

# *T-Scale*

## EW Weighing Indicator

### Technical Manual



V1.00  
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# 1.SPECIFICATION

<b>Model</b>	<b>EW</b>
Display	30mm LCD with white LED backlight
Housing	ABS Plastic
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Resolution	1/30000d
Key Pad	5 Keys
Power	AC Adaptor (12V/500mA)/ Battery (6V/4Ah)
Calibration	Automatic External
Interface	RS-232 Output Optional
Load cell drive Voltage	Max: 5V/150mA
Load Cells	Up to 4 load cell
ADC	Sigma Delta
ADC Update	≤1/10 second
Stabilization Time	One seconds typical

## 2. INTRODUCTION

- The EW series weighing indicator that amplifies signals from a load cell, converts it to digital data and displays it as a mass value.
- It is suitable for general & simple weighing applications.
- It can connect the indicator to a printer or a PC.
- Large LCD with white LED back light display
- High precision A/D conversion and readability 1/30000

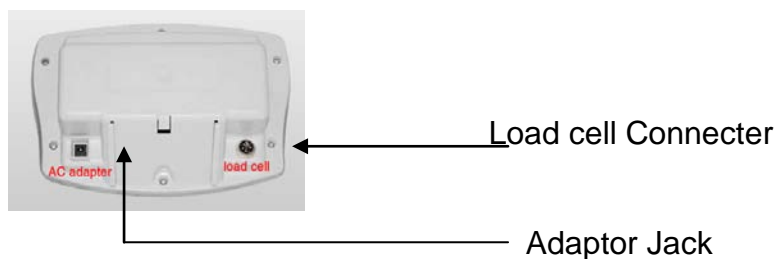
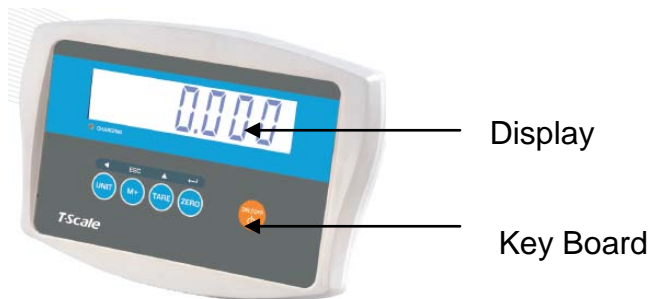
## 3. INSTALLATION

### Unpacking

When you receive the scale, inspect it to make sure that it is not damaged and that all the parts are included:

- Remove the Indicator from the carton.
- Remove the protective covering. Store the packaging and to use if you need to transport the scale later.
- Inspect the indicator for damage.
- Make sure all components are included.
  1. Indicator
  2. Adaptor
  3. Manual
  4. Indicator holder (Optional)
  5. Load cell Output connector (Optional)
  6. RS-232 Output Connector (Optional)

### Installation



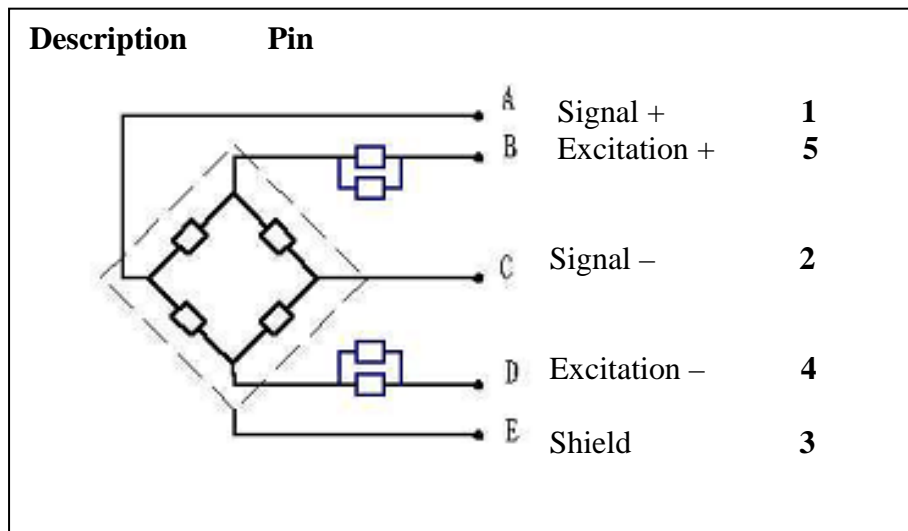
- Place the Indicator on a table or connect with proper stand.
- Connect the platform load cell cable in to the indicator load cell connector. Load cell connector is located back side of the indicator.

