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# Weighing Instrument Selection Manual





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Weighing automation technology GENERAL MEASURE TECHNOLOGY CO.,LTD

# ENTERPRISE PROFILE

General Measure established in 1993, as one of China's earliest industrial weighing company who is also a national high-techenterprise, has over 50 people in the R&D team. For decades, we have been committed to improving the automatic process of industrial weighing and the precision of weighing control.

In 2003, we began to open the overseas market. Since 2006, General Measure dominated the high-end market and occupying more than 25% of the market in China. To expand the global business scale, we have been focusing on overseas markets since 2012. It has been seen that the average sales growth is above 30% every year.

We will continue to provide reliable industrial weighing indicators and equipment with excellent performance and weighing solutions with innovative value to our partners. Listening, Innovating, and growing together is our value, which guides us to achieve win-win cooperation by helping clients achieve their goals.











200<sup>+</sup> R&D Paten



2000<sup>+</sup>



# **CUSTOMER CASE**

#### Multi-applications

GM products are widely used in lithium battery, Chemical industry, building materials, foods, feedschemicals, pharmaceutical industries and etc.



Chemical industry



Grain industry



Feed industry



**Building materials industry** 



Logistics industry





BFertilizer industry



Lithium battery industry



Chemical industry

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# Making weighing more accessible.



2000 + Global Clients

























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# GMT-X1

# **Weighing Transmitter**

(Digital Version Available)



GMT-X1, a DIN rail-mounted weighing transmitter for industrial automation, can be used in various system weighing applications, such as weight checking, loss-in-weight, liquid filling, batching, vessel and silo weighing, etc. Through Bluetooth, it can be connected to Weasy App for configuration and monitoring.



# **SOFTWARE HIGHLIGHTS**

- · Liquid filling software selectable;
- Calibration without weights (by loadcell sensitivity value );
- Printer function ;
- Self-testing for I/O and Communication port;
- Self-editable boot screen;





# HARDWARE HIGHLIGHTS

- Stainless steel case with compact design;
- Different configuration choice, a variety of combinations;
- Standard: RS485 + RS485/RS232(Selectable)

Option 1 3 Input 5 Output or 3 Input 4 Output relay (Optional);

Option 2 RS485+16bit Analog or 2 Input 4 Output or CAN OPEN;

Option 3 Modbus TCP or Ethernet/IP or Profinet or Profibus DP;

(Hardware Option1,2,3 can be selected at the same time);

Bluetooth Communication



#### Standard:

- RS232 or RS485 selectable;
- RS485 for digital loadcell interface;

#### **Options:**

Same as common version:







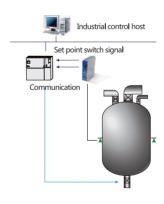




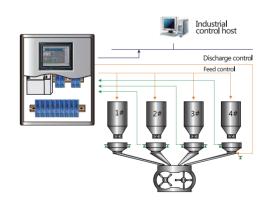


#### **Standard Specification GMT-X1 Digital Version** GMT-X1 Model Power Supply DC 24V(12~30VDC) Working temperature -10°C~40°C General **Specifications** Maximum humidity 90% RH.without dew Testing standards Class III 6000 e, 1µV/e About 5W Power consumption A/D performance N/A 24 bit Delta-Sigma A/D conversion speed 50~960 times/sec N/A N/A Non-linearity 0.01%F.S N/A Gain drift 10PPM/℃ Measurement **Parameters** N/A Input sensitivity $0.1\mu V/d$ 1/1,000,000 Display Accuracy 1/1,000,000 Weighing Platform 1 simulation scale interfacecan connect up to 8 load cells with 350Ω, Support 1 standard RS485 digitaloadcell interface Requirement sensitivty in 1mV/V, 2mV/V, 3mV/V DC12V 250mA, up to connect with 8 digital Sensor power supply DC 5V 200mA(Max)

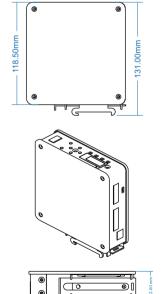
### **Application**







Multi-material batching application









-05--06-



**DIN Rail Mount Four-Channel Weighing Transmitter** 



GMT-X4 **Weighing Transmitter** (Intelligent Junction box)



GENERAL MEASURE TECHNOLOGY CO.,LTD

GMT-X4 weighing indicator with intelligent junction box built in can easily monitor the defaulted load cell.



# **FEATURES**





# **HARDWARE HIGHLIGHT**

- Stainless steel housing with compact design(62X134X128mm);
- Different configuration choices, a variety of combination;

Standard

weighing, etc.

- 1 4-channel of 6-wire load cell interfaces;
- ② RS485 & RS232:
- 3 4 Input 8 Output I/O;

Modbus TCP /IP or EtherNet/IP or ProfiNet or EtherCat or CCLink IE;

GMT-X4 is a DIN rail mounted weighing transmitter with four-channel. It has the characteristics of

compact design, stable performance, and easy operation, which can be used for various weighing applications, such as weight checking, loss-in-weight, liquid filling, batching, vessel and silo

Option2

4-channel analog output;

Option3

CAN communication;











(Option1, 2, 3 can be selected at the same time.)



# **SOFTWARE HIGHLIGHT**

- Zero point reset function: support resetting the zero point as before power failure when re-powering;
- Theoretical value calibration, stable within 3s of the calibration process automatically;
- Remote monitoring and configuration by PC with Modbus TCP connecting up to 6 devices at once;

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Input anti-vibration function, which time can be set.





Main display

338ks

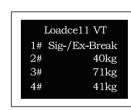
• Up to 6 digits



- Main display
- Error notice
- · Load cell failure

Loa	dce11 VT
1#	231kg
2#	40kg
3#	71kg
4#	41kg

- Weight display
- Individual load cells



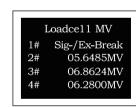
- Weight display
- Error notice

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Defaulted load cell

L	oadce11 MV
1#	05.6425MV
2#	05.6485MV
3#	06.8624MV
4#	06.2800MV

- Millivolt display
- Individual load cells



- Millivolt display
- Error notice
- Defaulted load cell



# HARDWARE HIGHLIGHT

Stainless steel housing with compact design(62X134X128mm);

Standard

- 1 4-channel of 6-wire load cell interfaces;
- 2 RS485 & RS232;
- 3 4 Input 8 Output I/O;

Option1 Modbus TCP /IP or EtherNet/IP or ProfiNet or EtherCat or CCLink IE;

Option2

1-channel analog output;

Option3

CAN communication;

(Option1, 2, 3 can be selected at the same time.)



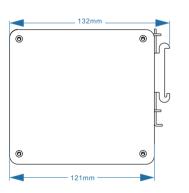


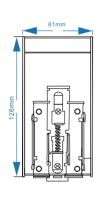


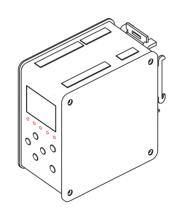




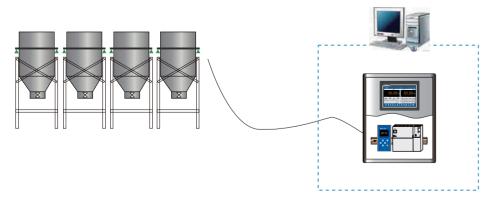
Specification		
	Model	GMT-X4
	Power	DC 24V ±5%
	Size	62mm ×134mm ×128mm
General	Weight	Approx. 880g
Specifications	Operating Environment	-10 ~ 40°C; 90%R.H,No Condensation
	Storing Environment	-40 ~ 60°C; 90%R.H,No Condensation
	Power Dissipation	10W
	Weighing Platform	5V, 200mA(MAX)/channel
	Excitation Voltage	5V, 200HA(WAX)/GHAIHEI
	Weighing Platform	4 simulation scale interface, can connect up to 40 load
	Requirement	cell with 350Ω, support sensitivity 1mV/V, 2mV/V, 3mV/V
Measurement Parameters	Sensitivity	0.1uV/d
_	Non-Linearity	0.01% F.S
	A/D Conversion Speed	50/60/100/120/200/240/400/480/800/960/SPS
	Maximum Display	1/1,000,000
	Accuracy	171,000,000







### **Application Diagram**



Multi-material batching application

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# **HARDWARE HIGHLIGHT**



- Wall mount or panel mount installation available, stainless steel case;
- IP67 for wall mount case and front panel;
- Four independent load cell input channels;
- Two-screen display: LED and OLED;

#### **Configuration interface:**

Standard: 1 RS485 and 1 RS232;

Optional:

① Modbus TCP/IP; ② Profinet/Ethernet/CC-Link IE;

3 4 inputs 6 outputs I/O; 4 4G module;











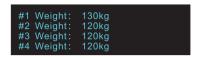
# **SOFTWARE HIGHLIGHT**

- Two-screen with Chinese and English display, easy to operate;
- Four-channel combination mode for digital weighing system;
- Each load cell's data can be checked in detail;
- Intelligent load cell installation and automatic angular difference adjustment;
- Calibration without weight function by higher accurate load cell parameters;
- Support special weighing system, each channel can be involved in different ranges and different sensitivity of the load cell;
- Preset point output

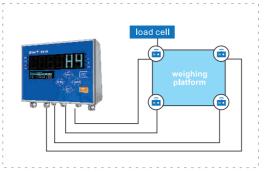
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# **Usage:**

- Multiple load cells can connect to the GMT-H4 directly without junction box;
- Bright LED main screen displays the total weight allowing to see under sunshine or long distance;
- OLED screen can check each load cell's weighing data in detail.



