

# Weighing Indicator **USER'S GUIDE**



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## VI Calibration

1. Connect the load cell properly, then turn on the indicator, press [#] key during startup, it will enter calibration mode and calibrate as follows:

Step	Operation	Display	Notes
1	Press [Tare] for division selection.	[d X]	Select division option (1/2/5/10/20/50, press [UNIT] to confirm Example: 20.
2	Press [Tare] for DECIMAL POINT selection.	[P X]	Select decimal point optional: 0~3, press [UNIT] to confirm Example: 3.
3	Set the full range.	[FULL]	Press [Tare] for digit bit selection. Press [Zero ] for digit selection. Press [UNIT] for confirm input.
4	Zero point calibration: Press [UNIT] when the stable signal is on.	[nLOAD]	Assure there is no load.
5	Full range point calibration: Press [UNIT] when the value input is the same as the loaded weight. Stable signal must be on.	[AdLOAD]	While inputting the loaded weight, Press [Tare] for selection of the digit bit; Press [Zero ] for digit selection. When the input value is the same as the loaded weight, press [UNIT] when the stable signal is on.
6		[End]	
7	Press the calibration button under the lead sealing board at the back of the indicator.	 Calibration Button	Saves the calibration parameter and sets back to the weighing status. Attention: If switch is not pressed, all parameters will not be saved.

2. **Fast calibration for zero point and full range point:** Press [UNIT] during startup, it enters calibration mode.
3. **Fast calibration for zero point:** At any time before it shows [nLOAD], press [FUNC], it keeps the original division, decimal point, full range and enters the zero point calibration mode. Press [ZERO] when the stable signal is on, it displays [END] and keeps the original full range point calibration. Press the calibration switch under the lead sealing board at the back of the indicator, this saves settings and returns to weighing status.
4. **Fast calibration for full range point:** At any time before it shows [AdLOAD], press [ACCU], it keeps the original division, decimal point, full range, zero point calibration and enters full range point calibration mode. When it is finished, press the calibration switch under the lead sealing board at the back of the indicator, this saves settings and returns to weighing status.

## IV Maintenance and Warnings

- ⚠ To guarantee the clarity and life of the indicator, this device shouldn't be used under direct sunlight and should be placed in room temperature area.
- ⚠ The indicator should be placed away from dense dust and moist environments.
- ⚠ Load cell should be securely connected to the indicator, and the system should be positioned safely. They should be kept away from strong electric and magnetic fields, corrosive objects, as well as flammable and explosive materials.
- ⚠ Do not use this device in an environment with flammable gas or steam. Pressure vessel canned system is prohibited.
- ⚠ If placed in severe thunderstorm environments, a mounted lightning rod is required to assure the safety of the operator and avoid damage to the indicator and relevant devices.
- ⚠ Load cell and indicator are electrostatic sensitive devices; anti-static measures must be performed during operation. Anti-static and anti-conductive matting is required. It is prohibited to perform electric welding and other strong electric field operations.
- ⚠ It is prohibited to clean the case of indicator with strong corrosive chemicals (such as, benzene and acidic lubricants)
- ⚠ Do not pour liquid or other conducting particles into the indicator, in order to avoid electric hazards or damage to the indicator.
- ⚠ Power supply of the indicator and relevant devices must be turned off before plugging or unplugging the connecting line of indicator and peripheral devices.

## V Messages

### Error Operation Messages

1. Err 1 The AD value is too small when calibrated.
2. Err 2 The zero point is out of range when calibrated.
3. Err 3 The zero point is out of range upon starting.
4. Err 4 The sample number inputted is zero when sampling in counting
5. Err 5 The weight inputted is zero when scale is calibrated in calibrating mode.
6. Err 6 The unit weight is less than 0.25e when sampling in counting
7. bAT-Lo Low power.

