

**LM Series Weighing Controller
Instruction Manual**

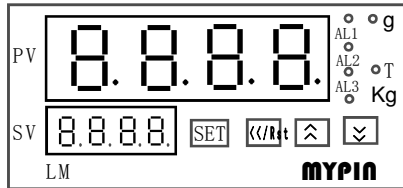
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Before operating this instrument, please carefully read this manual and fully understand its contents. If any problems, please contact our sales or distributors whom you buy from. This manual is subject to change without prior notice.

Application

- Weight measurement and control
*Mixed Batching control
- Direct Load :1-4 PCS loadcells, 24 Bits A / D
- Digital Input: Start / Stop and Clear Tare
- Output:4-20mA / 0-10V , Relay / SSR / Logic output
- Data Peak value holding function for choice.
- Communication : RS485 RS232,RJ45(LAN)
MODBUS-RTU protocol.

Panel(for reference)



- PV LED :weight value/ Parameter code display
SV LED: preset /parameter value display
Peak value display (for Peaking meter)
- Lamps: AL1,AL2,AL3: alarm , g,kg,T: units
- Operation key

- SET** Select OR Confirm key
- <</Rst** Shift OR Clear Tare key
- Up** key **Down** key

Specifications

Power	220V/110V AC 90-260V AC/DC or 24V AC/DC
Consumption	≤5VA
Accuracy	0.1%F.S±2digit
Sampling speed	≤16times/sec
output	Relay: Normal Open AC 250V 3A or DC 30V 5A Resistive load :SSR:12V/24V, MAX30mA
Input	1-4 PCS Loadcells Others:mA / V (special order)
Transmit output	DC 4-20mA / 0-10V etc.
Communication	RS232 / RS485 RJ45 MODBUS RTU protocol

Ordering code

MODEL		Functions	
LM	□ □ □ □ □ □ □ □ □ □ □ □ - □	LM Series	
SIZE	4	48H*48W*80L	
	8	48H*96W*80L	
	9	96H*96W*80L	
Power	E	Blank: 220V/110VAC 18-30V or 24VDC blank:none	
	V	DC 0-10V	
Transmit output	I	DC 4-20mA	
	R	AL3:alarm, no transmit	
	S	Blank: none	
Alarm	AL1	N	N: none
		R	Relay: AC250V / 3A
		S	SSR: 12 / 24V / 30mA
	AL2	N	N: none
		R	RELAY: AC250V/3A
		S	SSR,12/24V/30mA
Communication	2	Blank: none	
	4	RS232	
	5	LAN RJ45	
Excitation source	D	5V/80mA	
	B	24V/30mA	
	E	Other:order	
Input code		Blank: load sensors	
	1	0-30mV	
	2	0-100mV	
	F	Other: order	
Application: ALL 350 Ω -1K Ω Loadcells or pressure sensors		Blank:none	
	T	Supply loadcell sensor with the meter	

E.g LM8-IRRD Weight indicator /controller
Size: 48H* 96W*80Lmm
power supply: 220 / 110V AC
Transmit output: DC 4-20mA ,
Alarm: 2-Relay High or Low output,
input: load cells

Mounting and Sizes

- LM4 W48 X H48 X L80mm mounting W45 X H45mm
- LM8 W48 X H96 X L80mm mounting W45 X H92mm
- LM9 W96 X H96 X L80mm mounting W92 X H92mm
- LM10 W160X H80 X L70mm
mounting: W152X H76mm

Operating setting

1 Parameter setting:

- A press and hold SET key until to enter setting menu.
- B Press << /Rst key once, LED flashing
Press << /Rst to shift LED if need
- C press Up or Down key to modify data,
D press SET key to confirm data.
- E Press SET key to read other parameters,
and repeat B,C,D steps to modify data if need
- F .press and hold SET key until to quit menu

2.Weight Adjustment:

- A when empty (no load),press DOWN key until 'Oy' flashing. release DOWN key ; PV LED displays about 0
- B Follow step A,placing the weight of this calibration, press UP key until SV LED flashing. release UP key.refer parameter setting step to set SV LED data,SV LED data = the weight of this calibration (Equal USP parameter),
E.g,the calibrate weight is 50Kg,
Setting SV data=50.00, the unit is Kg,
Setting SV data=0.050, the unit is Ton
- C Refer Page 2 to lock adjust operation If need

