without weights
Bit15	CH2 enters the calibration scale without weights	CH2 has not entered the calibration scale without weights

(6) BFM5: Error code

Bit NO.	Content	Error state
Bit0	K1 (H0001)	Abnormal power supply
Bit2	K4 (H0004)	CH1 conversion error

Bit4	K16 (H0010)	CH1 write calibration parameter error
Bit1	K2 (H0002)	Hardware fault
Bit3	K8 (H0008)	CH2 conversion error
Bit5	K32 (H0020)	CH2 write calibration parameter error
BFM#45	Reserved	
Others	Reserved	

Note: A data register that stores all error states. Each error state is determined by the corresponding bit. It is possible to generate more than two error states at the same time. 0 means normal without error, 1 means there is an error state.

(7) Tare setting: CH1-BFM6, CH2-BFM46

Writing 1 to CH1-BFM6/CH2-BFM46 is valid; after execution, reset to 0. Select the current weight value (BFM16-17) as the weight value for the tare weight (BFM19-20). Takes CH1 as an example.

The current weight value is 100, after tare setting:

If the gross weight is currently displayed (BFM7=0), the tare weight (BFM19-20) becomes 100, and the current weight is still 100;

If the net weight is currently displayed (BFM7=1), the tare weight (BFM19-20) It becomes the original value + the current weight value, and the current weight value becomes 0.

(8) BFM8: Weight calibration instruction

Adjustment steps: (Described with CH1)

1) Calibration with weights

Step1: Do not put any weights on the load cell.

Step2: Write 0x0001 to #8.

Step3: Add standard weights to the load cell.

Step4: Write the weight of the current weight on the chassis into #23.

Step5: Write 0x0001 to #8.

2) Weightless calibration

Step1: Do not put any weights on the load cell.

Step2: Write the maximum range of the sensor into #23.

Step3: Write the sensor sensitivity into #39, accurate to three decimal places.

Step4: Write 0x0003 to #8.

3) Modify calibration parameters:

Step1: Modify the calibration parameter values in BFM#35 to BFM#38;

Step2: Write 0x0004 to #8.

Note: When a value is written to BFM#8 or BFM#48 using the device monitor, it is automatically reset to 0.

(9) BFM11: Filter strength

The greater the filter strength, the more stable and accurate the weight value will be, but the delay will increase and the sensitivity will decrease accordingly, which can be set as required.

(10) BFM12: Zero tracking interval time

BFM#12 is used in conjunction with BFM#13. When BFM#13 is not 0, BFM#12 indicates the interval between the current automatic weight reset and the next automatic reset to prevent continuous reset.

Note: This function is generally used to correct sensor temperature drift.

(11) BFM13: Zero tracking range

The accumulation range of zero point tracking. If the accumulation exceeds this range, the tracking will not continue.

Settings	Description	Remark
0	Do not enable zero tracking	Default
1 to 300	When setting the zero tracking range (absolute value), tracking must be performed when the value is stable and the current weight is within the zero tracking range.	If set to 10, the current weight is ± 9 and the stable flag is 1, the current weight is cleared.

Note: When the accuracy of the measured items is not high, the temperature drift has little effect, and this function is not required.

E.g: The setting value is 100, after the zero point drifts from the 0 position to more than ± 100 , the tracking will not continue. If it drifts back to within ± 100 , the tracking will be resumed.

(12) BFM15: Set the AD chip gain

It can be set according to the sensor range. After the BFM is set, it needs to be re-calibrated.

BFM15	voltage range	Sensor sensitivity
0	$\pm 5V$	$< 1V/V$
1	$\pm 625mV$	$< 125mV/V$
2	$\pm 312.5mV$	$< 62.5mV/V$
3	$\pm 156.2mV$	$< 31.25mV/V$
4	$\pm 78.125mV$	$< 15.625mV/V$
5	$\pm 39.06mV$	$< 7.812mV/V$

5.3 Function description

(1) Net weight measurement function

You could choose whether the measured weight is net weight or gross weight. Net weight refers to the weight of the product itself, that is, the actual weight of the product after removing the weight of the outer packaging. The weight of the outer packaging is generally called the tare weight, and the gross weight is the total weight, which refers to net weight plus tare weight.

