LOCOSC PRECISION TECHNOLOGY

LP7515

Weighing Indicator

USER MANUAL



Document Version: CN260907

Safety Precautions

Read this section carefully before installing, operating, or servicing this equipment. Failure to observe these warnings may result in equipment damage, metrological inaccuracy, or personal injury.



WARNING — Qualified personnel only

Setup, calibration, inspection, and maintenance of the indicator must be carried out only by qualified, professionally trained personnel. Unauthorized servicing may affect metrological integrity and void the warranty.



WARNING — Protective earth (grounding)

Ensure the indicator and the complete scale system are properly grounded (earthed) during use. A reliable earth connection is essential for measurement accuracy and for protection against electric shock.



WARNING — Electrostatic-sensitive device (ESD)

The indicator contains electrostatic-sensitive components. Switch off and disconnect power before making any electrical connections. Do not touch internal components by hand, and observe appropriate anti-static precautions.

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1. Instruction

This weighing indicator is suitable for general industrial, commercial, and agricultural use, including animal weighing and force measurement. It connects to a compatible load-cell platform to display gross, net, and tare weight, with optional serial output to a remote display or PC.

1.1 Function Feature

- Compact indicator design with a stable-performance PCB, suitable for industrial or commercial use
- Low power design for longer battery usage time
- 6-digit, 20 mm high LCD display with backlight
- Full-featured operation:
  - Low-battery detection and warning; shuts down automatically under low battery voltage
  - Hold function, locks the weight reading
  - Idle mode and automatic power-off function
  - Zero and tare function
  - Optional serial output to a remote display or PC

1.2 Technical Parameter

Parameter	Specification
Accuracy class	Class III
Tare range	100% of Max. Capacity
Initial zero range	±10% of Max. Capacity
Manual zero range	±2% of Max. Capacity
Operating temperature & humidity	14°F to 104°F (–10°C to +40°C); ≤85% RH

1.3 Battery Instruction

The indicator uses 3 AA batteries and operates for about 30 hours. With the backlight off, battery life extends to about 100 hours. When the low-battery icon lights up, replace the batteries promptly; if not replaced in time, the indicator will shut down automatically.

When using a DC power supply, the indicator does not consume battery power.

1.4 Overall Dimensions (mm)

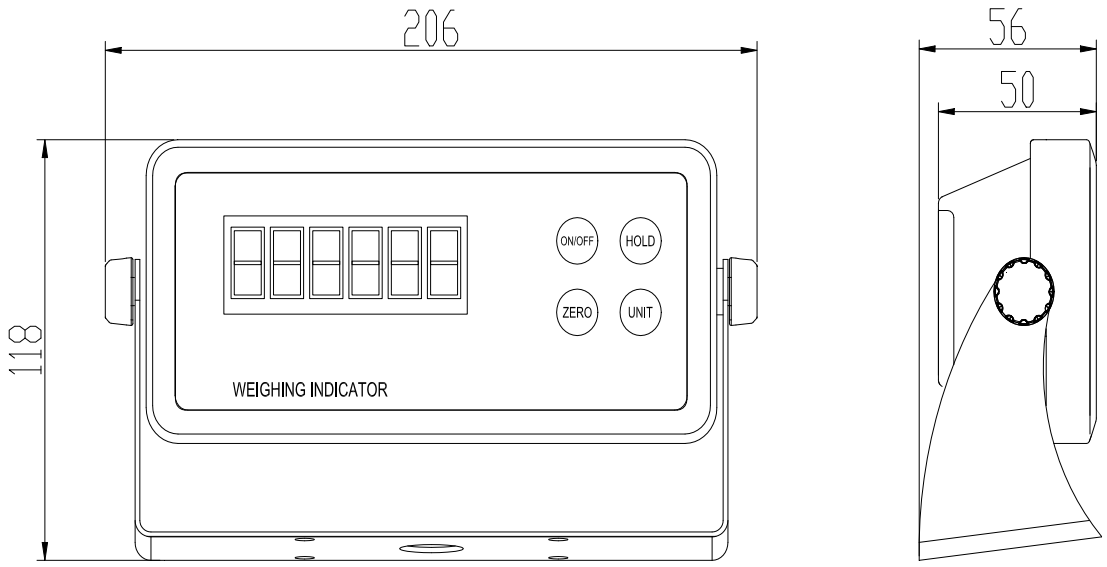


Figure 1-1 Overall dimensions

2. Installation

2.1 Unpacking Inspection

Once you open the package, please check all the parts against the packing list. If any parts are missing or damaged, please contact our after-sales department as soon as possible to ensure proper use of the indicator.