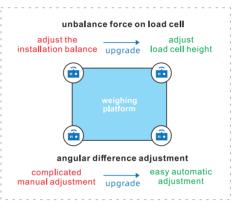




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# **Load Cell Installation:**

- GMT-H4 can remind the force data during load cell installation. Adjust the height of load cell according to the force of each load cell;
- Automatic adjustment of the angular difference, to avoid the repeated adjustment process.









# <u>'[?]'</u>

# **Early Warning Function:**

• GMT-H4 has detection and early warning functions which is helpful for users to intuitively understand the working state of the weighing system. It can detect and remind the below problems:

Unbalance load

GMT-H4 can detect the load at different positions on the weighing platform to avoid the weighing error caused by partial load.

Installation base subsidence

GMT-H4 can identify changes or settlement of the foundation to prevent inaccurate weighing due to unstable foundation.

Load cell damage

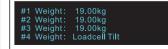
GMT-H4 can real time monitor the load cell status and identify the load cell damage to ensure the weighing accuracy.

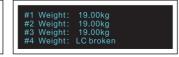
Load cell wiring failure

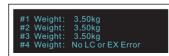
GMT-H4 can real time monitor the load cell wiring status for identifying and reminding the fault immediately. Emergency use

When the load cell damaged, GMT-H4 can switch the load cell to emergency use mode to make sure the production runs well.

Scale body tilt any key clear alarm

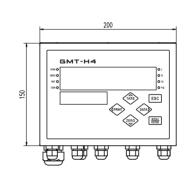


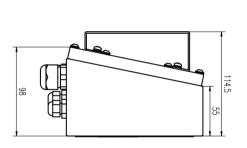




#### **Specifications** GMT-H4 Model DC 24V ± 10% Power Certificated Environment -10 ~ 40°C; 90%R.H no condensation General **Specifications** Operating Environment -40 ~ 70°C; 90%R.H no condensation Approx. 20W **Power Consumption** Calibration standard ClassIII6000e, 1µV/e Size 200mm x 150mm x 120mm Load Cell Channel Four independent analog load cell input channels Nonlinearity 0.01%F.S 10 PPM/℃ Gain Drift Measurement **Parameters** Sensitivity 0.01µV/d DC5V, 200mA(Max) Load Cell Power Maximum Display Accuracy 1/000000 A/D Sampling Rate 50/100/200/400/800Hz

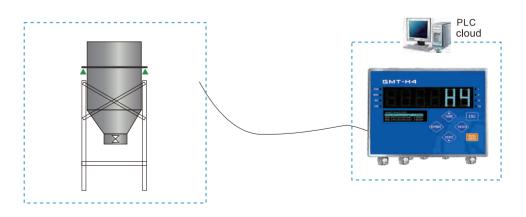






Unit: mm

### **Applications Diagram**



Schematic diagram of weighing data transmission

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The GMT-P1 is a panel/harsh-mounted weighing transmitter that offers exceptional reliability, advanced filtering, and tested ability to perform stably under interference of harsh industrial environments. It is customized for dynamic weighing systems with the highest demand for reliability, response speed and accuracy.



- OIML R76 approval;
- With second generation anti-vibration filter;
- Support calibration without weights;
- 1,000,000 weight resolution ability;







# **HARDWARE HIGHLIGHTS**

#### Standard

- RS232 or RS485 selectable by switch;
- 1 input 2 output I/O;

#### **Options**

- Single network port + RS232/RS485 selectable, support Modbus;
- Dual network ports, support ModbusTCP;
- Profinet or Ethernet IP or EtherCAT or CCLink IE;
- Analog output.

# **Digital Version**

#### Standard

- RS232 or RS485 selectable by switch;
- RS485 for digital loadcell interface;
- 1 input 2 output I/O;

#### **Options**

16-bit analog output (Voltage/Current Type);









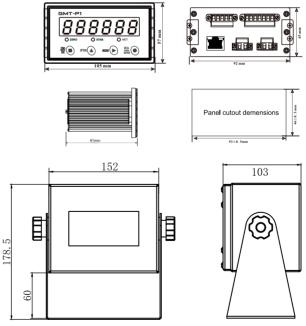


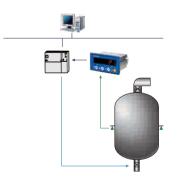


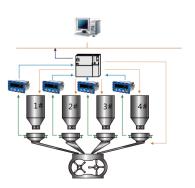
#### **Standard Specification GMT-P1 Digital Version** Model GMT-P1 DC 24V±5% Power Supply Working temperature -10°C~40°C General **Specifications** 90% RH.without dew Maximum humidity Class III 6000 e, 1 µ V/e Testing standards Power consumption About 10W 24 bit Delta-Sigma A/D performance N/A A/D conversion speed 30/60/120/240/480/960 times/sec N/A Non-linearity 0.01%F.S N/A Gain drift 10PPM/°C N/A Measurement Input sensitivity N/A $0.01\mu V/d$ **Parameters** 0~15mV N/A Maximum input voltage 1/1.000.000 1/1.000.000 Display Accuracy DC 5V,200mA(Max),Up to 8 load cells DC12V, 250mA, up to connect 8 digital Load cell excitation (350Ω) can be connected load cells Dust/water protection The IP65 display when mounted into a panel

# **Application**

Unit:mm







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GMT-H1 weighing transmitter is designed for industrial weighing application. It's harsh mount, **IP65** protection widely used in silo and vessel weighing field.

#### **FEATURES**

- Anti-dust and waterproof harsh mount case;
- 6-wire loadcell interfaces, connecting up to 8 load cells in 350Ω;
- Support theoretical data calibration;
- Support GPRS, Modbus-RTU, Modbus-TCP/IP, RS485 for communication;
- The function of automatic upload relevant weighing data;
- Through IO port to get the information of material level.

#### **DIGITAL VERSION**

#### Standard

- RS485 for digital loadcell interface;
- RS485 support ModbusRTU;
- Standard network port, support ModbusTCP;
- 3 inputs 3 outputs, 3 self-defined I/O (input or output);

#### **Options**

· GPRS data transmission function;



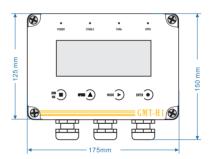


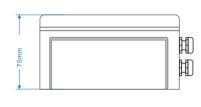




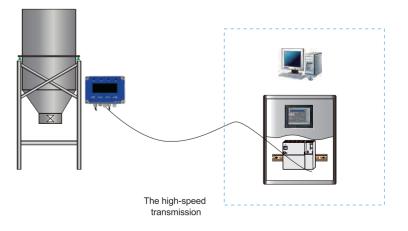
#### **Standard Specification** GMT-H1 **GMT-H1 Digital Version** Model Power AC 90~260V 50Hz(or 60Hz)±2% Temperature -20°C~60°C;90% RH.without dew **Specifications** Power consumption About 10W Weights 750g A/D conversion N/A 24 bit Delta-Sigma Sampling rate Sampling rate, initial value:100times/sec, N/A range: 50.60.100.120.200.240.400.480 times/ 0.01%F.S Nonlinearity N/A Gain drift 10PPM/℃ N/A Measurement Sensitivity N/A $0.1 \mu V/d$ / $0.5 \mu V/d$ Input range N/A Max 0.02~15mV Maximum display accurarcy 1/100,000 1/100,000 1 simulated weighing platform load cell Weighing platform load cell 1 digtial load cell interface, up to connect to interface can connect up to 8 load cells that is in 350Ω, and the sensitivity in 8 load cells 1mV/V, 2mV/V, 3mV/V. DC 5V 200mA(Max) DC 12V 250mA Load cell excitation RS485(Standard); Support ModbusRTU, continuous transmission protocol RJ45(Standard); Support Modbus-TCP, continuous transmission protocol I/O Interfaces and GPRS data transmission function Communications Fixed IO: 3 Input, 3 Output Optional IO: 3 more (can be selfdefined as output or input)

Unit: mm





# **Application**



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GMT-H2 is a wall/desk-mount weighing transmitter, with stainless steel shell which reaches IP65 protection. 2-inch LED display with 6 digits and 6 indicator lights. It can be widely used in the industrial automation fields, such as silo weighing, platform weighing, weight checking, loss-in-weight, liquid filling, batching, and so on.

#### Anti-explosion Version Available

Anti-explosion version GMT-H2ex is suitable for explosive industrial field. Cast aluminum explosion-proof enclosure, 4 metal buttons, AC220V / DC24V dual power supply configuration.

Ex d IIB T6 Gb / Ex tD A21 IP66 T80°C





# **HARDWARE HIGHLIGHTS**





- 2 RS485, 1 RS232 ports;
- 4 in 6 out I/O ports;









- 1 analog output;
- Modbus TCP, or Profinet(support Siemens PLC connection), or Ethernet IP (Omron or Schneider PLC connection) or EtherCAT (developing phase, Omron or Schneider PLC connection).

