

User Guide

TPE-28ABS **WEIGHING INDICATOR**

·Overview

TPE-28ABS weighing instrument is a kind of intelligent instrument with microprocessor, it is not only fast and accurate weighing, reliable performance, convenient operation, AC/DC power supply, LED display, and also has the characteristics of low power consumption, compact structure, light weight. It is the electronic platform scale, electronic Weighbridge and weighing measurement ideal display instrument.

·Main Technical Performance

- 1.Accuracy rank: III.
- 2.A/D conversion speed: 40 times/second.
- 3.Internal resolution: 300,000.
- 4.Display resolution: 1/1000~1/30,000.
- 5.Non linearity: <0.016%F.S.
- 6.Rated Output: 0~20mV.
- 7.Uninterrupted date, time display and modification.
- 8.Date, time, weight printing, cumulative printing function.
- 9.Excitation Voltage: $\pm$ DC5V, Analog (up to 4 x 350 Ω or 1000 Ω load cell) .
- 10.Power supply: (1)DC6V/3.2Ah re-charge battery. (2)AC220V.12V1A adapter power supply.
- 11.Display: 20mm height green LED display,6 digits.
- 12.LED indicate: battery, stable,G.W., N.W., tare, zero, HL, g, LB, kg.
- 13.Power consumption: 8VA.
- 14.Operating temperature: 0 $^{\circ}$ C ~ 40 $^{\circ}$ C .
- 15.Humidity: $\leq$ 85%.
- 16.Dimension: 210mm $\times$ 139mm $\times$ 92mm.
- 17.Weight: $\approx$ 1.2 kg.

·Main Function

- 1.Automatic keyboard calibration, range from software automatic adjustment.
- 2.Function with error message indication.
- 3.Can set time 3~30 minutes automatic shutdown function.
- 4.Battery voltage indication: when the battery voltage is insufficient, the battery indicator light is bright, indicating the charging (the red indicator light is bright when charging, and the light turn green when voltage is full), low voltage automatic shutdown function.
5. Display and modification of date and time.
6. With the consumption of vibration, shaking the filtering function, animal weighing mode function.
7. The function of the unit can be displayed at any time in the panel.
8. RS232 interface can be connected to the big screen, with weight printing, automatic printing function and tare printing function. Optional interface: contact output of OVER, PASS, UNDER.
9. Strong anti-interference ability, error operation will not lose important parameters, the program can automatically recover.
10. Arbitrary set Index value, a wide range for the largest scale selection, can choose a variety of display resolution, the maximum 1/30000.

11. Automatic zero tracking, zero bit abnormal display, overload alarm and other functions.

12. Direction:

(1)Battery: when the power supply voltage is low.

(2)Stable: when the weighing is stable, it will be bright.

(3)G.W.: when tare is zero, gross weight indicator light is bright.

(4)N.W.: when tare, net weight indicator light is bright.

(5)Tare: when tare is removed, tare indicator light is bright.

(6)Zero: when the scale is zero.

(7)kg: when select units for kg.

(8)LB: when select units for LB.

(9)g: when select units for g.

(10)HL: when select units for HL.

(11)Minus: when the weight value on the platform is negative.

(12)Charge indicator: the red indicator light indicates charging, the green indicator light (red turns green) indicates that the charge is complete.

(13)OVER indicator: indicates that the current weighing display value is higher than the set value.

(14)PASS indicator: indicates the current display value and the set value are consistent.

(15)UNDER indicator: indicates that the current weighing display value is lower than the set value.

Operational principle

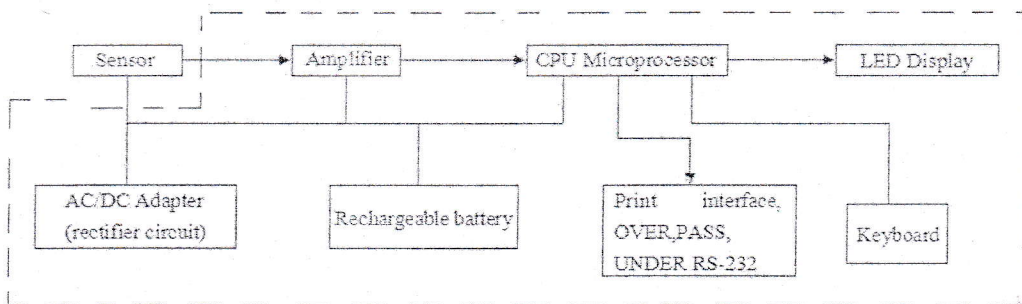


Fig 1 Instrument Principle Diagram

TPE-28ABS weighing instrument outside the high precision resistance strain type weighing sensor, the instrument is equipped with a sensor dedicated power supply (+5V). When the sensor force to produce deformation, the output voltage signal is proportional to the force received.

