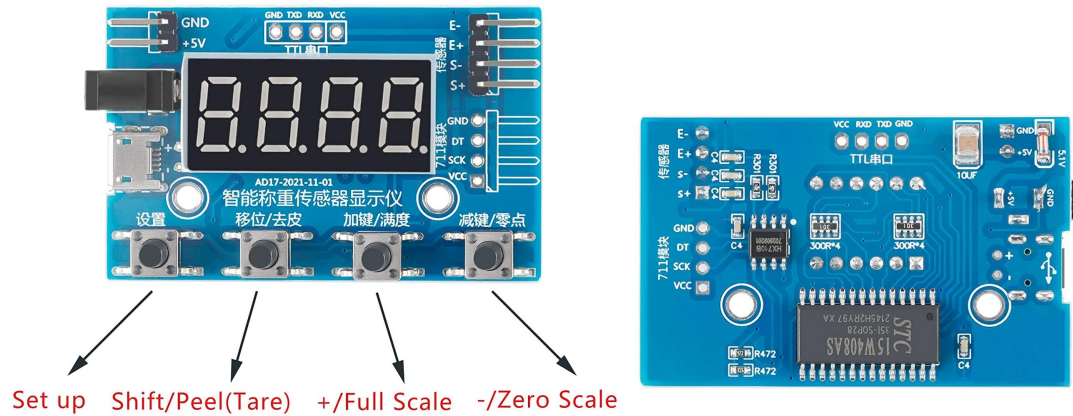


Intelligent weighing sensor display



1. Overview

Load cell display, used for various weighing display occasions. 24-bit A/D high-precision weight value, the module can simulate the signal of the weighing sensor while maintaining communication with upper computers such as computers or PLCs while displaying the weight value, fully meeting the requirements of automation control. Used for weighing displays, process control instruments, and tensile testing machines, and suitable for other measuring occasions such as weighing and mechanical strength testing.

2. Product Material Selection

The A/D, memory, communication, and other chips used in this module are carefully selected from top electronic device manufacturers. Both the schematic design and the layout and wiring of components on the circuit board fully consider factors such as temperature, humidity, and vibration, as well as the influence of electromagnetic interference such as static electricity, pulse bursts, and electromagnetic radiation. It has the advantages of strong anti-interference ability, powerful function, simple operation, strong universality, slight temperature drift, and high linearity, and it can be widely used in the weighing industry site.

3. Communication instructions

This module can achieve high-precision weighing under static conditions, and then undergo dynamic and static digital filtering to make the digital weight signal response

faster and more accurate; This module can also achieve high-speed and accurate dynamic weighing under impact and vibration conditions, and can send digital weight signals at fixed times or when weight changes through the serial port.

4. Features of this product:

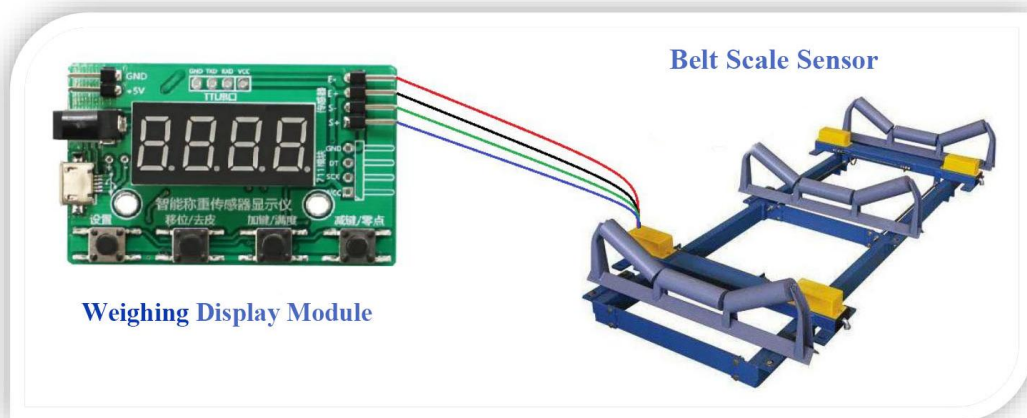
- ★ Small size, portable, and supports Micro Android interface power supply
- ★ Built-in HX711 chip for easy on-site debugging and operation
- ★ Data is sent on a regular basis, or when the weight changes
- ★ Measurement signal range: $\pm 19\text{mV}$
- ★ Temperature coefficient: $\leq 100\text{ppm}/^{\circ}\text{C}$
- ★ A/D conversion rate: 6.25~100Hz
- ★ Comprehensive protection function: with multiple protections such as anti-reverse connection, anti-overvoltage, and instantaneous suppression
- ★ Operating temperature range: $-40^{\circ}\text{C}\sim+70^{\circ}\text{C}$; Storage temperature range: $-60^{\circ}\text{C}\sim+90^{\circ}\text{C}$