I/O preset point function;



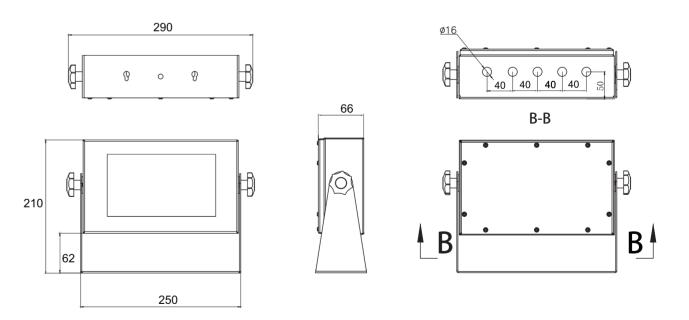
# **SOFTWARE HIGHLIGHTS**

- Zeroing and taring functions;
- Analog functions;

- Print function;
- Serial port communication functions;
- Simple weighing functions: weight collect, filter and display;
- Calibration with or without weights, support 5 points calibration with weights;

Standard Specification				
	Model	GMT-H2	GMT-H2ex	
	Power Supply	Power Supply DC 24V ( 12~30VDC )		
General	Working temperature	-10°C~40°C		
Specifications	Maximum humidity	90% RH.w	vithout dew	
	Testing standards	Class III 6000 e, 1 μ V/e		
	Power consumption	About 10W		
	A/D performance	24 bit Delta-Sigma		
	A/D conversion speed	30/60/120/240/480/960 times/sec		
	Non-linearity	0.01%F.S		
Measurement	Gain drift	10PPM/℃		
Parameters	Input sensitivity	0.1µV/d		
	Maximum input voltage	0~15mV		
	Display Accuracy	1/1,000,000		
	Load cell excitation	DC 5V,200mA(Max),Up to 10 load cells(350Ω) can be connecte		

# **Dimension** unite:mm



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GM7702, a digital weighing transmitter with the standard dimension, is suitable for mounting on DIN rail in many industrial fields. Small size and compact design make it ideally integrate with whole weighing sector. Due to its high practicability, stability and easy operation, GM7702 can be widely applied to the industry of feeds, chemical, concrete and bitumen mixing, metallurgy smelting, etc.

# **DESCRIPTION**





#### Standard

- With RS232/485 serial ports and support remote control;
- Support tare, preset tare function;
- Equipped with 2 IN 3 OUT I/O module.



#### **Compact Design**

• Small size and compact design with standard 35mm DIN mounting;





### **Optional Communication**

 Optional 16bit high-precision analog output: 0~24mA, 0~5V, 0~10V and user-defined analog output.



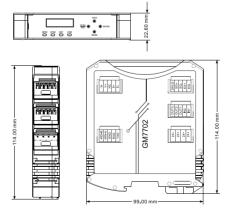


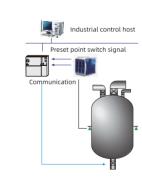


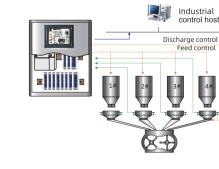
#### Standard specification Model GM7702 General Power Supply DC 24V **Specifications** Working temperature -10°C~40°C Maximum humidity 90% R.H without dew A/D performance 24 bit Delta-Sigma 120/240/480 t/s A/D conversion speed 0.01%F.S Non-linearity Gain drift 10PPM/°C Input sensitivity Measurement 0.02µV/d **Parameters** Input range -15mV~15mV Maximum display accuracy 1/100.000 Load cell power DC 5V 100mA(Max) Input impedance 10ΜΩ Zero steady range -15mV~15mV(Load cell 3mV/V) Inputs 2,active low Zero/tare/trigger preset point n (n=1/2/3/4) 3, single drive current 500mA Outputs I/O Part Stabilization/Overfilow/Trigger Point n Output (n=1/2/3/4)/Upper/Middle/Lower Limit

### **Dimensions**

Unit:mm







Preset point mode weighing application

Multi-material serial weighing and networking

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# **DESCRIPTION**



- · Weigh controller module with optional preset point function;
- Easy operation and installation, equipped with OLED display;
- RS485 communication as standard to connect with a PLC;
- A variety of expansion modules are available to support various external communication output modes.

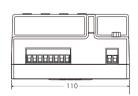


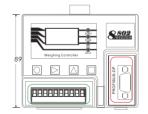


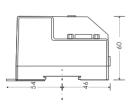


# **DIMENSIONS**

Unit:mm







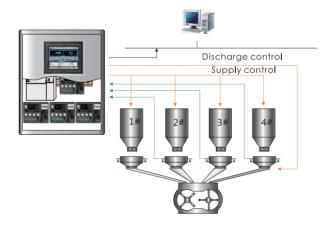




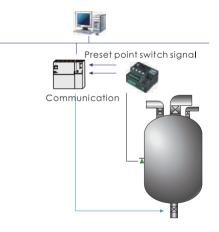


#### Standard specification Model GM8802S-T A/D Conversion Method 24-bit Delta-Sigma modulation Zero Adjustment Range 0.02~8mV (Load cell 2mV/V) Nonlinearity 0.01%F.S Measurement **Parameters** Maximum Input Voltage 0.02~10mV (Load cell 2mV/V) $0.1\mu V/d$ Minimum Sensitivity 10ΜΩ Input Impedance 120/240/480 t/s. Sampling Rate 1/100,000 Display Resolution Load Cell Excitation DC5V,200mA(Max),Up to 8 load cells can be connected 1.3 inch OLED screen Display Element ZERO.STAB.SIO.DATA Status Indicators DC 24V ±5% Power Source Voltage General **Specifications** Approx.10w **Power Consumption** Temperature and Humidity -10°C~40°C/90% R.H or less (Condensation must be avoided) **Dimensions** 110\*89\*60mm (L\*W\*H) Weight Approx.250g

# **Application**







Preset point weighing controller

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GMC-X3 is a loss-in-weight scale control module for high precision continuous dosing applications, capable of reliable, accurate and stable dosing of liquid, powder, granular and flake dry bulk materials, reducing material waste and improving mixture consistency. It is mainly used in chemical, plastic, rare earth smelting and other industries.

# **Functions & Features**

#### **Weasy Functions**

- Standard 1. 96-inch OLED display
- Optional Weintek 7-inch or 10-inch touch screen, well-designed interface, easy operation.





Optional

 Two permissions, prevents
 Modular design, Clear simple
 Support 4 points flow calibration, operator error;

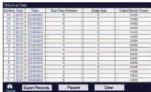


- interface and easy operation.
- single point flow calibration,

<ul> <li>Historial data check and exce</li> </ul>
export.
•



**Software Features** 



#### **Hardware Features**

- Stainless steel case, IP65 protection;
- USB Port, Easy to upgrade and import/ export data;
- Standard
- 6-wire load cell interface;
- 1 analog output interface;
- 1 RS485,1 RS232 interface with isolation;
- 4 inputs and 4 outputs + 4 self-defined transistor input or output interfaces;
- A standard network port for Modbus TCP
- Options
- Dual net work ports for Modbus TCP or Profinet
- 1 Analog input (current/voltage optional)+1 analog output interface;

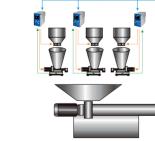


- New generation flow control algorithm, more stable;
- Support analog calibration, automatic/manual calibration of flow rate;
- Automatic locking and unlocking function for flow interference;
- Support two devices to access the instrument parameters function simultaneously (ModbusTCP);
- Working modes: 1) Flow calibration mode;
- 2 Flow rate presetting and flow rate giving mode;
- 3 PID control mode, segment control mode;
- Threshold anti-interference function, which makes the working process of the instrument more stable;
- Multi-material function, support up to 10 sets of material parameters, convenient to switch between different material parameters;

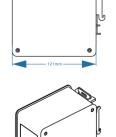
Standard Specification			
	Model	GMC-X3	
	Power Supply	DC 24V ( 18~36VDC )	
General	Approved Environment	-10°C~40°C	
Specifications	Maximum humidity	90% R.H without dew	
	Testing standards	Class III 6000 e, 1 µ V/e	
	Power Dissipation	15W	
	Load cell excitation voltage	5V 200mA(MAX)	
	Load cell connection	1load cell interface , 6-wire with compensation , up to 8 cells with $350\Omega$ , support 1mV/V、2mV/V、3mV/V sensiti	
	Analog Input Range	0~15mV	
Measurement Parameters	Input sensitivity	0.1μV/d	
	Non-Linear	0.01%F.S	
	A/D Conversion	480 times/sec	
	Display Accuracy	1/1,000,000	
Communication Interface	Standard	<ul> <li>1 analog output interface</li> <li>1 RS485, 1 RS232 interface with isolation</li> <li>4 inputs and 4 outputs + 4 self-defined transistor input or output interfaces;</li> <li>A standard network port for Modbus TCP</li> </ul>	
	Optional	<ul> <li>Dual net work ports for Modbus TCP or Profinet</li> <li>1 Analog input (current/voltage optional) +</li> <li>1 analog output interface;</li> </ul>	

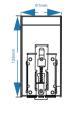
#### **Application Diagram**











Multi-heads Continuous Dosing

-24--23-



GMC-X904-2/D single or double hopper packing controller is a DIN rail-mounted weighing controller developed for packaging machine. Stainless steel case provides strong capability in anti-interference. The new algorithm makes the weighing control faster and more accurate. It can be widely used in feed, chemical, grain and other industries.