The sensor outputs the signal is enlarge by the high gain, low drifting, the high impedance input's operational amplifier. Because it use a monolithic microprocessor software zero adjustment and zero automatic tracking procedure, thus the drifting produced by the sensor and the direct-current amplifier is overcome, so the electronic scale can zero automatic adjust and has the long-term stability.

Operation instructions

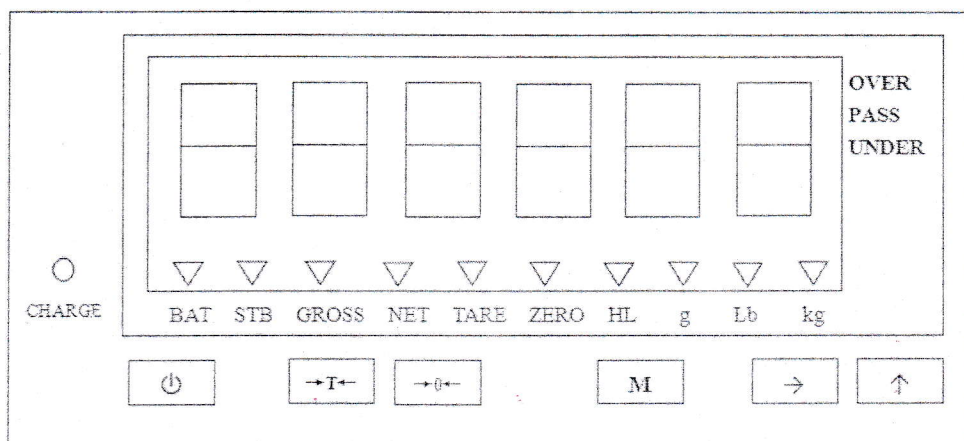


Fig 2 Front-Panel diagram

1. Press key's use

- (1) **[⏻]**: the power source on or off. Press **[⏻]** instrument self-checking from 0 to 9, then enter the weighing condition. OFF: press **[⏻]** 1.0 second, the measuring appliance closes down automatically.
 - (2) **[→T←]**: the current weight will do tares the elimination, skins lamp to be bright indicates the net weight.
 - (3) **[→0←]**: zero set, the reset scope is the full scale $\pm 2\%$.
 - (4) **[M]**: use in establishing operates and demonstrates weight unit's automatic switching, same time there is a contact closure output (Output plate type selection). If you want to modify, press **[→]** **[↑]** keys, enter a new value, press **[M]** key to input.
 - (5) **[↑]**: press **[↑]** one time, then the current weight printing, and demonstrates the accumulation number of times "n ××" and the accumulation weight "YYYYYY" each 1.5 second.
 - (6) **[→]**: print the weight of the current print, and demonstrates the accumulation number of times "n ××" and the accumulation weight "YYYYYY" each 1.5 seconds.
- In the above demonstration process, press **[→0←]**, can clear the accumulation number of times and the accumulation weight.
- Printing format can be divided into: weight printing, label printing. The following print format is weight print:
- Press **[↑]** key each time, the weight of the current will be printed, press **[→]** key to print accumulative total the weight of the current has been printed (press **[↑]** key first, the printer will print the first three lines of the format as follow).

•Installation

1. Sensor signal line connection: when used for the first time, sensor output lines must be welded:

(1)Welding on circuit board JT1:

- ① F.G: shielding wire;
- ② -E: power negative electrode;
- ③ -S: -signal input;
- ④ +S: + signal input;
- ⑤ +E: power cathode.

(2)Welding on Round 5P Aviation Plug:

- ① + S : + signal input;
- ② -S : -signal input;
- ③ F.G : shielding wire;
- ④ + E : power cathode;
- ⑤ -E : power negative electrode;

2. RS-232 output connection:

(1) connect the 232 output line to JT2:

- ① G : ground line GND;
- ② T : data output, TXD.

(2)Welding on 9P Ladder Plug:

- ③ data output, TXD;
- ⑤ ground line GND.

•Maintenance and Attention

1. To guarantee indicator's service life, it is not suitable to use under the sunlight perpendicular incidence, place should be smooth.
2. Should not be placed in the dust and used in severe vibration place.
3. The weight (include tare) refuses to surpass the max weighing value.
4. If not use, should extract the 220V power line.
5. When a battery symbol is used for a period of time, indicate the battery voltage is insufficient, at this time to respond to rechargeable batteries for charging, so as not to affect the accuracy of the measurement.
6. Refuse the use strong solvent (for example: the benzene, the nitric acid class oil) clean the machine case.
7. Do not to pour water into the measuring appliance, prevents the electric appliance part to damage and receive an electric shock.
8. When the breakdown in the use process, should tear off the power plug immediately, generally non weighing instrument manufacturers will be sent back to the company to repair it. Please do not repair voluntarily, in order to avoid creates a bigger damage.
9. If already reinforced the lead sealing on the weighing indicator, the user refuses to open voluntarily.