- ① Tare weight: Refers to the weight of the outer packaging.
- ② Net weight: Refers to the weight of the product itself, that is, the actual weight of the product after removing the weight of the outer packaging.
- ③ Gross weight: Refers to the total weight, that is, the weight of the product itself (net weight), plus the weight of the outer packaging (tare weight)
- ④ Gross weight = net weight + tare weight.

E.g: There is a product that is 10KG, the carton it is packed in weighs 0.2KG, and the total weight is 10.2KG.

Net weight=10KG

Tare weight=0.2KG

Gross weight=10.2KG

E.g: Use CH1 to measure the value to display the net weight, and CH2 to select OFF. (If the weight of the outer package is known, you can skip the step of reading the tare weight).

- 1) Read the tare value
 - ① Write H0000 in BFM7;
 - ② Place the package on the CH1 weighing module;
 - ③ Write H0001 in BFM6, and take the current package weight as the tare weight.
- 2) Set BFM7=H0001

(2) Stability check

When placing the item on the weighing module to measure the weight, the user can use the stability check function to know that the current measurement value is stable.

If the variation range of the measured value is within the stable range #22 set by the user, the #4 stable bit of the measured value will be set to 1.

When the variation range of the measured value exceeds the set stability range, the #4 stable bit of the measured value will be set to 0, until the stability check time #21 is within the stable range, the #4 stable bit of the measured value will be set to 1 again.

E.g: The stability check time is set to 200ms, and the stability check range is 10. When the change range exceeds 10, the measurement value is unstable, that is, the #4 stable bit of the measured value will be set to 0. When the beating range is within 10 within 200ms, the stable bit of the measurement value will be set to 1 again. (It is recommended that the user should judge whether the current measurement value is stable before performing control).

(3) Zero point judgment

You could use the zero point judgment function to know that the item has been removed from the weighing module. You could judge that the measurement value is stable and the Bit is 1, which means that the item has been removed from the weighing module, and you could perform the next step at this time. (The zero point weight Bit in the zero point judgment range is 1).

(4) Filter function

The average value is the function of summing and averaging the read values to obtain a slowing value, but the environment used will have unavoidable external force factors, which will cause the read value to have a sharp change in the surge value. The change also becomes larger. The function of filtering is not to include the sharply changing surge value in the aggregated average, and the obtained filtered average value will not be affected by the sharply changed surge value.

(5) Standard of g/m

1) Fast Track Criteria:

After 20 seconds, the error between the flow rate and the final value is within 5% (the final value is the flow rate value at 20 minutes)

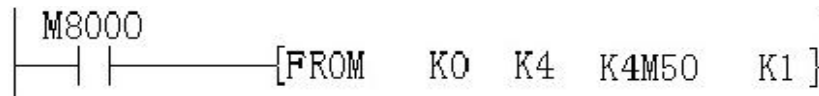
2) Final value accuracy standard:

If the flow is above 1000: After 20 minutes, the error between the flow rate and the final value is within 0.5% (The final value is the average of several final values)

If the flow is below 1000: After 20 minutes, the error between the flow rate and the final value is within 1% (The final value is the average of several final values)

6. Example

(1) Get the current weighing status



Read the current weighing state BFM4 and judge it by Bit state. For details, please refer to the description of BFM4 in "5.2 Buffer Register Description".