3. Clear tare weight :

- press << / Rst key until 'oy' flashes to clear tare or **short external RST** terminal once to clear tare

4.The instrument will auto-return to the measuring estate without any operation for 25 seconds

Note: Zero display (option,refer page 2) when empty or no load

- if need PV window display 0 when no load, then set PF2 >= |PV| ,
E.g when no load,PV display range: -0.2--+0.2,
set PF2=0.3 > |PV|=0.2, PV will display 0.0,
but if PV > PF2, E.g PV value =0.31 > 0.2,
PV LED will normal display 0.31.

Parameter setting

press SET Key until to enter the menu

↓ SET

AL1
144.0
Alarm 1 setting, range -1999- 9999

↓ SET

AL1
H
Alarm 1 output controll
H:High output weight > AL1,AL1 active,
weight < AL1-HY1,AL1 inactive
L: Low output weight < AL1 ,AL1 active
weight > AL1+HY1,AL1 inactive

↓ SET

AL2
10.0
Alarm 2 setting, range -1999- 9999

↓ SET

AL2
H
Alarm 2 output controll
H:High output weight > AL2,AL2 active,
weight < AL2-HY1,AL2 inactive
L: Low output weight < AL2 ,AL2 active
weight > AL2+HY1,AL2 inactive

↓ SET

AL3
50.0
Alarm 3 setting(Hidden when no AL3)

↓ SET

AL3
H
Alarm3 output controll (hidden when no AL3)
H:High output weight > AL3,AL3 active,
weight < AL3-HY1,AL3 inactive
L: Low output weight < AL3 ,AL3 active
weight > AL3+HY1,AL3 inactive

↓ SET

HY1
100.0
Hysteresis value setting for all alarms.
Range: ±50.0

↓ SET

Add
001
communication ID address, Range :000-250,
Baud rate: 9.6K Bit or :19.2Kbit

↓ SET

PUF
0.0
Reserved,(Tare weight
or drop difference value)

↓ SET

USP
100.0
USP=The weight of this calibration
Range: 0-9999, the unit is determined by this

↓ SET

dP
000.0
PV LED Decimal point display
int :0000 1 -decimal point :000.0
2-decimal point :00.00 3-decimal point :0.000,

↓ SET

SF2
0.0
Digital filter,range:0-20,factory : sft =001
Larger the data, more stable is the weight display

↓ SET

trL
0.0
Transmit output low value:
E.g weight display range 0.0-200.0 for output
4-20mA (or 0-10V), set trL=0.0

↓ SET

trH
100.0
Transmit output high value:
E.g weight display range 0.0-200.0 for output
4-20mA (or 0-10V), set trH=200.0

↓ SET

Unit
0.01
weight unit: 9 : g 29 : Kg 1 : Ton

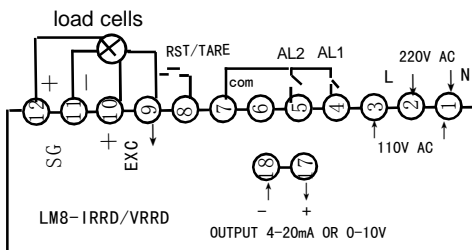
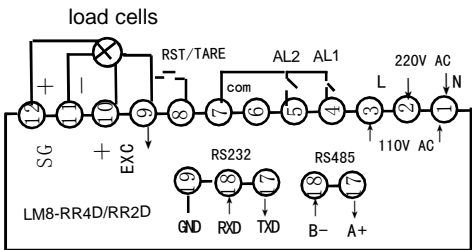
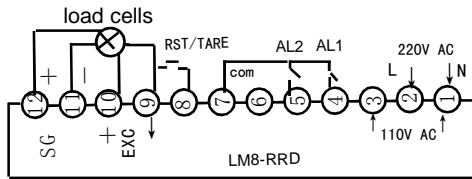
↓ SET

LcK
000
Parameter lock, range:0-255
LCK=010,is for read only.
LCK=000 Read and Write.

press SET Key until to quit the menu or return AL1

Connections

(If any changed, refer the label on the meter).