5. Function Description

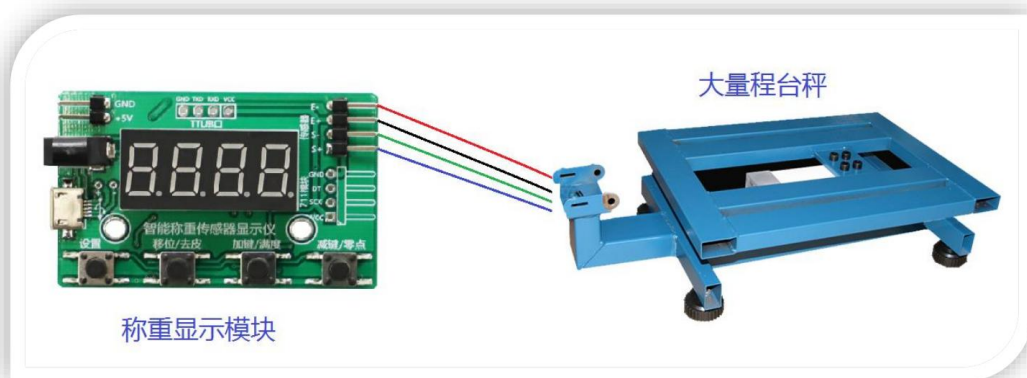
- ★ It has the functions of analog-to-digital conversion, digital calibration, tare, zero setting, anti-shake and so on.
- ★ Strong anti-interference ability, strong universality, small temperature drift, and high linearity
- ★ Nonvolatile storage of characteristic parameters, which are still saved after a power outage;
- ★ Display: 4 digital tubes (decimal point can be set, automatic displacement)
- ★ Keyboard: 4 buttons
- ★ Power supply: 5VDC, all copper high resistance socket 3.5-1.3, power cord supply DC3.5mm
- ★ Size: $55\text{mm} \times 35\text{mm} \times 12\text{mm}$ (L $\times$ W $\times$ D)
- ★ A/D module acquisition speed: 0-100 times/second optional (default 30)
- ★ Number of sensors: 4 $350\ \Omega$ weighing sensors

