

END-3188 series

Indicators

User's guide

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SECTION 1 INTRODUCTION

The END-3188 series of Indicators provides an accurate, fast and versatile series of general purpose weighing indicators.

All the keypads are sealed, color coded membrane switches and the displays are large easy to read, red colored LED displays.

All units include tare, zero, change weighing unit, change division function.



SECTION 2 SPECIFICATIONS

END-3188 SERIES	
Capacity	3 kg, 6 kg, 15 kg, 30 kg, 60 kg, 150 kg, 300 kg, 600 kg, 1500 kg
Accuracy	OIML III
Display	6 digit LED Display
Key Pad	6 key
Power	AC : ~220 V ($\pm 10\sim 5$), 50 Hz, ~10W OR DC : Rechargeable battery
Temperature	Storage : $-10^{\circ} \sim +50^{\circ}$ Pursuit : $0^{\circ} \sim +40^{\circ}$
Humidity	Storage : $\leq 70\%$ RH non kink dew Pursuit : $\leq 90\%$ RH non kink dew
Weight	1.6 kg
Dimension	250 x 165 x 130 (mm)

SECTION 3 INSTALLATION

3.1 GENERAL INSTALLATION

The indicator should be placed in a location that will not degrade the accuracy. You can also fit on the pedestal.

Avoid extremes of temperature. Do not place in direct sunlight or near air conditioning vents.

Avoid unsuitable stand. The stand or floor must be rigid and not vibrate. Do not place near vibrating machinery.

Avoid unstable power sources. Do not use near large users of electricity such as welding equipment or large motors.

Avoid high humidity that might cause condensation. Do not immerse the indicator in water.

Avoid air movement such as from fans or opening doors. Do not place near open windows.

Keep the indicator clean.

3.2 INSTALLATION of END-3188 SERIES


END-3188 series Indicators use AC adapter and rechargeable battery powered.

Please attention the power source voltage accord with the mark of the adapter.

SECTION 4 KEY DESCRIPTIONS

Zero or 

Set the zero point for all subsequent weighing. The display shows zero. A secondary function of "Enter" key when setting parameters or other functions.

Tare or 

Tares the scale. Stores the current weight in memory as a tare value, subtracts the tare value from the weight and shows the results. This is the net weight.

Set-up or 

Used for changing value in set-up operations.



Used for changing value in set-up operations.

Enter or 

It is useful for entering the value in the indicator's memory, when it is in set-up / calibration mode.

Accumulation or 

Sums-up the weighing values when desired.


SECTION 5 DISPLAYS


The LCD display will show a value and some marks under the digits.

Zero	:	Zero indicator
Stable	:	Stability indicator
Net	:	Tare indicator, current scales in net weight mode
Bat. Lo	:	Low battery indicator, charging the battery at once when this indicator on
Accum.	:	accumulation indicator

SECTION 6 OPERATION

6.1 Zeroing the Display


You can press the ZERO  key at any time to set the zero point from which all other weighing, within 10% of power up zero. This will usually only be necessary when the platform is empty. When the zero point is obtained the display will show the indicator for zero.


The indicator has an automatic re-zeroing function to account for minor drifting or accumulation of material on the platform. However you may need to press the ZERO  key to re-zero the scale if small amounts of weight are shown when the platform is empty.

6.2 Tare & De-Tare




Zero the scale by pressing the ZERO  key if necessary. The zero indicator will be on.

Place a container on the platform, a value for its weight will be displayed.

Press the TARE  key to tare the scale. The weight that was displayed is stored as the tare value and that value is subtracted from the display, leaving zero on the display. The "TARE" indicator will be on. As product is added only the weight of the product will be shown. The scale could be tared a second time if another type of product was to be added to the first one. Again only the weight that is added after taring will be displayed.


When the container is removed a negative value will be shown. If the scale was tared just before removing the container this value is the gross weight of the container plus all product that was removed. Press the ZERO  key to clear off tare value, the indicator light for "TARE" will go off.

Digital De-Tare

You can enter the already known tare value of the container by this method. Press  key to begin the tare setting. Press ,  key to enter the tare value. Press TARE key to store the entered tare value. The "TARE" indicator will be on.


6.3 Accumulation

Automatic OR Manual accumulation


You can set-up the indicator on automatic accumulation. Press  key to set the indicator on automatic/ manual accumulation. The display will show as follows:

“Aut 0” Manual accumulation
 “Aut 1” Automatic accumulation




Manual accumulation

When the indicator is set to manual accumulation the weight displayed will be stored in memory when the  key is pressed and the weight is stable.