2.2 Load Cell Connection

The indicator accepts up to four 350 Ω load cells, supporting both 4-wire and 6-wire (optional) load cells. Use the supplied quick-disconnect connector to mate with the load cell cable.

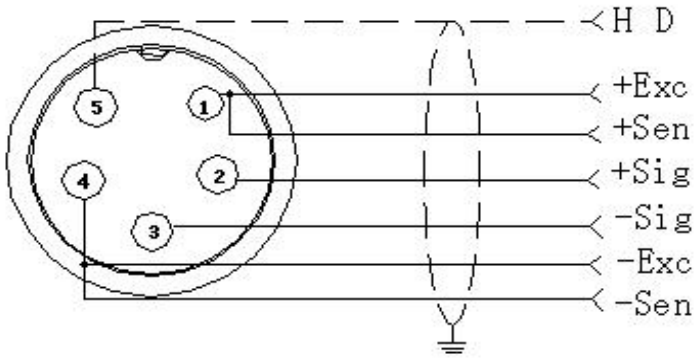


Figure 2-1 Load cell wiring

2.3 Power Connection

- Adaptor power supply: insert the adaptor into the DC connector on the indicator's back cover.
- Battery power supply: 3 AA batteries.

2.4 Communication Interface

The RS232 serial port uses a DB9 connector to interface with a remote display or PC, as shown below.

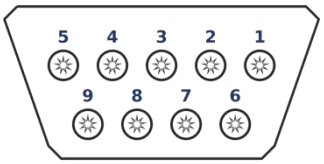


Figure 2-2 DB9 connector, female, pin view

Pin	Definition	Function
2	**TXD**	Transmit data
3	**RXD**	Receive data
5	**GND**	Signal ground

3. Basic Operation

3.1 Display

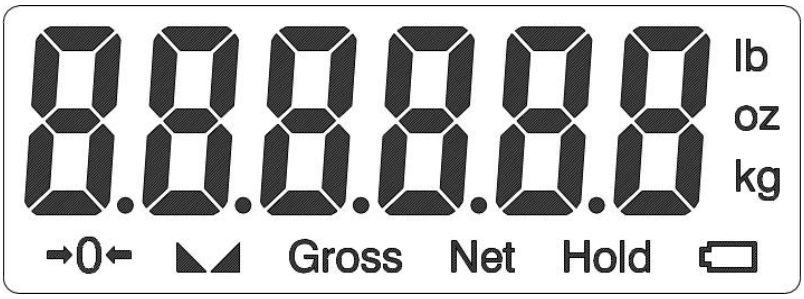


Figure 3-1 Display layout

Display	Description
→0←	Center-of-zero indication
	Stable equilibrium indication
Gross	Gross weight indication
Net	Net weight indication

Hold	Display hold status
	Low battery
kg	Weight unit: kg
lb	Weight unit: lb
oz	Weight unit: oz

3.2 Key Function

Key	Weighing Mode	Parameter Setting
ON/OFF	Power on/off	Exit
HOLD	Hold	Confirm
ZERO	Zero/Tare	Move left
UNIT	Unit switch	Move down

3.3 Power On

Press and hold [ON/OFF] for 1 second to power on and perform a self-check. If it exceeds the initial zero range, the display shows “ERR6”; otherwise, the weight display returns to zero.

3.4 Power Off

- Press and hold [ON/OFF] for 1 second to power off.
- The indicator powers off automatically when the battery is low.
- The indicator powers off automatically after 10 minutes of inactivity (see §4.1, OFF parameter, to adjust this time).

3.5 Zero/Tare Function

- When the weight exceeds the zero range (±2%) and is stable, press [ZERO] to switch to net weighing mode: the current weight is recorded as the tare weight, and the display shows zero net weight.
- When the weight is within the zero range (±2%) and stable, press [ZERO] to return to gross weighing mode: the display shows zero gross weight.