# **HARDWARE HIGHLIGHT**



• Stainless steel case with compact design (61\*132\*126mm);

Standard: ①1 RS232 and 1 RS485; ② I/O 12 input and 16 output.

Optional: Single or dual network port: support Modbus TCP/IP.



# **SOFTWARE HIGHLIGHT**

• Support hopper/non hopper/big bag/bulking scale structure;

Multiple working modes: pneumatic feeding/discharging; motor feeding/discharging;

**Clamping and loosening bag modes:** Pneumatic, stepping motor, motor single-limit, motor double-limit optional;

- Batches setting function;
- Material level control function;
- I/O logic programming control function;

#### Weighing and peripheral functions:

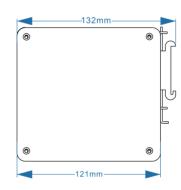
- multiple digital filtering;
- automatic zero tracking;
- auxiliary pulse;
- multiple bag tapping modes;
- sewing machine control;
- discharge vibration;
- conveyor control;

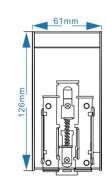


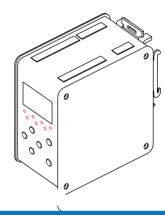




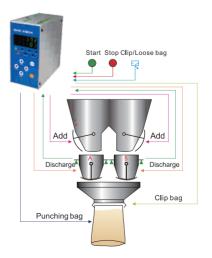
#### **Standard Specification** Model GMC-X904 Power DC24V ±5% General 61mm×132mm×126mm Size Specifications Working Environment -10~40°C Max. Humidity 90%R.H No Condensation **Power Dissipation** Approx. 15W Weighing Standard ClassIII6000e, 1µV/e A/D Conversion 24bit Sigma-Delta A/D Speed 120/240/480/960 SPS Non-Linearity 0.01%FS Measurement parameters 10 PPM/°C Gain Drift Sensitivity $0.02\mu V/d$ Input Millivolt 0.02~15mV Load cell Power DC5V, 125mA(Max) Input Impedance 10MQ Zero Steady Range Maximum 0.002~15mV(Load Cell 3mV/V)







# **Application Diagram**







Duplex Packing Controller without Hopper

-25-

-26-



The GMC-X802-C2/D is a weighing module developed for linear feeder packing systems with vibrators. Single scale (C2) or dual scale (CD) are selectable. The new algorithm makes the weighing control faster and more accurate. Various communication ports make the equipment easier to connect with the system. It is suitable for weighing powdery or small granular materials, such as sugar, salt, seeds, rice, sesame, spice, milk powder, coffee, washing powder, etc.



# **Hardware Interface**



#### Standard:

- 2 RS485 Communication: for PC, PLC, printer, tag printer, remote display, or other external device;
- USB: used for program upgrade and parameter import, export and backup;
- 10 Input/20 Output I/O ports: for starting, stopping, discharging, feeding, I/O definable for different applications:
- C2: 1load cell interface: for the 6-wire load cell scale;
- CD: 2 load cell interface: for the 6-wire load cell scale, 1 interface can connect up to 8 load cells with 3500;

#### Options:

- Single/dual internet ports: support Modbus TCP;
- C2: 1/2 analog interfaces, output range: 0~5V, 0~10V, 0~24mA, 4~20mA;
- CD: 2/4 analog interfaces, output range: 0~5V, 0~10V, 0~24mA, 4~20mA.



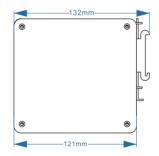
# **Functions**

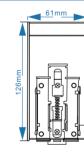
- DIN rail mount, save space;
- With screen and buttons for easy operation;
- For dual packing scales, up to 3 controllers for 6 packing scales interlocking without PLC;
- McgsPro program sample code of single / double / four / six scales can be provided;
- Various feeding mechanisms: vibrator, air cylinder, stepper/servo motor;
- Various discharging mechanisms: pneumatic, common motor, stepper motor, etc.;
- Support for batching management, bag clamp/loosen, material level control, over-under alarm and under-level feed;

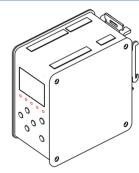
-27-

• Support analog self-search, lead adaptive function, reduce the difficulty of debugging, to achieve intelligent system.

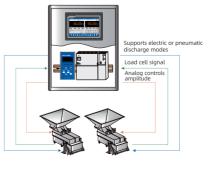
Specificatio	ns	
	Model	GMC-X802-C2/D
	Power	DC 24V ±5%
General	Working Temperature	-10 ~ 40°C
Specifications	Humidity	90%R.H no condensation
	Power Consumption	Approx. 5W
	Calibration standard	ClassIII6000e, 1µV/d
	Size	61mm x 132mm x 126mm
	A/D Conversion	24 bits Delta-Sigma
	Nonlinearity	0.01%F.S
	Gain Drift	10 PPM/℃
Weighing	Sensitivity	0.1μV/d
Parameters	Input range	0.02~11mV (load cell: 2mV/V)
	Load Cell Power	DC5V, 125mA(Max)
	Input Impedance	10ΜΩ
	Zero Adjustment Range	Max 0.02~8mV (load cell: 2mV/V)
Hardware Interfaces	Load Cell Interface	C2: 1load cell interface: for the 6-wire load cell scale; CD: 2 load cell interface: for the 6-wire load cell scale, 1 interface can connect up to 8 load cells with $350\Omega$ ;
	I/O Interface	10 IN 20 OUT transistor interfaces (PW1-PW6 is PWM output)
	Communication Interface	2 RS485 communication interfaces Modbus TCP optional
	Analog Interface	C2: 1/2 analog interfaces, output range: 0~5V, 0~10V, 0~24mA, 4~20mA CD: 2/4 analog interfaces, output range: 0~5V, 0~10V, 0~24mA, 4~20mA







#### **Applications Diagram**



GMC-X802CD for 2 Linear Feeder Packing Machine without PLC



GMC-X802CD for 6 Linear Feeder Packing interlocking without PLC

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# **M04**

Weighing Controller Plastic Version



M04 weighing controller is designed for dynamic weighing applications like: packing, bulking, and liquid filling, widely used in grain and seeds, feeds, fertilizer, cement and concrete, and the chemical industries.

# **DESCRIPTION**







# **Application Software**

#### **Multiple Software Selections:**

- M04-2 Simplex packing; M04-D Duplex packing;
- M04-4 Reduce weight method packing; M04-5 Bulk Scale (continuous weighing);
- M04-6/6D Liquid filling(simplex/duplex);



# **Highlight Features**

#### **Button Functions**

Quick access key can be set to facilitate formulation selection, batch setting, parameter calibration and other operations.

#### Auxiliary logic programming function

Up to 6 sets of logic trigger signals can be defined and simple logic signal output can be configured to control the upper barrel, gland, coding and other auxiliary devices.

#### ▶ Database

It can store 20 groups of recipes. For each formula can input target value, fast/slow feed drop value and other parameters.

#### ► Intelligent feeding control

Automatic adjustment of fast feeding, slow feeding, filling scale speed and accuracy to achieve the best.





# **Multiple Communication Methods**

- RS232 + RS232/RS485 selectable;
- 8 Input/12 Output for starting, stopping, zeroing, clamping/loosening bags, etc.;
- Modbus TCP for connecting PC, PLC, printer etc.;
- USB for importing and exporting data or working parameters, upgrading software or customizing boot screen.;



# **M04**

**Weighing Controller Stainless Steel Version** 



M04 weighing controller is designed for dynamic weighing applications like: packing, bulking, and liquid filling, widely used in grain and seeds, feeds, fertilizer, cement and concrete, and the chemical industries.