- Connect the adaptor pin in to the indicator adaptor jack.  
Adaptor jack is locating, back side of the indicator.
- Adaptor connects into your AC power socket.  
Pluggable equipment must be installed near an easily accessible socket outlet with a protective ground/ earth contact.
- Turn on the On/Off key. If you want to turn off, press the key again.
- Display will be show the scale capacity and will be starting self checking.
- After self checking, display will be come to normal weighing mode.
- Warm-up time of 15 minutes stabilizes the measured values after switching on.
- Calibrate with exact calibration weights, minimum 1/3 of the scale capacity want to use for calibration. For calibration see details in parameter.

Then you can start your operation

## Load cell connections

- Connect the load cell cables to the terminal as shown below.



- It can connect four 350 ohm load cells.
- The load cell drive voltage is 5V DC  $\pm 5\%$  between Excitation + and Excitation -.

## Connect Adaptor and Charging






- To charge the battery insert the adaptor pin to jack. Adaptor simply plug into the mains power. The scale no needs to be turned on.
- The battery should be charged for 12 hours for full capacity.
- Left down side of the keyboard there is an LED to indicate the status of battery charging. When the scale is plugged into the mains power the internal battery will be recharged. If the LED is green, the battery has a full charge. If it is red, the battery is nearly discharged and if yellow, the battery is being charged.
- Do not use any other type of power adaptor than the one supplied with the scale.
- Verify that the AC power socket outlet is properly protected.

**Note: Please charge the battery before using the scale for the first time.**

## 4. DESCRIPTION

### 4.1 Key Board



Keys	Description
	Power turn ON/OFF
	Set the Zero Display Secondary Operation: To confirm the selected menu
	To perform a tare function, Subtracts weights. Secondary Operation: To change the menu and to increase the active digit
	To send the data to printer or PC and to use accumulation Function Secondary Operation: Escape from the menu to normal operation.
	To select the unit weight Secondary Operation: To move the active digit to left



## 4.2 Display Indication



Display	Description
○	Indicate when the scale get stable
ZERO	Indicate when the scale in Zero
NET	Indicate when the scale in Net mode.
GROSS	Indicate when the scale in Gross mode
kg	Indicate when the scale in Kilogram (kg) unit
lb	Indicate when the scale in pounds unit

## 5. OPERATION

### Initial Start-up

Warm-up time of 15 minutes stabilizes the measured values after switching on.


### 5.1 Power On/Off:

Switch on the balance by pressing on/ off key.


The display is switched on and the test is started and if want to switched off, press again the key.



### 5.2 Zero

Environmental conditions can lead to the balance exactly zero in spite of the platform not taking any strain. However, you can set the display of


your balance to zero any time by pressing  key and therefore ensure that the weighing starts at zero.

### 5.3 Tare


The weight of any container can be tared by pressing  button so that with subsequent weighing the net weight of the object being weighed is always displayed.

- Load weight on the platform.
- Press  key. Zero is displayed, and tare is subtracted.
- Remove weight on the platform. Tared weight is displayed. It can set only one tare value. It will be shown with a minus value.
- Press G/N to change between gross weight and net weight.
- To clear the tare value, remove the load and press  key. Zero is displayed, tare weight is cleared.