6. Application diagram

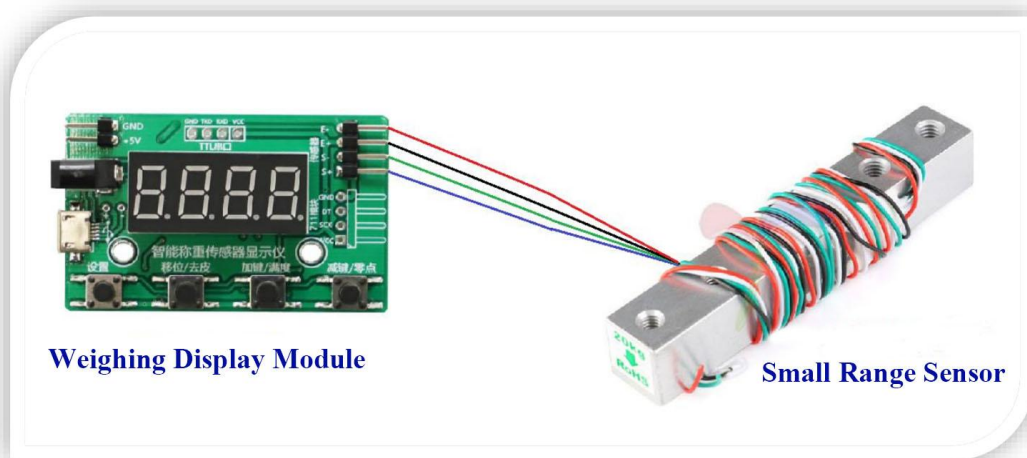
6.1 Belt scale display



6.2 Platform scale



6.3 Sensor testing



7. Can be used with the following sensors

(Large range S-type tensile pressure sensor)



(Small range S-type tensile pressure sensor)



(Static torque sensor)



(Cantilever beam weighing sensor)



(Dynamic torque sensor)



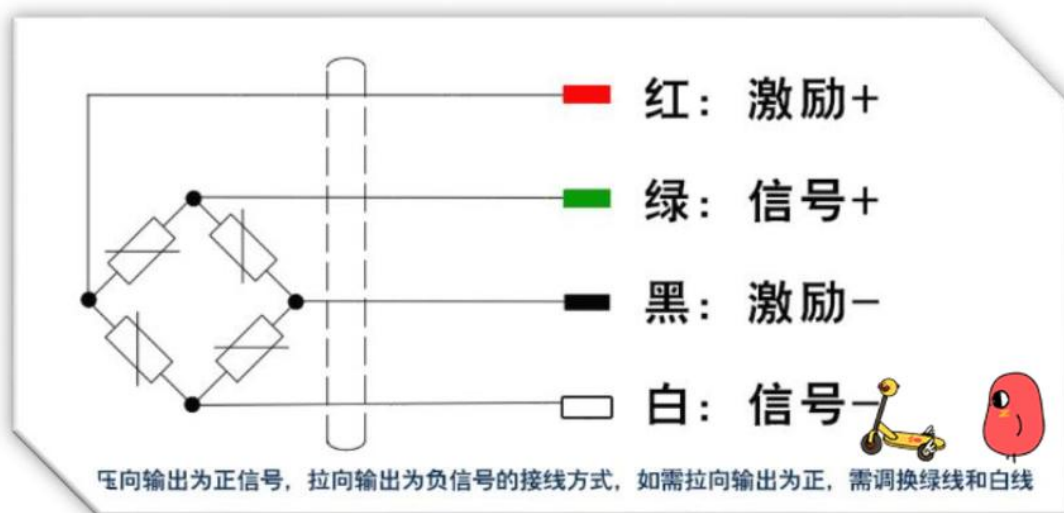
(Cylindrical S-type tension pressure sensor)