The display will show "n 1" and then the total in memory for 2 seconds before returning to normal.

Remove the weight, allowing the indicator to return to zero and put a second weight on. Press  key, the display will show "n 2" and then show the new total.

Continue until all weights have been added.

To view the totals in memory press the  key when the indicator is at zero. The display will show the total number of items "ACC xx". Press  key, the display will show the high 4 places "H 23" of the total weight. Press  key again, the display will show low places "L 506.5" of the total weight.



To erase the memory press  key to clear the memory.

Automatic accumulation

When the indicator is set to Automatic accumulation, the weight displayed will be automatically stored into memory when display is larger than 20d, and display is stable, the number of accumulated weights will be displayed "n 12".

Note: The indicator "ADD" will light-up in the status of Automatic accumulation.

6.4 No of digits on indicator

You can set the "Number of digits" by this function. Press  key to enter into set-up mode. The "Set-up" indicator LED will be on. Press  key to change the value of "No. of digits".

SECTION 7 BATTERY OPERATION

When the battery needs change the display will show "BT LOW". It means the strength of the battery is <15%. Please charge your battery. To charge the battery simply plug into the mains power. The indicator does not need to be turned on.

The battery should be charged for 12 hours for full capacity.

The indicator can be operated from the battery if desired. The battery life is approximately 35 hours.

The strength of battery will be displayed every time when you turn ON the indicator. If the display show "b.t. 90"; the strength of the battery is 90%.

Your indicator's battery is protected against the over-discharging. When battery's electric strength is=0%, the instrument will be automatically turn-off to avoid the battery's over-discharging.



It is also equipped with "power saving function". The display will show "- " When there is no weighing operation for the period of more than 3 minutes to reduce the electricity consumption.

SECTION 8 CALIBRATION & Set-up



8.1 Enter setting mode

To set your indicator to calibration mode, hold ,  &  keys, then turn ON the indicator, "-" is displayed at the last place, it is now ready for calibration & setup.



8.1.1 Calibration Set-up

After entering into setting mode, press  key, "-CAL-" is displayed. Press key  to enter for calibration.



8.1.2 Weighing Set-up

After entering into setting mode, press  key two times, "-SBT-" is displayed. Press  key to enter Weighing Set-up.

8.1.3 A-D value display

After entering into setting mode, press  key three times, "-Ad-" is displayed. Press  key, the A-D value will be displayed.




8.2 Calibration




When you enter into calibration mode, "-CAL-" is displayed, meaning it is in the status of zero calibration. Remove all loads from the scale, and press  key to display "-----", your scale is now ready for zero calibration. Seconds later, the maximum value "300.0" will be displayed after few seconds. Put the required load and press  key after it is stable. "-----" The calibration will be over seconds later.

It is advisable to turn-off the machine before entering into regular weighing operations. Turn-on the machine for regular weighing operations.

Calibrating the machine with the load other than maximum value





In case if you wish to calibrate your machine for the Load other than maximum value; you can follow following procedure.

When you enter into calibration mode, "-CAL-" is displayed, meaning it is in the status of zero calibration. Remove all loads from the scale, and press  key to display "-----", your scale is now ready for zero calibration. Seconds later the maximum value "300.0" will be displayed. Use  &  keys to enter the actual load value, then display the last value of load permission, if the

load value is not the displayed value, press  &  keys again to enter the actual load permission. Press  key after the scale is stable. “-----” will be displayed, meaning it is in calibration mode. Seconds later the calibration will be over.

It is advisable to turn-off the machine before entering into regular weighing operations. Turn-on the machine for regular weighing operations.

8.3 Weighing Set-up

Enter into weighing set-up as stated above. “d 0.1” for weighing setup to choose the division value. Press  key to choose 0.001, 0.002, 0.005, 0.01, 0.02, 0.05, 0.1, 0.2, 0.5, 1, 2, 5. Press  key to choose the value of division. “n 3000” will be displayed. Press  &  keys to input new division.

SECTION 9 CONNECTION OF THE SENSOR

legs 1-2	+E	the sensor is enabled
leg 3	GND	the sensor is shielded
leg 4-5	-E	the sensor is negatively enabled
leg 7	+S	the sensor's +ve output
leg 8	-S	the sensor's -ve output

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 - Wash Proof/ Water Proof Scales
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- Deck Scales
- Pallet scales
- Crane Scales
- Hanging (fishing) Scales
- Postal / Parcel Scales
- Bathroom Scales
- Kitchen Scales
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