# **DESCRIPTION**







### **Application Software**

#### **Multiple Software Selections:**

- M04-2 Simplex packing;
- M04-D Duplex packing;
- M04-4 Reduce weight method packing;
- M04-5 Bulk Scale (continuous weighing);
- M04-6/6D Liquid filling(simplex/duplex);







- Stainless steel case, robust and durable;
- 5-inch LCD screen plus button input, user-friendly operation;
- 20 species formula for different weight ranges and materials packing;





### **Multiple Communication Methods**

- RS232 + RS232/RS485 selectable;
- 8 Input/12 Output for starting, stopping, zeroing, clamping/loosening bags, etc.;
- Modbus TCP for connecting PC, PLC, printer etc.;
- USB for importing and exporting data or working parameters, upgrading software or customizing boot screen.;



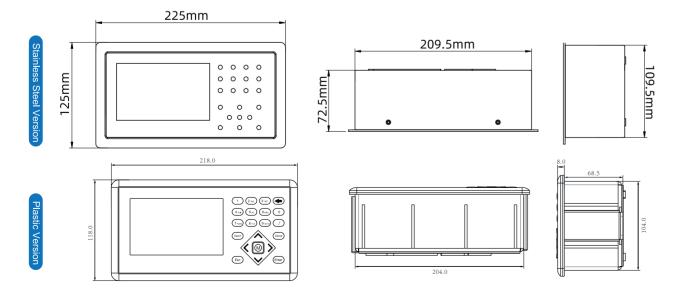
-29-

Weighing automation technology

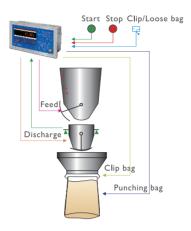


#### Standard Specification M04 Model DC 90~260V 50Hz(60Hz) ±2% Power supply -10°C~40°C Working temperature General 90% R.H without dew Maximum humidity Specifications Testing standards Class III 6000 e, 1 $\mu$ V/e IP grade Ip65 (front panel) A/D performance 24 bit Delta-Sigma A/D conversion speed 120/240/480/960 times/sec Non-linearity 0.01%F.S Gain drift 10PPM/°C A/D Input sensitivity $0.02\mu V/d$ Conversion Display accuracy 1/100,000 Input range 0.02~15mV Sensor power supply DC5V 125mA(Max) Input impedance $10M\Omega$ Zero steady range Maximum 0.002 ~ 15mV(Load Cell 3mV/V) 1.M04-2 Simplex packing; 2.M04-D Duplex packing; Application 3.M04-4 Reduce weight method packing; Software 4.M04-5 Bulk scale (continuous weighing); M04-6/6D Liquid filling(simplex/duplex);

# Dimension Unit:mm



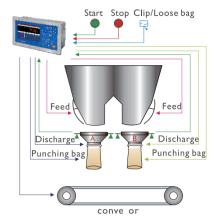
# **Application**



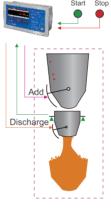
Single Channel Packaging Controller with Hopper



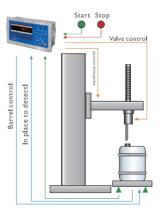
Double Channel Packaging Controller with Hopper



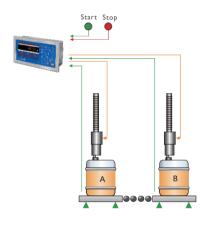
Double Channel Packaging Controller without Hopper







Single Nozzle for Liquid Filling Application



Double Nozzle for Liquid Filling Application

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# **DESCRIPTION**





# **Application Software**

#### **Multiple Software Selection:**

- Simplex packing;
- Duplex packing;
- Reduce weight method packing;
- Bulk Scale (Continuous weighing);
- Batching scale.







# **User-friendly Design**

- 7-inch touch screen, interactive design, and easy operation;
- Record the weight of every pack, million data storage and export.

			0.9	8 kg	2021/01/0 Adn	
	Total ACUM		5 pcs		0.01 kg	
	Recipe ID	ACUM pcs			ACUM Weight kg	
	01	20			10000000,00	
User ACUM	02	5			50000000.00	9-16
	03	40			0.00	17-20
History	04	0		0.06		
Data	05	0			0.00	Clear All
Print	06	50			50000000.05	Recipe ACUM
S	iii Statistic	X	A. Racipa	Peripherals	(i)	<b>(</b> Start

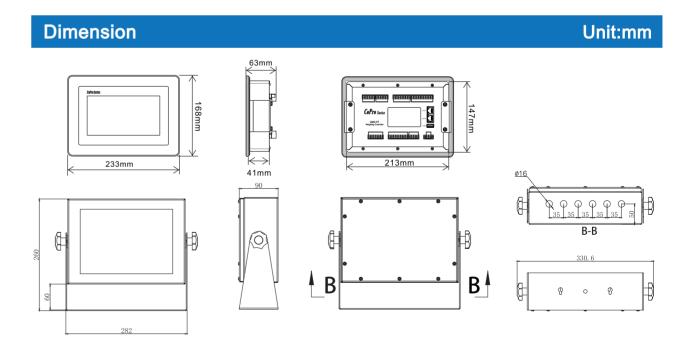


# **Multiple Communication Methods**



- RS232+RS485 for connecting PC, PLC, Printer, Label Printer, Remote Display, Code Printer, or other external devices, for reading and setup remotely;
- 12 Input/16 Output for starting, stopping, unloading, clamping/loosening bags, etc.;
- Modbus TCP for connecting PC, PLC, Printer, etc., for reading remotely;
- USB for importing and exporting recipes, I/O function communication parameters and other working parameters, upgrading system software, customizing boot screen, etc.

Standard S	pecification		
	Model	GMC-P7 (CoPro Series)	
	Power Supply	DC 24V plus or minus 5%	
General	Working temperature	-10°C~40°C	
Specifications	Maximum humidity	90% R.H without dew	
	Testing standards	Class III 6000 e, 1 μ V/e	
	Power consumption	About 15 w	
	A/D performance	24 bit Delta-Sigma	
	A/D conversion speed	120/240/480 times/sec	
	Non-linearity	0.01%F.S	
	Gain drift	10PPM/°C	
Measurement	Input sensitivity	0.02μV <b>/</b> d	
Parameters	Display Accuracy	1/100,000	
	Input range	0.02~15mV	
	Sensor power supply	DC5V 125mA(Max)	
	Input impedance	10ΜΩ	
	Zero steady range	Maximum 0.002 ~ 15mV(Load Cell 3mV/V)	
Application Software	<ul><li>Simplex packing;</li><li>Reduce weight method packing;</li><li>Batching scale.</li></ul>	<ul><li>Duplex packing;</li><li>Bulk Scale (Continuous weighing);</li></ul>	
Function extension	Equipped with GMA-X1 automatic tra	ction module, reduce workforce cost	



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GMC-P7(F8) is a high precision weighing controller with 7-inch touch screen. It is easy for operation and checking data. The new algorithm and optimized A/D conversion scheme make the weighing transmission faster and more accurate. A variety of optional communication interfaces make it easier to interact with data between various equipment systems. It can be used in harsh environment for the applications of platform scale, silo weighing, animal weighing, counting, and truck scale.





# **HARDWARE CONFIGURATION**





#### Standard:

- 5 input (TTL), 9 output (5 TTL and 4 relay output), I/O position can be customized;
- 2 RS485 and 1 RS232;
- Modbus TCP;

#### **Options:**

- Profinet or Ethernet/IP;
- 1 analog output;

#### Digital Version

#### Standard:

- RS485+ RS232;
- 1 RS485 for digital loadcell interface;
- 5 inputs 5 outputs I/O;
- USB for software upgrading;

#### **Options:**

- Analog output;
- ModbusTCP or Ethernet/IP or Profinet;

#### ₹ F

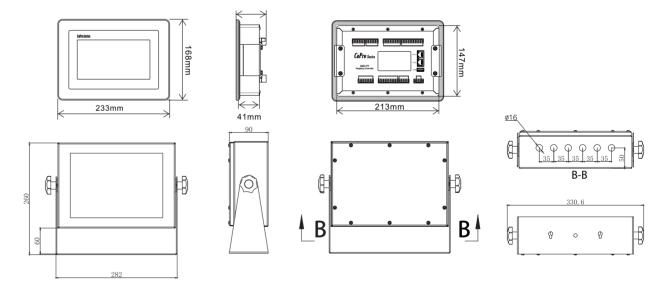
# **FEATURES & FUNCTIONS**

- 7-inch touch screen provides good interaction, easy for operation;
- Stainless steel casing, robust and anti-interference capability;
- I/O test function and serial test function for user-friendly debugging;
- Built-in web page, which can be connected by Modbus TCP for data interaction;
- Settable upper and lower weight values, which can be read through the communication interface;
- Editable boot screen;
- Static check weigher function;
- · Counting function with adaptive adjustment of unit sampling weight;
- Support the connection of printers including Epson printers, while the head and tail of the printed information can be edited.

	Model	GMC-P7 F8	GMC-P7 F8 Digital Version	
	Power Supply	DC 24V±5%		
General	Working temperature	-10°C~40°C		
Specifications	Maximum humidity	90% RH.v	without dew	
	Testing standards	Class III 60	000 e, 1 μ V/e	
	Power consumption	Abou	ut 15W	
	A/D performance	24 bit Delta-Sigma	N/A	
	A/D conversion speed	50~960 times/sec	N/A	
	Non-linearity	0.01%F.S	N/A	
	Gain drift	10PPM/°C	N/A	
Measurement	Input sensitivity	0.02µV/d	N/A	
Parameters	Input range	0.02~15mV	N/A	
	Display Accuracy	1/100,000	1/100,000	
	Sensor power supply	DC 5V 125mA(Max)	DC 12V 250mA	
	Input impedance	10ΜΩ	N/A	
	Zero steady range	Maximum 0.002 ~ 15mV (Load Cell 3mV/V)	N/A	

#### **Dimension**

**Standard Specification** 



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#### **GENERAL** MEASURE 杰・夏・科・技

# GM9907-L2/LD

# **Packing Controller**

(L2:Simplex Packing LD:Duplex Packing)



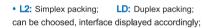
GM9907-L2/LD is the simplex/duplex packing controller, widely used for, granule packing scale, powder packing scale, big bag, valve type scale-cement, etc.