(2) Get the current weighing value

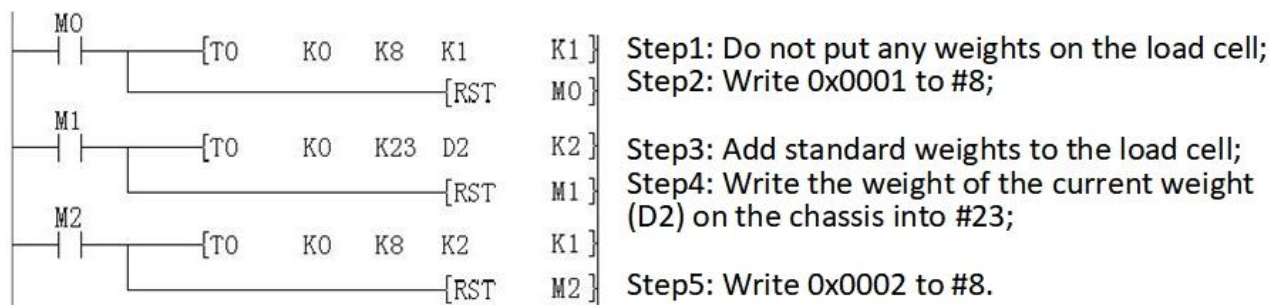


Write the average weight value (BFM16) of CH1 in the weighing module into D0.

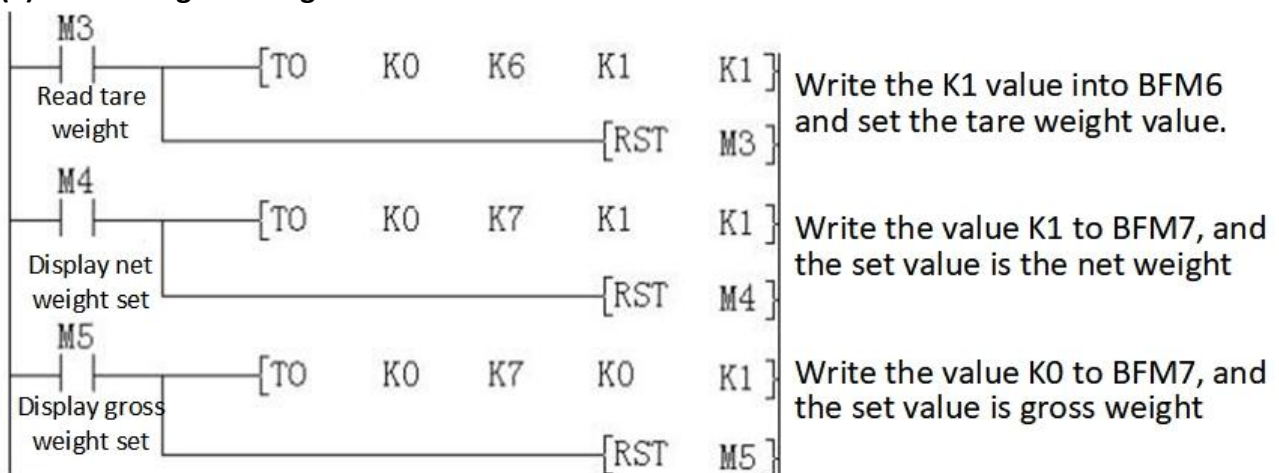
(3) Calibration weight

* In the new version, the first step can also be used for manual reset.

The adjustment is to make the module match the weight value of the load cell of the weighing module. The adjustment steps are as follows. Described with CH1.