3.6 Hold Function

- When Hold = 1 (peak hold mode): press [HOLD] to hold the peak weight — the display shows the maximum value only; press [HOLD] again to release the hold.
- When Hold = 2 (data hold mode): press [HOLD] to hold the current weight; press [HOLD] again to release the hold, or it releases automatically after 15 seconds (see §4.1, Ht parameter, to adjust this time).
- When Hold = 3 (auto hold mode): the indicator automatically holds the weight once it is stable; press [HOLD] to release the hold, or it releases automatically after 15 seconds.

3.7 Kg/Lb/Oz Unit Switch

- When Uns = 0, the unit switch function is disabled.
- When Uns = 1, press [UNIT] to switch between kg and lb.
- When Uns = 2, press [UNIT] to switch between lb and oz.
- When Uns = 3, press [UNIT] to switch among kg, lb, and oz.

4. Parameter Setting

4.1 User Parameter Setting

Press HOLD and UNIT together to enter user parameter setting.

Function	Display	Parameter Instruction
Auto power-off	OFF 10	=0 Disabled =10 10 minutes =30 30 minutes =60 60 minutes
Back light mode	BL 1	=0 Disabled =1 Auto back light =2 Continuous back light
Units switch function	UnS 1	=0 Disabled =1 kg/lb =2 lb/oz =3 kg/lb/oz
Hold function	Hold 1	=0 Disabled =1 Peak hold =2 Data hold =3 Auto hold
Hold time	Ht 1	=0 No time limit, released only by pressing HOLD =1 15 seconds =2 30 seconds =3 45 seconds =4 60 seconds =5 No time limit, released when returning to zero

Zero range	Zero 1	=0 Disable manual zeroing and initial zeroing =1 Initial zeroing range ±10%, manual zeroing range ±2% =2 Initial zeroing range 100%, manual zeroing range 100%
Negative range	negr 1	=0 Displays negative values down to –20d =1 Displays negative values up to –10% MAX =2 Displays negative values up to −100% MAX

4.2 Communication Parameter Setting

Enter communication parameter setting after finishing user parameter setting.

Function	Display	Parameter Instruction
Communication mode	trn 1	=0 Disabled =1 Continuous send =2 Manual send =3 Command mode
Baud rate	baud 1	=1 9600 bit/s =2 4800 bit/s =3 2400 bit/s =4 1200 bit/s =5 600 bit/s

Communication mode instruction

- Continuous send mode: the indicator continuously sends Communication format 1.
- Manual send mode: press UNIT for 1 second to send Communication format 1.
- Command mode: send ASCII “R” (or hexadecimal 52) to the indicator; the indicator responds with Communication format 1.

Communication Format 1

Data is transmitted in ASCII format; the host computer can read the weight directly upon receipt. Frame structure: S1, S2, S3, Data, S4, comma, comma, CR, LF.

		,			,											CR	LF
S1			**S2**			**S3**					**Data**				**S4**		

S1: weight status — ST = stable, US = unstable (in motion), OL = overload

S2: weight mode — GS = gross, NT = net

S3: sign — “+” or “–”

S4: unit — “kg” or “lb”

Data: weight value, including decimal point

CR: carriage return

LF: line feed

4.3 Error Messages

Display	Probable Cause	Corrective Action
UUUUUU	1. Overload. 2. Incorrect load-cell wiring. 3. A faulty load cell.	1. Reduce the load. 2. Check the load-cell connection. 3. Check the load cell by measuring its input and output resistance.
nnnnnnn	1. Faulty calibration. 2. Incorrect wiring. 3. A faulty load cell.	1. Check that the platform moves freely and the feet are level. 2. Check the connection and the load cell.
ERR6	Zero is out of range.	Remove the load from the platform.

4.4 Packing list

S/N	Item	Name	Unit	Qty	Packing
1	Weighing indicator	LP7515	PCS	1	
2	Packaging Bag		PCS	1	
3	Accessory Bag		PCS	1	
4	Adapter	US/DC5V(or other)	PCS	1	
5	User manual		PCS	1	
6	RS-232 connector	DB9	PCS	1	
7	Load-cell plug	5 PIN quick disconnect	PCS	1	
8	Bracket	Wall-mounted	PCS	1	
9	Packing list		PCS	1	