#### **Version Features**

#### User-Friendly · Better Experience

 Memory card build in, 7-inch touch screen for displaying clearly and operating easily, Single/double scale interface mode switching;







• Multi-Mode: With Hopper, No Hopper, Big Bag Scale, Valve Scale, PLC;

Scale S	tructure	With H	lopper >	Manual Ur	lock Bag	
Working	Mode	Single	Scale >	DISC Gate	Pos Detect	
Filling	Scale St	tructure				X
Fill Ga						
Clamp		With Hooper	No F	Hopper	Big Bag Scale	
		Valve Scale	F	4.C		



• Self-Adaptive: I/O Programmable;

				×
	User Logic Type	OFF To On Edge Trigger >	User Logic Type Edg	FF To On e Trigger >
Recipe > ACUM	Logic Trigger Type	Input-1 >	Logic Trigger Type By Trigger I	Function >
			Trigger Fune(IN)	None >
	Trigger Funo(OUT)	None >	Trigger Fune(OUT)	None >
User ACUM	Delay ON Timer	0.0s >	Delay ON Timer	0.0s >
	Logic Output On Timer	0.0s>	Logic Output On Timer	0.0s >
History Data				
Solid				



#### RS485+RS232

• For connecting PC,PLC,Printer,Label Printer, Remote Display,Code Printer,or other external devices,for reading and setup remotely;

#### USB

 For importing and exporting recipes,works,I/O function communication and other parameters, upgrading system software,customizing boot screen.etc:

#### 12 Input/16 Output

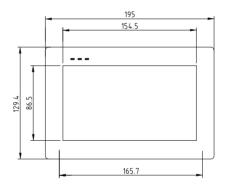
 For starting, stopping, feeding, unloading, clamping/loosening bags, etc;

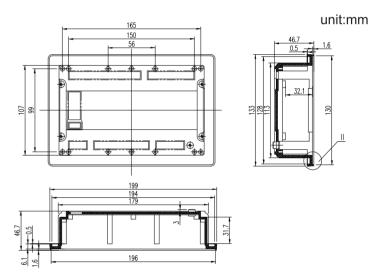
#### Modbus TCP

• For connecting PC, PLC, Printers, etc., for reading remotely.

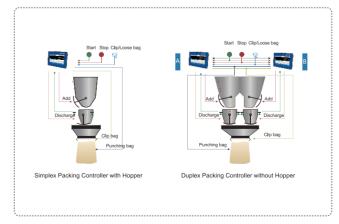
#### **Specification**

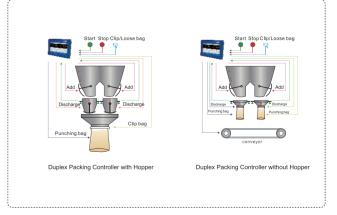
	Model	GM9907-L2/LD
	Power Supply	DC24V
General	Operating Temperature	-10~40°C
Specifications	Maximum Humidity	90%R.H without dew
	Test Standard	Class III 6000 e, 1 μ V/e
	Power Consume	About 15W
	A/D converter type	24 bit Sigma-Delta
	A/D Conversion Rate	120/240/480/960 times / sec
	Non-Linear	0.01%F.S
	Gain Drifting	10PPM/C
Measurement	Minimum Sensitivity	0.02μV/d
parameters	Analog Input Range	0.02~15mV
•	Display Accuracy	1/100,000
	Power Source for Load Cell	DC5V 125mA(MAX)
	Input Resistance	10ΜΩ
	Zero Point Adjustment Range	0.002~15mV (load cell 3mV/V )
	12 Input 16 Output, I/O Selectable	
I/O Interfaces and	12 Input, Active-low Start, Emergency stop, Stop, Zeroing, Cle Manual coarse flow, Change recipe, Emp	ear alarm, Clear total ACUM, Bag Lock/Unlock, Manual discharge, Manual fine flow, sty material
Communications	16 Output, Single drive current 500mA Run, Stopped, Coarse flow, Medium flow, Alarm, Batch complete, Over/Under	, Fine flow, Bag lock, Result waiting, Ready, Discharge, -NZ-, Pat bag, FILL, EMPT,





# **Application Diagram**





GM9907-L2

GM9907-LD

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# GM9907-L4

Reduce weight method packing controller



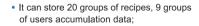
GM9907-L4 is designed for Loss-in-weight bagging machine. It can be widely used in rice, grains, feeds, chemical industries etc.



#### **Version Features**

#### User-Friendly · Better Experience

 Memory card build in, 7-inch touch screen for displaying clearly and operating easily;



		n	0.98	B kg		
	Total ACUM		5 pcs		0.01 kg	
	Recipe ID	ACUM pcs		AC	UM Weight kg	< 1=8
	01	20		10	10000000 00	
User ACUM	02	5		50	0000000.00	9-16
	03	40			0.00	17-20
History	04	0			0, 05	17-20
Data	05	0			0,00	Clear Al
Print	06	50		50	0000000.05	Recipe ACU
S	<u>di</u> [	<b>%</b>	A I	強	(II)	



• Data backup and recovery function can save the optimal parameters and improve the working efficiency;

System Info	Run	0.2	20 t 2021/01/06	
	All	Reset	Communication	Reset
Version	All(No Calibration)	Reset	Basic Para,	Reset
	Recipe	Reset	Advanced Para.	Reset
	Calibration	Reset	I/O Function	Reset
Others	Parameter Backup	Backuo	Backup Date: 2021/01/06 13:00:	10
	Recovery From Backuo	Reset	Delete Backup	Delete
S Home		A.	Peripherals   D	Start



• Starting patting mode when filling material to shape bags by setting relevant parameter;

Red (E		Run	Ę	50. 00 k	Ø	06 14:00 lmin
01		Overtime Monitor		Patti	ing Para.	
0.00	0,00	Supply Overtime	5 s >	Patting Mode	No-Patting >	Filling Values
0.00	04 0,0 P					
05	06					Filing Timer
0.00	0.0	No-Patting		When FI	loo.	
97	GS.					OverUnder FreeFall Correction
0.00	0.0					Conscion
0.00	10					
4						
<	>					
Hon		LL X Statistic   X Filling Test	A		<u>()</u>	

# Communication

#### RS485+RS232

• For connecting PC,PLC,Printer,Label Printer, Remote Display,Code Printer,or other external devices,for reading and setup remotely;

#### USB

 For importing and exporting recipes,works,l/O function communication and other parameters, upgrading system software,customizing boot screen,etc;

#### 12 Input / 16 Output

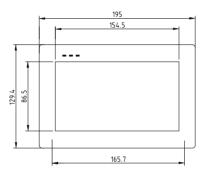
 For starting, stopping, feeding, unloading, clamping/loosening bags, etc;

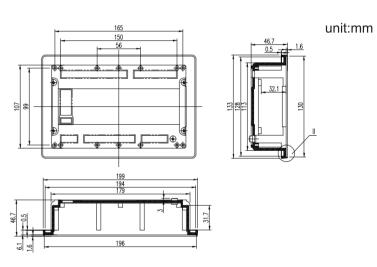
# Modbus TCP

• For connecting PC, PLC, Printers, etc., for reading remotely.

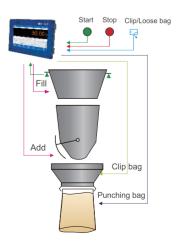
# **Specification**

	Model	GM9907-L4
	Power Supply	DC24V
Conord	Operating Temperature	-10~40°C
General Specifications	Maximum Humidity	90%R.H without dew
Specifications	Test Standard	Class III 6000 e, 1 µ V/e
	Power Consume	About 15W
	A/D converter type	24 bit Sigma-Delta
	A/D Conversion Rate	120/240/480/960 times / sec
	Non-Linear	0.01%F.S
	Gain Drifting	10PPM/C
Measurement	Minimum Sensitivity	0.02μV/d
parameters	Analog Input Range	0.02~15mV
parameters	Display Accuracy	1/100,000
	Power Source for Load Cell	DC5V 125mA(MAX)
	Input Resistance	10ΜΩ
	Zero Point Adjustment Range	0.002~15mV (load cell 3mV/V )
	2 Input 16 Output, I/O Selectable	
I/O Interfaces and Communications	12 Input, Active-low Start, Emergency stop, Stop, Zeroing, Cle coarse flow, Clear total ACUM, etc.	ear alarm, Change recipe, Bag Lock/Unlock, Manual discharge, Manual fine flow, Manua
	16 Output, Single drive current 500mA	, Fine flow, Bag lock, Result waiting, Pat bag, FILL, Batch complete, Supply full, Pause,





# **Application Diagram**



Reduce weight method packing

-39-

# GM9907-L5

Weighing automation technology

Bulk Scale Controller (Continuous Weighing)



GM9907-L5 is designed for bulk scale to solve the problem of batch weight and automatic totalizing of incoming and outgoing material. It can be used widely used in chemical, grain, feeds, construction and harbor logistics industies etc.