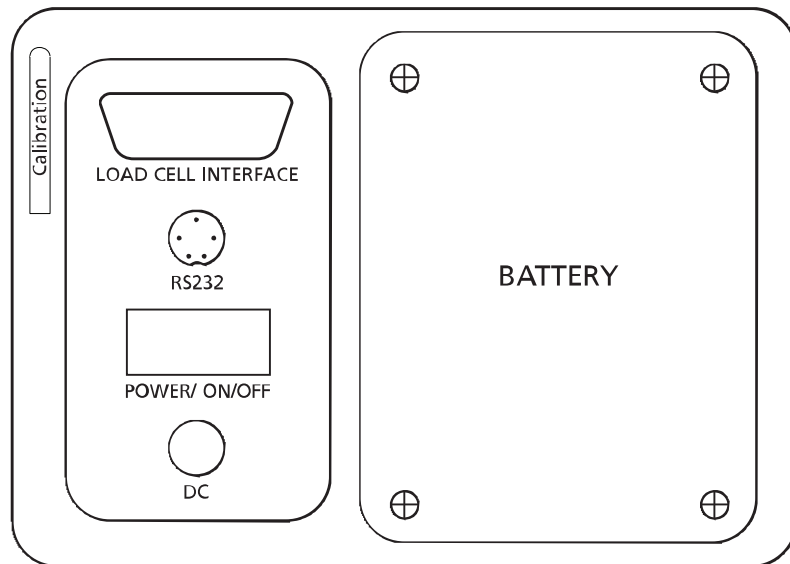
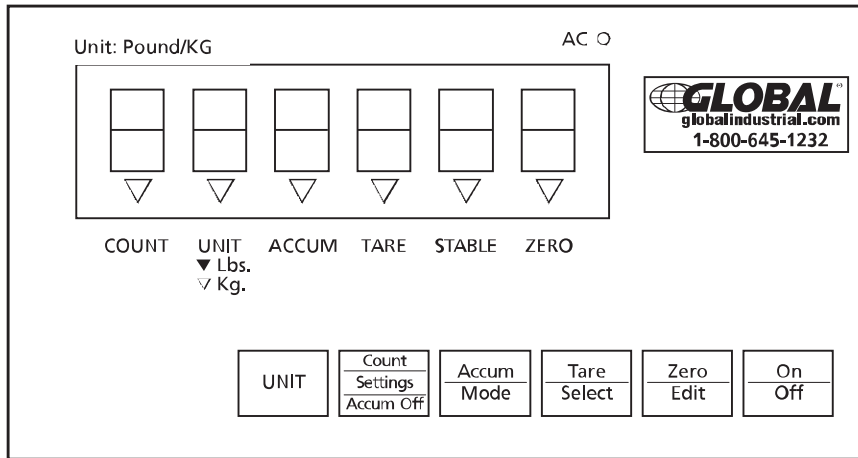
## Read this manual carefully before operation

## I Main Specifications

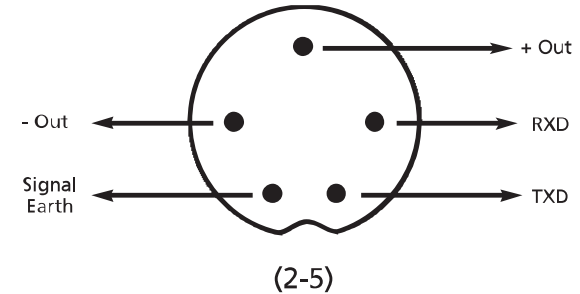
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|--|--|
| 1. Model:                              | K3190 - A12 weighing indicator                                     |
| 2. Accuracy:                           | Grade III, n=3000  |
| 3. Sample Rate:                        | 10x/second   |
| 4. Load cell sensitivity:              | 1.5 ~ 3mV / V  |
| 5. Scale interval:                     | 1/2/5/10/20/50 for option  |
| 6. Display:                            | 6 bits LCD, Six 1"H Digits   |
| 7. Scoreboard interface (optional):    | Serial output mode: current loop signal, transmission distance≤50m |
| 8. Communication interface (optional): | RS232C; Baud rate 1200/2400/4800/9600                              |
| 9. Power supply:                       | Battery DC6V/4AH   |
| 10. Operating temperature/humidity:    | 0 ~ 40°C; ≤ 90%RH  |
| 11. Transporting temperature:          | -20 ~ 50°C   |

## II Display and Keyboard

### 1. Drawing of the indicator display and keyboard



BACK VIEW



### B. Connect the scoreboard to indicator

1. The scoreboard interface adopts a 5-pin socket. Pins 3 and 4 in drawing (2-5) define the leads.
2. RS232 interface is used for scoreboard signal, which is transmitted in serial binary code style.

Make sure that the communication interface output lead and computer are connected correctly. If connection is unstable, risk of damage to output port of instrument and input port of scoreboard will increase. Only use provided connecting cable.

Professional computer technology and programming help is required. Non-professional staff installation is prohibited.



## 6. Tare function

- Place the load desired to be considered as tare and when indicator is in weighing mode displaying positive weight and stable indicator is on, press [Tare] key. The indicator will deduct the displayed weight value as tare weight, it then displays net weight as "0", and Tare sign indicator is on.

## 7. RS-232 communication function

### A. Set parameters for RS-232 communication

There are 10 configurable modes from P1 to P10 (P11 and P12 are not applicable for this unit).

- When in weighing mode, press [Settings] button for approximately 5 seconds, system will enter operator setting mode.
- Press [Mode] to choose the mode and press [Select] to choose the parameter.

Parameters Description:

P1 – Unit:

- 1 = KG
- 2 = LB

P2 – Sleep mode:

- 1 = Turns off sleep mode
- 2 = Power off 10 minutes later
- 3 = Power off 20 minutes later
- 4 = Power off 30 minutes later

P3 – Bits per second:

- 1 = 9600
- 2 = 4800
- 3 = 2400
- 4 = 1200

P4 – Net weight or Gross weight:

- 1 = Net Weight
- 2 = Gross Weight

P5 – Output mode option:

- 1 = No transmission (RS232 communication stops)
- 2 = Continuous transmission
- 3 = Continuous transmission when stable
- 4 = Command mode (Z: zero, T: tare, R: transmit weight data one time)
- 5 = Current loop output
- 6 = Keep (Printer)