## 5.4 Accumulation

The scale can be set to accumulate manually by pressing  key. Before operation scale should be stable and return to zero, accumulation available only when weight more than 20d

### Accumulation Operation



- Place the load on the platform.
- Press  key, when displayed STABLE indication.
- Display will be show a memory indication  $\Sigma$ . These displays will be show only three seconds.
- Remove the weight from the pan.
- When display get zero and stable then place the second weight.
- It can continue until the memory gets fully or 99 items.

### 5.4.1 Memory Recall

To recall the memory press  key.

Display will be show the total saved value. These displays will be shown only three seconds.

### 5.4.2. Memory Clear

To clear the memory, press  key, display will be show total saved value and press  key Display will be show 0.00 , all accumulation memory cleared from the memory.


## 6. PARAMETERS

### 6.1 ScaleSettings– Calibration


Enter into the parameter

Turn on the scale and press  key during the self-test,


Change the menu

Press  key to change the menu.


Confirm the selected menu




Press  key to confirm the menu




Escape from the menu

Press  key to escape from the menu or return to weighing mode


#### Scale Settings - Calibration

Turn on the scale and press  key during the self-test,  
Display will be show “d 1”

Menu	Description
d 1	select scale division 1/2/5/10/20/50 Choose the division and Press  key to confirm the menu
P 0.00	Select scale decimal point Choose the decimal point and Press  key to confirm the menu
Full	Select Scale Capacity Input scale capacity and Press  key to confirm the menu




noLoAd	Keep empty platform and make sure stable indication is turned on. Press  key to confirm the menu
AdLoAd	Place standard weights on the platform and make sure stable indication is turned on Press  key to confirm the menu
0005.00	Input loaded test weight value and Press  key to confirm the menu
End	Scale settings and calibration finished. Indicator will restart automatically. Remove test weight from the platform

## 6.2 Internal Counts


Turn on the scale and press and hold  key 3 seconds during the self-test, display will be show internal count.

## 6.3 Scale Gravity


Turn on the scale and press and hold  key 3 seconds during the self-test, display will be show current gravity value.

By using  and  key can change the gravity value and press  key to confirm the gravity, it will restart and will show the normal display


## 6.3 Scale Function Settings

In the normal weighing mode, press and hold  key until to show the display  
P1 1


### Changing menu


Press  key to change the menu.

### Changing sub-menu

Press  key to change the sub menu.

### Confirming settings

Press  key to confirm the changes or settings.

Menu	Description
P1 1	Selectscale weighing unit <b>kg or lb</b> P1 1: kg P1 2: lb
P2 1	Selectscale communication baud rate P2 1: 9600 P2 2: 4800
P3 1	Selectscale RS-232 output mode of operation  P3 1: Press  key to send data P3 2: Send continues data automatically
P4 1	Selectscale back light settings P4 1: Back Light function turned OFF P4 2: Back Light function always TURN ON P4 3: Back Light function AUTO ON
P5 1	Selectscale AD Speed P5 1: FAST P5 2: MEDIUM P5 3: SLOW

## 6.4 Error Message

Error Message	Description
Err 4	Out of Zero Range
-OL-	Over load or out of range
BAT LO	Low battery



The company was founded in Taiwan in 1967 as Taiwan Scale Mfg Co., Ltd in order to produce Mechanical Weighing Instrument. Today, this privately owned company is recognized worldwide as a leading Electronic Weighing Scale Manufacturer. The core business of TSCALE is the development, manufacture, worldwide sales/marketing and service of electronic weighing instruments.

The TSCALE products

- Medical Scale
- Counting Scale
- Tabletop Scale
- Retail Scale
- Precision Scale
- Platform Scale
- Weighing Indicator
- Crane Scale
- Floor and Pallet Scale
- Weigh Bridge
- Accessory
- Software

TSCALE has its manufacturing unit in Kunshan, China, ISO 9001 certified company, OEM- ODM partner, products certified by OIML, NTEP & CE.

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