

# Optima OP-900-LD

Score Board Indicator  
(with Remote Control)

User Manual

# Warnings



- For safety operation of the weighing indicator, please follow the following warning/safety instructions:
  - Calibration inspection and maintenance of the indicator are prohibited by non-professional staff
  - Please ensure that the indicator has good ground
  - The indicator is a static and sensitive equipment; Please cut off power during electrical connections; Touching the internal components by hand is prohibited; Please take anti-static prevention measures



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### Overview

Thank you for using Optima's OP-900-LD score board indicator with remote control for your important application. The OP-900-LD score board indicator can be used for many type of scales such as bench and floor scales.

### Technical Parameters

- Accuracy class: 6000 e
- Resolution:
  - Display: 30,000
  - ADC: 2,000,000
- Zero stability error:  $TK_0 < 0.1 \mu\text{V//K}$
- Span stability error:  $TK_{\text{spn}} < \pm 6 \text{ ppm//K}$
- Sensitivity (internal):  $0.3 \mu\text{V /d}$
- Input voltage: -30 to +30mV DC
- Excitation circuit: 5 VDC, 4 wire connection, 6 load cell of 350ohm maximum
- AC power: AC 100-250V (use only the 9V adapter supplied with the indicator)
- Operation temperature:  $-10 \text{ }^\circ\text{C} \sim +40 \text{ }^\circ\text{C}$
- Operation humidity:  $\leq 90\% \text{RH}$
- Storage temperature:  $-40 \text{ }^\circ\text{C} \sim +70 \text{ }^\circ\text{C}$

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## Remote Control Keys Overview

- Button 1: Power key (Hold Key to turn on/off scale) / Exit Calibration key
- Button 2: Left arrow
- Button 3: Unit key (changes between lb and kg) / Right arrow
- Button 4: Net,Gross key (changes between net and gross) / Down arrow
- Button 5: Zero key (zero the indicator) / Up arrow
- Button 6: Enter key
- Hold button 1 + 6: Go into configuration mode
  - Press button 1 briefly will exit configuration. Note that holding this key too long will turn off score board indicator.

## Calibration and Parameter Settings

- To enter calibration/parameter settings
  - Press and hold the remote control's button 1 and 6 key at the same time
  - Navigate through the settings as shown in the following tables by using the arrow keys (button 2,3,4,5) and return key 6 on the remote control.
  - Press the remote control button key 1 (do not hold) to save and exit settings at any time. Note that holding key 1 too long will shut off score board indicator and the changed setting will NOT be saved.

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The following table shows the steps to properly calibrate the score board indicator in the calibration menu:

Step	Method of operation	Display	Remark
1		[C01 ]	After you enter calibration mode, it display [C01 ]
2	press ←	[C01 1]	Weight unit option: 1=kg 2=lb
3	press ← press ← press ↑ or ↓	[C02 ] [C02 0] [C02 2]	Set decimal digits option: 0/1/2/3/4 Select decimal digit example: two decimal point: [C02 2]
4	press ← press ← press ↑ or ↓	[C03 ] [C03 1] [C03 5]	Set graduation option: 1/2/5/10/20/50 Select required graduation example: graduation 5: [C03 5]
5	press ← press ← press ↑ or ↓/←	[C04 ] [0100.00] [0100.00]	Max capacity example: max weighing 100kg: [0100.00]
6	press ← press ← press ↑ press ←	[C05 ] [C05 0] [C05 1] [CAL 9] ° ° ° ° ° ° [0000.00]	Zero calibration Option 0=no need zero calibration 1=need zero calibration calibration zero please choose 1 and ensure scale is empty and "stable" light is on Ensure zero calibration, countdown. Till show[0.00](example for two decimal point)°

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7	<p>press ←</p> <p>press ←</p> <p>press ↑ or ↓</p> <p>press ←</p> <p>press ↑ or ↓</p> <p>press ←</p>	<p>[C06 ]</p> <p>[C06 0]</p> <p>[C06 1]</p> <p>[SPAN ]</p> <p>[0100.00]</p> <p>[0080.00]</p> <p>[CAL 9]</p> <p>.....</p> <p>[0080.00]</p> <p>[CAL End]</p>	<p>calibration option: 0=No need calibration 1= need calibration Load weights on scales according to max. capacity. Suggest close to the max capacity, at least 10% of max. capacity.</p> <p>For example: the weights is 80kg As bellows: Input the 0080.00, count down , then indicator shows 0080.00 , calibration is over. If you want to set application function parameter. Press "PRINT" if you want to exit press "TOTAL"</p>
8	<p>press ←</p> <p>press ←</p> <p>press ↑ or ↓</p>	<p>[C07 ]</p> <p>[07 0]</p> <p>[07 1]</p>	<p>Default parameters setting option:0=non-restore default parameters 1=restore default parameters Note: after the above parameters setting finish, please do not set default parameters to avoid the original setting parameters is lost.</p>

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## Troubleshooting

Q:What are the different error codes?

A:The following table shows the error codes and explanations:

ERROR	REASON	SOLUTION
UUUUUU	1. Overload 2. wrong connection with load cell 3. load cell has quality problem.	1. reduce the weight 2. check load cell connection 3. inspection load cell. Check the input and output
nnnnnn	1. calibration is no good 2. wrong connection 3. load cell has quality problem	1. check scale is resisted or not, foot is kept level or not. 2. check load cell connection. 3. checking load cell: check input and output resistance to judge it is good or not.
ERR1	During calibration, not input the weights or the weight is overload	Input the correct weights
ERR2	During calibration , the weights is below than Min. required weights	The calibration weights Minimum is 10% of Max. cap. Recommend 60%-80% of Max. Cap.
ERR3	During calibration, the input signal is negative	1. check the connection is correct 2. check load cell is no problem 3. recalibration if still wrong change the PCB
ERR4	During calibration, the signal is unstable	After the platform is stable, start calibration
ERR5		Change PCB



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Q: The scale does not turn on.

A: Make sure the power cord is plugged in, and that there is power. One easy way to test this is by connecting another appliance to the same outlet and see if it's operational.

Q: The reading goes negative when a load is applied.

A: Try interchanging the Sig+ and Sig- wiring connected to the load cell or junction box (if one is used).

## Technical Support

Please email [support@optimascale.com](mailto:support@optimascale.com) if you have any further questions.