Complete products contains

- ★1 copy of user manual,
- ★1 inspection QC label,
- ★2 installing brackets.

We are responsible for the overall repairment for the failure of manufacturing quality within 12 months since the date of purchase.

More information: PLS Down load from: www.mypinchina.com
 IP/wechat: 86-18689341985, Email: sale@mypinchina.com

Main Products

- Counter & length meter
- Time relay
- Temperature controller
- Panel meter
- Frequency/Tacho/Line-speed meter
- Proximity sensor Photo-electrical sensor
- Ampere & Voltage Power meter
- Transmitter
- Universal Sensor indicator
- Power adjustor

Calibration Lock / Unlock

press UP and Down key until to enter menu

6Ad Baud Rate
 9.6K Bit/S OR 19.2K Bit/S
 factory:9.6K Bit/S

9.6

↓ SET

P r t Prt=No,Unlock calibration,
 Prt=YES,lock calibration,Calibration
 operation not allowed (refer PAGE 1
 weight adjustment)

0 0

↓ SET

P F 2 PV LED zero value setting.
 If |PV| < PF2,the PV display is 0

0.0

↓ SET

C t Reserved weight=Ct*USP-PVF

1.000

↓ SET

S c P Calibration password for factory

0 1 5

press UP and Down key until to quit menu

LM MODBUS USER INSTRUCTIONS

1 The instrument RS485/RS232 MODBUS-RTU data format

Start bit	Data bit	Stop bit	Parity	Baud rate
1	8	1	None	9.6k or 19.2kBitS

2 The format of the data reading and writing is same as standard Modbus protocol.

Definition as follows:

Request:(eg. TX: 01 03 00 62 00 02 65 D5)

01	03	0098(0062H)	0002	26069 (65D5)
ADD	COM	PV	Counts	CRC

Response: (eg.RX: 01 03 04 6D 96 49 F3 71 66)

01	03	04	6D96 49F3	7166
ADD	COM	Count	PV	CRC

Return data : 2 word,PV= 6D96 49F3=6D96.49F3H = INT 6D96H+ POINT 49F3H=28054+18931/65536=28054.2888
 (49F3H=18931 6D96H=28054) When Max bit is "1",means negative, E.g PV=ED96 49F3 = - 6D96.49F3H= -28054.2888

3, Can read OR write 1 parameter only every time,when writing ,Please convert the demical data to hexadecimal data,
 .For example,100.5,INT 100=0064H,0.5=0.8000H,therefore 100.5=0064.8000H,100.5 data=00 64 80 00

4 Clear Tare: Parameter PVF(Address 10H), TX: 01 06 00 10 00 00 88 0F, 01:ID number,,06:COM ,ingnore writing data

5, Commands: 03H: read holding registers parameters 06H: write single holding register parameter value
 10H: write multi holding registers parameters value

5, Communication parameters:LM Weighing meter reading and writing parameter

Parameters	data address (HEX)	count (words)	functions	Parameters	data address (HEX)	count (words)	functions
PV	62H	2	weight value,read only	Add	0FH	1	ID address, 0-255, R/W
AL1	00H	2	AL1Value, R/W	USP	14H	2	the weight of calibration, R/W
AM1	03H	1	AL1 control, 0:L,1:H, R/W	dp	17H	1	PV decimal point, R/W
AL2	04H	2	AL2Value, R/W	Sft	18H	1	software filtering Value,R/W
AM2	07H	1	AL2 control, 0:L,1:H, R/W	TRL	1CH	2	Transmit low value, R/W
AL3	08H	2	AL3Value, R/W	TRH	20H	2	Transmit high value, R/W
AM3	0BH	1	AL3 control, 0:L,1:H, R/W	Unt	23H	1	weight unit, 0: g, 1: Kg, 2: T, R/W
HY1	0CH	2	AL1 AL2 AL3 control hysteresis, R/W	LCK	24H	1	Parameter lock, R/W