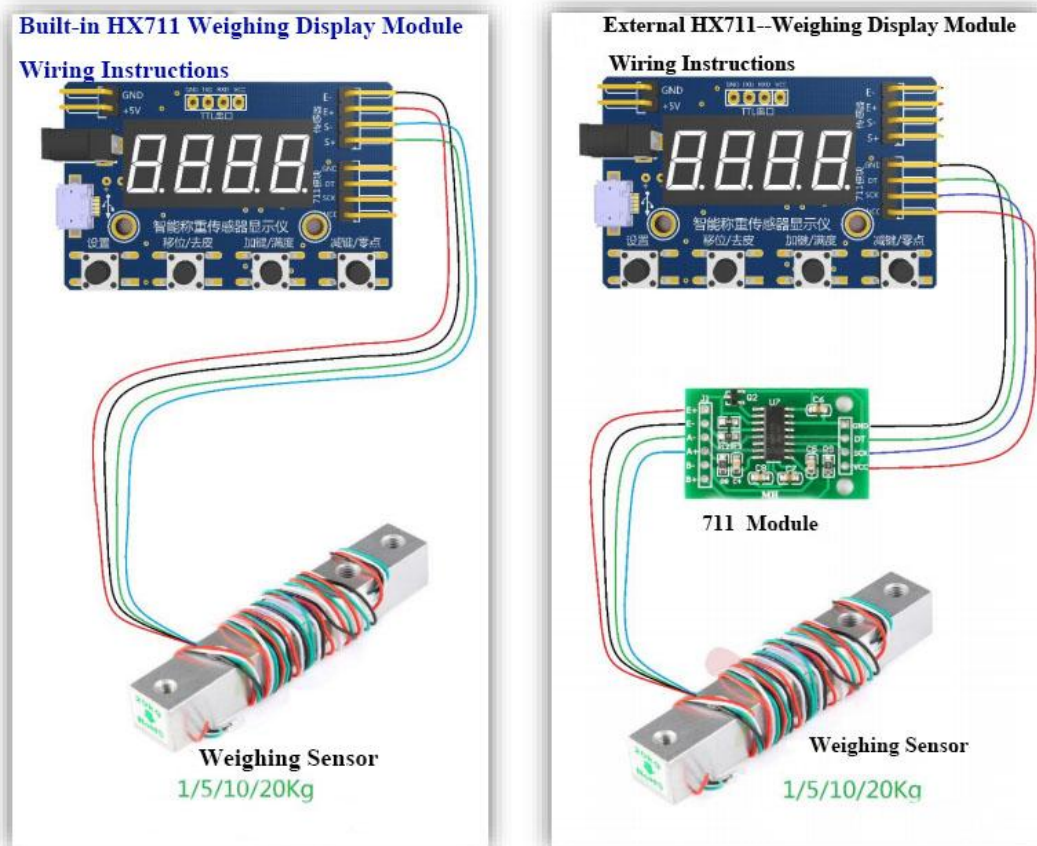
(Spoke type tension and pressure weighing sensor)



(Wiring instructions)



8. Wiring diagram



9. Buttons functions

Set - The parameter setting key is used to store the new set value of the parameter and enter the next set parameter during the setting state.

Shift - When setting the state, press this key to shift the corresponding numerical bit. In working mode, press the button for 3 seconds to tare.

Plus Key(+) - The set value increase key is used to increase the numerical value during the set state. In working mode, press and hold for 3 seconds to calibrate the full scale.

Minus key(-) - Set value decrease key, used to reduce numerical values during the set state. In working mode, press and hold for 3 seconds to calibrate the zero degrees.

10. Parameter settings

Dot: Decimal point position, range 0-3. For example, if the sensor range is 0-20Kg, 2 can be set. Default 1

Ad-h: Collection speed, range 1-100 times/second. Default 20

TS: Timed data transmission, 0-10.0s, set to 0, sent when the weight changes, up to 3 times per second. Default 0.5 seconds

En-b: When the calibration is set to ON, press for 3 seconds in the working state to enter the calibration. When set to OFF, press for 10 seconds in working mode to enter calibration. Default ON

Ini: Restore factory settings, default to OFF. When setting ON, restore the factory settings. Default OFF

11. Calibration instructions, peel(tare)

For example, if we are currently calibrating a 100kg sensor.

Zero calibration: Press and hold the minus key for 3 seconds, the screen will display - PL -, then release the minus key to enter the calibration state. Do not put any weight on the scale, enter 0 on the module, and press OK. Display - End, zero calibration completed.

Full-scale calibration: Press and hold the plus button for 3 seconds, and the screen will display - PH -. Then release the plus button to enter the calibration state, and place a weight of 20~100kg. How many kilograms of weight has been placed, input the weight value on the scale on the module and press to confirm. Display - End, full-scale calibration completed.

Peel/Tare: It is necessary to calibrate the zero point during the first calibration, not just by pressing Peel(tare), so that the instrument displays the zero point. Zero point calibration does not refer to true zero loads. It can be calibrated with a tare weight, such as a sensor range of 100kg, a tare weight of 3 kg (uncertain tare weight can default to 0 kg), and a standard 35 kg weight. When calibrating the zero point over there, no 35 kg weight is added, and the calibration PL is 0.0 kg or 3.0 kg; After adding a 35kg load, calibrate the pH to 35.0 kg or (38.0Kg).

Software connection