#### **Version Features**

#### User-Friendly · Better Experience

 Memory card build in, 7-inch touch screen for displaying clearly and operating easily;

• Flow rate function can discharge material automatically and alarm when flow rate is low,which is more intelligent;

Recij		Rus	50.00 kg	2021/01/ Ad	06 14:00 min
01		Target Flowrate On/OFF		•	Filing
03	-	Target Flowrate		20.00 t/h>	
0.00	0.00	Flowrate Low Alarm On/OFF			Filing Timers
05	06	Flowrate Low Alarm Trigger Count		3 PCS >	Over/ Under
0.00	0,00	Flowrate Low Auto Adjust On/OFF			
07	0.00				Function
09	10				
0.00	9.00				Motor Group ID
<	>				
(E Hon		LLL X Reg Test Reck	pe Peripherals	(i)	



• Two scale mode: Stock-In or Stock-Out; Data information is more convenient to operate;

	Scale Mode	Stool-In >	Personent ACUM	5 pc
Recipe ACUM	Stock-Cut Total	0.00 kg>		0.00 k
	Scale Mode			×
User ACUM				
			Street	
	Stock-In		Stock-Out	
History Data				

Reci		Run	50.00 kg	2021/01/ Ad	06 14:00 min
01		Target		75.00 kg >	
0.00	0.00	Co-Fill Remains		50.00 kg >	
0.00	0,00	Me-FII Remains		20.00 kg >	
as	GS.	Free Full		1,00 kg >	Filing Times
0.00	0,00	Over Value		0.00 kg >	OverUnder PresEall
0,00	0.00	Under Value		0.00 kg >	Consistion
0.00	10 % 00				Pating Para' Overtine
<	>				Monitor
Mer		iii   X   Solieic   F∎eg Test	A L Perpherals	(i)   (i)	(Start

• Two packing mode: Motor or Pneumatic; Add/Discharge feed is more convenient;

Motor <b>(</b> Back		50.00 kg	
Filing			DISC
Fill Gate Driver	Motor Drived >	DESC Gate Driver	Normal Motor(One Pos.)
Filler Motor Cfg ID	0 >	DISC Gate Pos.Signal	ON: If Closed )
Co-Fill Gate Open Time	0.8s >	DISC Gate Pos.Detect w	hen Filling
FI-FII Gate Open Time	0.2s >	DISC Gate Close OverT	ime 3.0s >
Filler Gate Close OverTime	4.0s >	DISC Gate Open Timer	1.0s )
Filler Gate Pos. Signal	ON:If Closed		
Satura Statute	X   B	A Bristonia	(I)   (b)

# Communication

#### RS485+RS232

• For connecting PC,PLC,Printer,Label Printer, Remote Display,Code Printer,or other external devices,for reading and setup remotely;

#### USB

 For importing and exporting recipes,works,I/O function communication and other parameters, upgrading system software,customizing boot screen,etc;

#### 12 Input / 16 Output

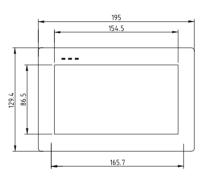
• For starting, stopping, feeding, unloading, clamping/loosening bags, etc;

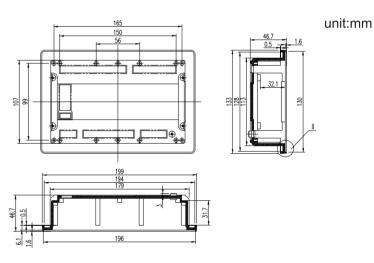
#### Modbus TCP

• For connecting PC, PLC, Printers, etc., for reading remotely.

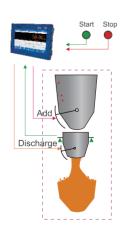
### **Specification**

	Model	GM9907-L5
	Power Supply	DC24V
General	Operating Temperature	-10~40 C
Specifications	Maximum Humidity	90%R.H without dew
•	Test Standard	Class III 6000 e, 1 μ V/e
	Power Consume	About 15W
	A/D converter type	24 bit Sigma-Delta
	A/D Conversion Rate	120/240/480/960 times / sec
	Non-Linear	0.01%F.S
	Gain Drifting	10PPM/C
Measurement	Minimum Sensitivity	0.02µV/d
parameters	Analog Input Range	0.02~15mV
	Display Accuracy	1/100,000
	Power Source for Load Cell	DC5V 125mA(MAX)
	Input Resistance	10ΜΩ
	Zero Point Adjustment Range	0.002~15mV (load cell 3mV/V )
	12 Input 16 Output, I/O Selectable	
I/O Interfaces and	12 Input, Active-low Start, Emergency stop, Stop, Zeroin	ng, Clear alarm, Fill permission, Clogged, Manual fine flow, etc.
Communications	16 Output, Single drive current 500r Run, Stopped, Clogged, Coarse flow, Fi	mA ine flow, Result waiting, Over/under, Alarm, Stock-out Done, Last feed, DISC, -NZ-, etc.





# **Application Diagram**



Continuous Weighing

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GM9907-L6/L6D is designed for single/double nozzle liquid filling applications. It can widely used in food&beverage, chemical, coating industries and so on.

#### **Version Features**

User-Friendly · Better Experience

 Memory card build in, 7-inch touch screen for displaying clearly and operating easily;

• L6/L6D single or double nozzle liquid

filling applications can be chosen. UI

changed accordingly.



It can store 20 pieces of formulation
 Automatic 2-filling speed, feed control for different materials filling.
 Automatic 2-filling speed, feed control function, easy to connect with front-end

ed >					20	20/4/16 13:58
есіре:	: 01	50.00kg		4(pcs)		12345kg
		Gross	В	_		Gross
	50	), 00 kg	h. 4	5	n (	ገበ
		. OO kg		5	<b>U.</b> (	JU kg
Ŀ	921 SPS	WAT U-	570P	II sec	572 107	er u-
9		Clear Alarm				Zeroing
tch:		Complete Batch: 0 >	1	0.00	4 (	0.00
CUM	ŕ	Opcs .	2	0.00	5 (	0.00
		0.00 kg >	3	0.00	6 (	0.00
	Statistic	X   A F∎ing Test Rec	), ipe	Pause	(X)	Start



Process Paramete	, SO.(	00 kg 2021/01/06 14:00 Reserved >
Start	Filling Start Pre-Delay 0.1s >	Intellengent Filling
Condition	Cowenbibit 0.6s >	Auto Filling Speed 0 >
Pipe Drop Process	Cowenbibit Timer(SP2) 0.8s >	Positive Error Control
Filing >	Result Checking Timer 0.58 >	Filling Filter Level 0 >
Process	Filling Signal Combination Filling	Filling Threshold Value 0.00 kg >
Checking	A SP1 Output Output-16 >	Leaking Detect
Bucket Move Proness	A SP2 Output Output-16 >	SP1 Flowrate Low Limit 0.00 kg/s >
		Weight Sudden Drop Alarm 1.23 kg >
S Home	±   X   A   Statistic   Figure 1 and   Recipe	

# Communication

#### RS485+RS232

• For connecting PC,PLC,Printer,Label Printer, Remote Display,Code Printer,or other external devices,for reading and setup remotely;

# USB

• For importing and exporting recipes,works,I/O function communication and other parameters, upgrading system software,customizing boot

# 12 Input / 16 Output

• I/O programmble.

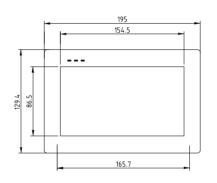
equipment.

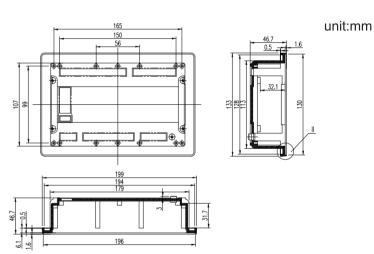
# Modbus TCP

• For connecting PC, PLC, Printers, etc., for reading remotely.

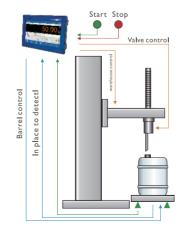
### **Specification**

	Model	GM9907-L6/L6D			
	Power Supply	DC24V			
General	Operating Temperature	-10~40℃			
Specifications	Maximum Humidity	90%R.H without dew			
•	Test Standard	Class III 6000 e, 1 μ V/e			
	Power Consume	About 15W			
	A/D converter type	24 bit Sigma-Delta			
	A/D Conversion Rate	120/240/480/960 times /sec			
	Non-Linear	0.01%F.S			
	Gain Drifting	10PPM/℃			
Measurement	Minimum Sensitivity	0.02µV/d			
parameters	Analog Input Range	0.02~15mV			
	Display Accuracy	1/100,000			
	Power Source for Load Cell	DC5V 125mA(MAX)			
	Input Resistance	10ΜΩ			
	Zero Point Adjustment Range	0.002~15mV (load cell 3mV/V )			
	12 Input, Active-low Start, Emergency stop, Zeroing, Clear alarm, Switch formula, Dropping/lifting nozzle, feeding, etc				
I/O Interfaces and Communications	16 Output, single drive current 500 Run, Stop, Fast feeding, Slow feedin Batching finish, etc.	DmA g, Constant value, Over/Under weight, Alarm, Move barrel, dropping nozzle,			

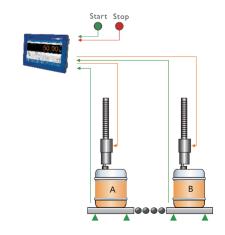




# **Application Diagram**



Single Nozzle for Liquid Filling Application



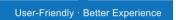
Double Nozzle for Liquid Filling Application

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GM9907-LB is designed for batching scale that can sort feeding orders of a variety of materials. It can be widely used in concrete mixing, bituminous mixing, metallurgy, chemical, feeds industries etc.