P6 – Backlight setting:

- 1 = No backlight
- 2 = Automatic backlight
- 3 = Keep lighting

P7 – Zero-tracking scope:

- 1 = 0.5e
- 2 = 1.0e
- 3 = 1.5e
- 4 = 2.0e
- 5 = 2.5e
- 6 = 3.0e
- 7 = 5.0e

P8 – Zero key scope:

- 1 = 2%FS
- 2 = 4%FS
- 3 = 10%FS
- 4 = 20%FS

P9 – Zero scope upon starting:

- 1 = 2%FS
- 2 = 4%FS
- 3 = 10%FS
- 4 = 20%FS

P10 – digital filtering intensity:

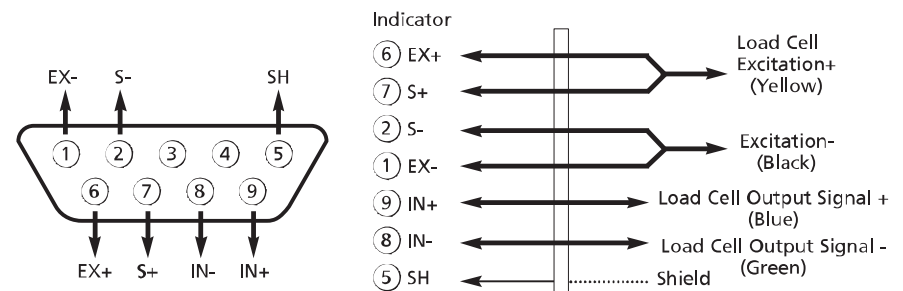
- 1 = High
- 2 = Middle
- 3 = Low
- P11 – N/A
- P12 – N/A

## 2. Key functions

- [Unit]: Change unit from "lb" to "kg".
- [Count/Settings/Accum OFF]: When in weighting mode, this button activates counting mode. If button is pressed for about 5 seconds, the system gets into settings. When in accumulating mode, this mode turns this mode off.
- [Accum/Mode]: When in weighting mode, this button adds weight to the accumulated weight saved in internal memory. When in settings mode, this button changes the mode to be set up.
- [Tare/Select]: When in weighting mode, this button is used to determine net weight. When in count mode, this button selects the digit to be edited.
- [Zero/Edit]: When in weighing mode, this button resets scale to zero. When in counting mode, this button edits the selected digit.
- [On/Off]: When unit is off, this button turns the indicator on. When unit is on, this button turns the indicator off.

## 3. Connect the load cell to the indicator

- The 9-pin socket is used for the link-up of load cell, as shown in graph 2-3.
- When the shielded 4-pin cable is used, the indicator does not have the function of long distance compensation.
- Indicator must be connected to load cell. Shielded-cable of load cell must be connected to ground wire. Do not insert or remove plug when indicator is powered on.
- Sensor and indicator are static sensitive devices; you must adopt anti-static measures.



## III Operation

### 1. Power on and auto zero setting

1. Press [ON/OFF] for 3 seconds to power on.
2. The indicator will execute a "999999-000000" count down to self-check when turned on. Then it will enter weighing mode.
3. When powered on and loading weight on scale deviates from zero point, but still within zero set range, the indicator will set zero automatically. If out of range, zero point adjustment is required: please recalibrate or reset system.

### 2. Zero function

When indicator is in weighing mode and "STABLE" indicator is on, the display should show "0". When no load is on the scale, press [Zero] to reset indicator to "0" when needed. If [Zero] key is invalid, please recalibrate or reset zero parameters. (Zero operation is only available when "STABLE" indicator is on.)

### 3. Unit setting

When indicator is in weighing mode, press [UNIT] to select the unit desired to be displayed (lb or kg).

- The indicator will show ▼ above "UNIT" when number displayed is in lbs.
- The indicator will show ▽ above "UNIT" when number displayed is in kg.

### 4. Counting Mode



1. When in weighing mode and display shows "0", place a known amount of pieces on the scale.



2. Press [Count]. "COUNT" indicator will appear on the display.



3. Press [Accum]. Screen will show the number of pieces to add or subtract.



4. Press [Select] to select the digit position we want to edit; and edit each digit pressing [Edit] until desired value is shown.



5. Select another digit and edit as previously explained.

6. When screen shows the right amount of pieces on the scale, press [Accum] and display will show current number of pieces.



7. Remove the pieces and place another load to be counted. The display will show the actual amount of pieces.



8. Press [Count] to go back to weighing mode.

NOTE: Accumulating mode is not available when in counting mode.

### 5. Accumulating mode (for weight only; max. 999999 kg or lb)



1. Put weight on scale. Display will show actual weight.



2. Press [Accum]. Display will show accumulated total and "ACCUM" indicator will appear on the display.



3. Replace the load with the new load to be weighted.

4. Press [Accum] again to show actual weight of the load in the display, and press [Accum] again to show total accumulated weight.

5. Repeat steps 3 and 4 until complete operation.

6. To erase total accumulated value, press [Accum] to show total accumulated value and press [Accum Off] button.