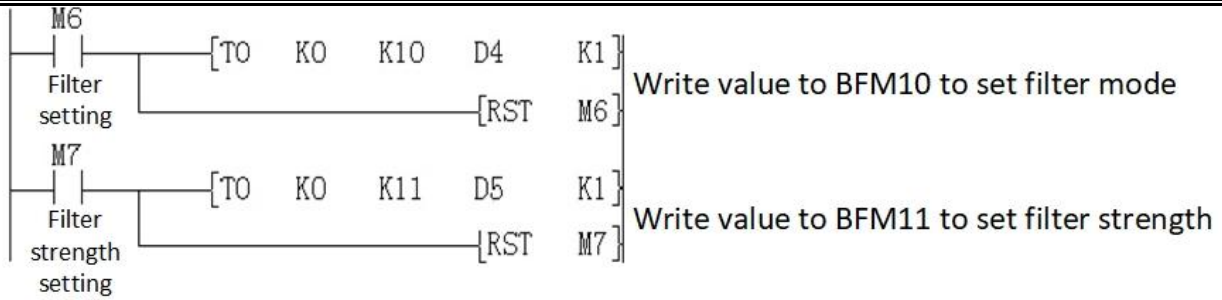


(4) Tare and gross weight



(5) Filter mode setting

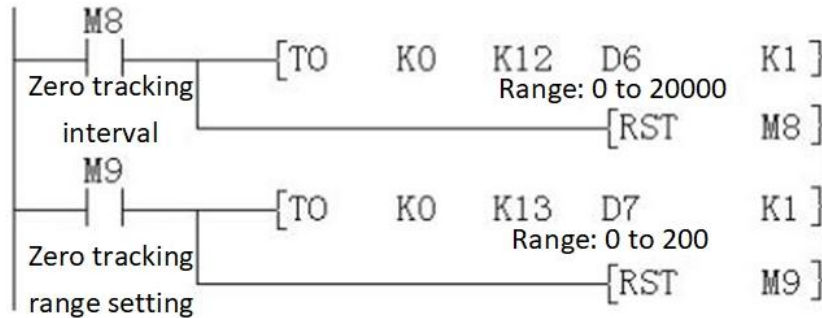
After setting the filter method or filter strength, re-calibration is required.



(6) Zero tracking

Zero tracking is used to reduce temperature drift interference.

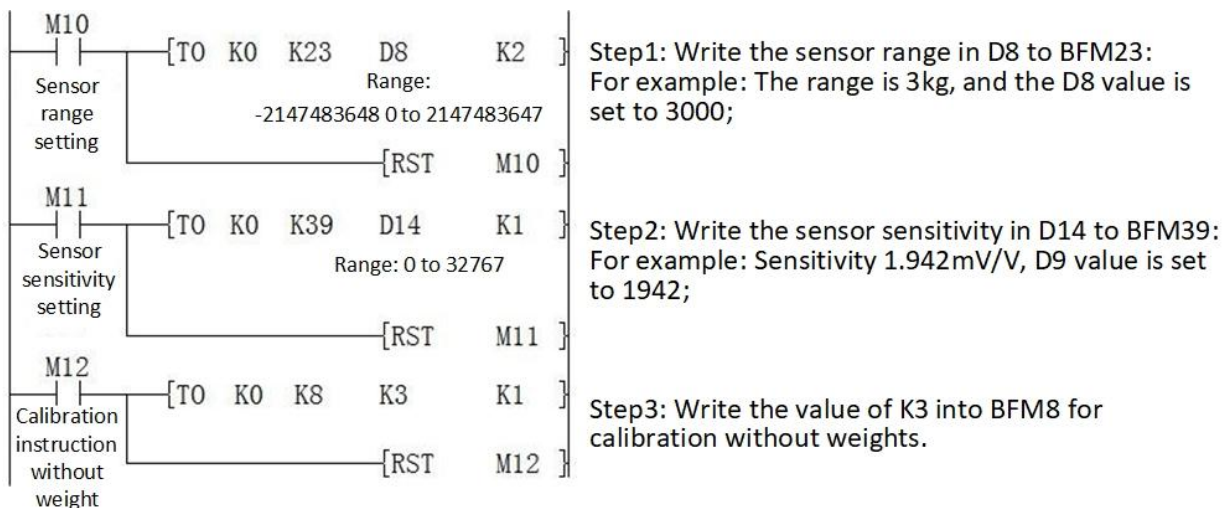
The zero tracking range is 0, which means zero tracking is not enabled.