#### **Version Features**



- Memory card build in, Dynamic batching process can be graphically displayed for better understanding and monitoring;.
- Support the batching of 12 kinds of materials. It can be customized according to the batching process sequence, which is flexible to use;





• The working process is clear. Feeding value and time of the material can be set, and real-time feeding dynamic can be displayed;

Recipe1 Supplement2		Filling PreDelay Timer	.5s )
Target	>	COMP.Inhibit Timer(Co-F)	. 5s )
Co-Fill Ramin	>	COMP.Inhibit Timer(Me-F)	. 5s )
Me-Fill Ramin	>	COMP.Inhibit Timer(Fi-F)	. 5s )
Free Fall	>	Stir Control	. 5s )
Over Limit Value	>		
Under Limit Value	>		
Fill Pause Control			





• User-friendly design: Save function when power down and monitoring alarm function;





#### RS485+RS232

 For connecting PC,PLC,Printer,Label Printer, Romote Display,Code Printer,or other external devices,for reading and setup remotely;



 For importing and exporting recipes,works,l/O function communication and other parameters, upgrading system software,customizing boot screen,etc;

# 12 Input/16 Output

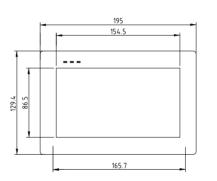
• For starting, stopping, feeding, unloading, clamping/loosening bags, etc;

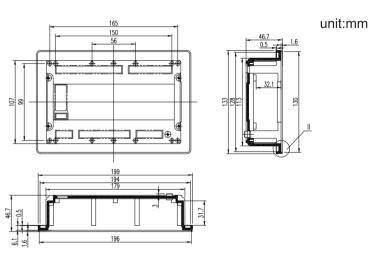


• For connecting PC, PLC, Printers, etc., for reading remotely.

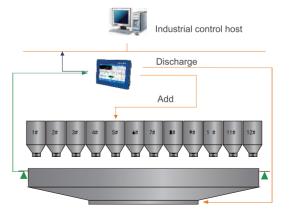
#### **Specification**

	Model	GM9907-LB				
	Power Supply	DC24V				
General	Operating Temperature	-10~40°C				
Specifications	Maximum Humidity	90%R.H without dew				
Opodiloadoris	Test Standard	Class III 6000 e, 1 μ V/e				
	Power Consume	About 15W				
	A/D converter type	24 bit Sigma-Delta				
	A/D Conversion Rate	120/240/480/960 times /sec				
	Non-Linear	0.01%F.S				
	Gain Drifting	10PPM/C				
Measurement	Minimum Sensitivity	0.02μV/d				
parameters	Analog Input Range	0.02~15mV				
•	Display Accuracy	1/100,000				
	Power Source for Load Cell	DC5V 125mA(MAX)				
	Input Resistance	10ΜΩ				
	Zero Point Adjustment Range	0.002~15mV (load cell 3mV/V )				
	12 Input 16 Output, I/O Selectable					
	12 Input, Active-low					
I/O Interfaces and	Start, Emergency stop, Stop, Pause, ZERO, Clear alarm, Change recipe, M-DISC permission, TARE, Clear tare,					
Communications	Manual stir, etc.					
	16 Output, Single drive current 500mA Run, Stopped, Coarse flow, Medium flow, Fine flow, Result waiting, Over/under, DISC, -NZ-, Alarm, Stir, etc.					





# **Application Diagram**



Batching, up to 12 materials

-45-



 $Weighing\ automation\ technology$ 

# Highly Visible Remote Display



Remote display is a outdoor truck scale weight display of highest quality with full stainless steel body with IP65 standard, which is the ultra light LED display with wide viewing angle of 170 degrees and crystal clear under sunlight.



# Remote Display GM8892



High Clarity LED Remote Display for Truck Scales



### Remote Display GM8895



High Clarity LED Remote Display for Truck Scales



# **Communication**

Our remote display offer unmatched flexibility with smart data recognition system compatible with indicators for truck scales, such as AD-4321, AD-4323, TOLEDO, Fairbanks, R2500, UMC600, GSE50 serial, Rinstrum, WI-125, WI-127, Df1500 etc.







### **Standard Specification**

Model	GM8892	GM8895
INDICATOR POWER		
Power Supply	90V ~ 260V AC 50Hz(or 60Hz)±2%	90V~260V AC 50Hz(or 60Hz)±2%
Power Consume	20W	40W
DISPLAY		
Display	6 digits, 7 segments, Ultra bright LED	6 digits, 7 segments, Ultra bright LED
Digits Size	2.5"	5.0"
LED Indicators	3 LED, Gross, Net, Motion	3 LED, Gross, Net, Motion
Visible angle	10 degree to 170 degree	10 degree to 170 degree
ENVIORNMENTAL		
Operating Temperature	-10℃ to 40℃	-10°C to 40°C
Storage Temperature	-25℃ to 70℃	-25℃ to 70℃
Humidity	90% R.H without dew	90% R.H without dew
IP Level	IP65	IP65
MECHANICAL DATA		
Dimensions with sun shelter	582×228×200 (L×W×H)	905×295×258 (L×W×H)
Dimensions without sun shelter	578×226×76 (L×W×H)	900×280×107 (L×W×H)
Weight	Approx. 8kgs	Approx. 16kgs
Certification	CE	CE
Enclosure	stainless steel	stainless steel
COMMUNICATION		
Interface	RS485/RS232; Current Circle; Wireless(Op	otional)
INDICATOR SUPPORTED		

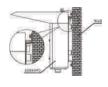
AD-4321, AD-4323, TOLEDO&Fairbanks, R2500, UMC600, GSE50 serial, Rinstrum, WI-125, WI-127, DF1500

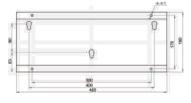
#### Dimensions

Unit:mm

#### GM8892



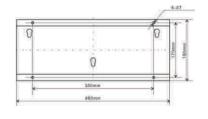




#### GM8895







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potentiometer. In some special weighing occasions when the angle deviation is so large to affect the measurement results, this junction box can effectively solve the user's problems.

#### **OPERATING INSTRUCTION**

#### Terminal identification

• GM-JX-M can connect with the analog or digital load cell.

When applying to the analog load cell:

• EX+: EXCITATION +

• SIG-: SIGNAL -

• EX-: EXCITATION -

• SHLD: SHIELD

• SIG+: SIGNAL+

(When the load cell is six-wire, short-circuit the +excitation and +sense to EX+, short-circuit the -excitation and -sense to EX-.)

#### ②When applying to the digital load cell:

• 12V+: EXCITATION + • 12V-: EXCITATION - • SHLD: SHIELD

A: SIGNAL A B: SIGNAL B

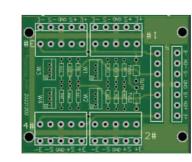
#### **Adjustment Method**

①Switches SW1-SW4 can be assigned to control the on-off of each load cell for single-channel load cell adjustment.

②Potentiometer R1-R4 can fine-tune the output signal of each load cell respectively for adjustment of the four corners of the load cell.

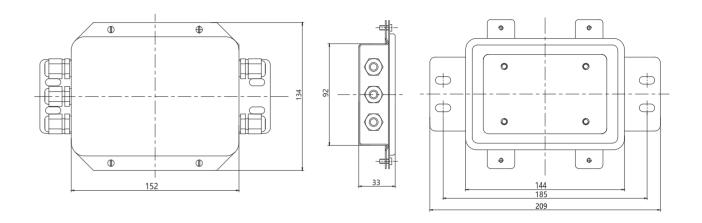
### **Four-Angle Deviation Adjustment Method**

- Step 1: Before adjustment, the four-channel potentiometer is gently rotated to the middle position;
- Step 2: Fine-tune the channel with large deviation to the average value (close the other three channels when observing one channel);
- Step 3: Repeat step 2 until the millivolt signals of four-channel are similar.

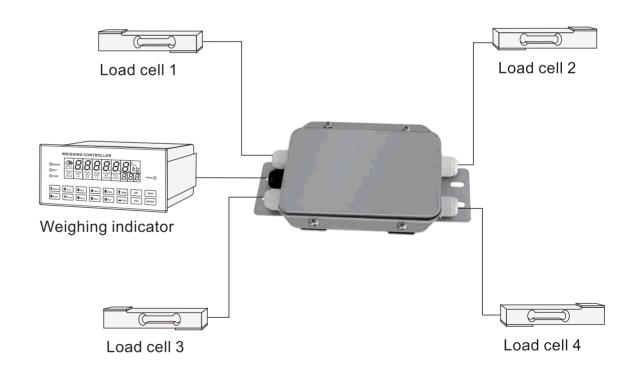


# **Dimensions**

Unit:mm



# **Connection Diagram**



-49--50-