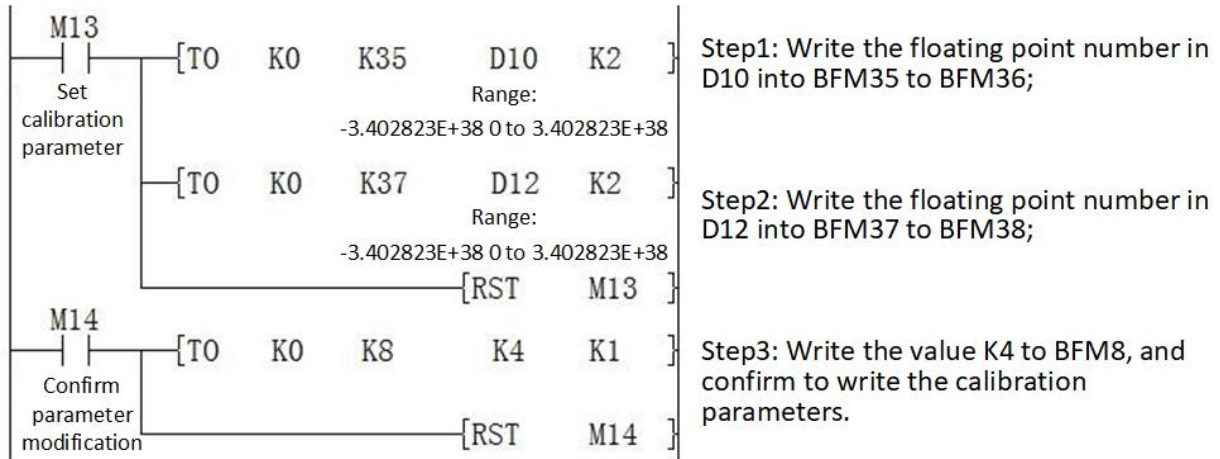
(7) Calibration without weights

The calibration without weights is calibrated by the zero point of the sensor and the maximum range of the sensor. The accuracy is related to the sensor specification and depends on the sensitivity of the sensor (mV/V).

For example: The sensitivity of the LAB-B-B sensor is $2.0 \pm 10\%$ mV/V, and there may be a maximum error of 10%. Therefore, it is best to use a sensor with a small sensor sensitivity error when using this function.



(8) Modify calibration parameters



Note: BFM35, BFM36, BFM37, and BFM38 are real numbers (float). When inputting, you need to input real numbers. If the input exceeds the range, BFM5 will report an error in writing calibration parameters.

7. Diagnosis

7.1 Check

- (1) I. Check that the input wiring and/or extension cables are properly connected to the LX3V-2WT-G analog special function module.
- (2) II. Check that the LX3V system configuration rules are not violated. E.g: The number of special function modules cannot exceed 8, and the total number of system I/O points cannot exceed 256 points.
- (3) III. Make sure the correct operating range is selected in the application.
- (4) IV. Check that there is no power overload on the 5V or 24V power supply, remember: the load of the LX3V main unit or active expansion unit varies according to the number of connected modules or special function modules.
- (5) V. Set the LX3V unit in RUN state.

7.2 Check errors

If the special function module LX3V-2WT-G does not operate normally, please check the following items.

- (1) Check the status of the LINK indicator

Blink: Expansion cables are properly connected.

Otherwise: Check the connection of the extension cable.

- (2) Check the status of the "24V" LED indicator (top right corner of the LX3V-2WT-G)

Light on LX3V-2WT-G is normal, and 24VDC power is normal.

Otherwise: 24V DC power supply may be faulty. If the power supply is normal then the LX3V-2WT-G is faulty.

- (3) Check the status of the "COM" LED indicator (top right corner of the LX3V-2WT-G)

Blink: Numeric conversion works fine.

Otherwise: Check buffer memory #5 (error status).

If any of the bits (b0, b1, b2) are ON, that's why the COM indicator is off. For details, please refer to "(6) BFM5: Error Code" in "5.2 Buffer Register (BFM) Description" in "Chapter 5" of this manual.

- (4) Check the sensor, measure whether the voltage between S+ and S- is less than (5*sensor sensitivity) mv, the sensor sensitivity is found in the sensor manual used, the unit is (mv/v), if the voltage at this point is out of range, it means the sensor Deformation or wiring errors have occurred. Measure whether the voltage between F+ and F- is 5V, if not, check the sensor wiring.