



# Model: H7000



# MANUAL FOR PRECISION LOAD CELL TESTER

## Manual\_V1.2

This manual mainly introduces the connection, function operation, setting and calibration of the Load Cell Systems H7000 sensor parameter measuring instrument. Please read this manual carefully before using.

1 / 11

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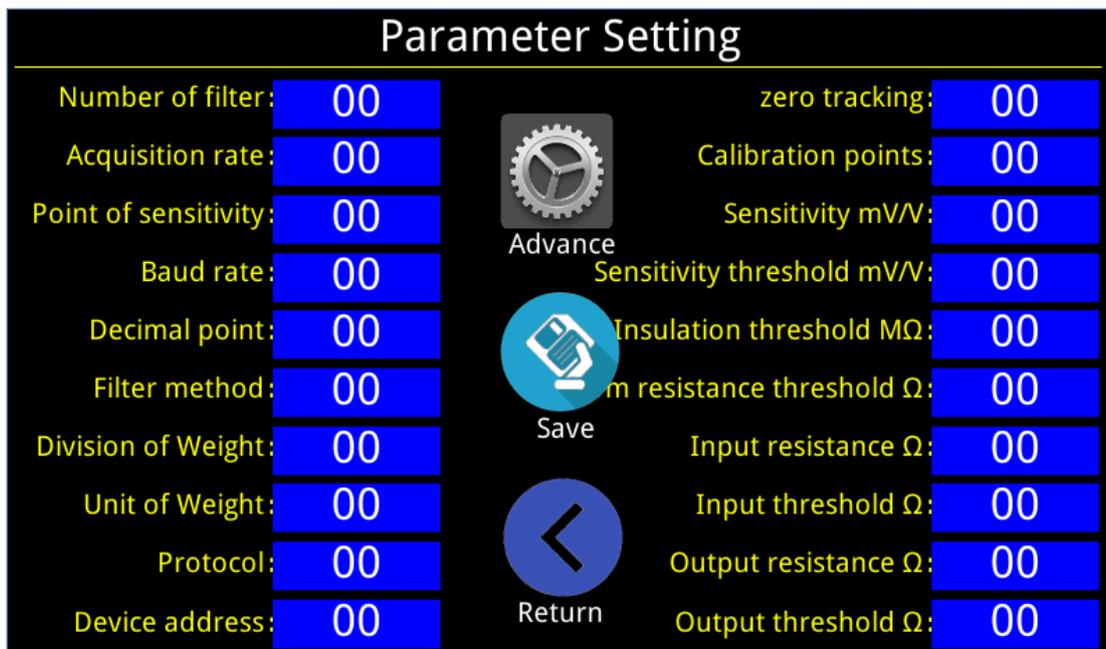
### (3) Setting interface



Click the icon to the left of the sensitivity indication to switch to the setting interface



- 1、 Parameter settings, mainly set some basic control parameters



Filter times: Set the sensitivity filter times, the larger the more stable, the range is 0-25.

### **Acquisition speed: fixed to 3.**

Sensitivity decimal point: Set the sensitivity decimal point. 1-5

Communication baud rate: used for the communication between the indicator and the computer, the default is 0

Engineering decimal point: Set the number of decimals for the engineering value. 1-4

Filtering method: Different filtering methods can be selected for different industrial applications. 0-4

Engineering value division: Set the engineering value division value

Engineering value unit: It can be selected in the engineering calibration, and it can be omitted here.

Device address: The device address for Modbus RTU communication.

Sensitivity setting value: It is used for sensitivity measurement judgment. When the absolute value of the measured value is greater than the set value, the sensitivity figure will be displayed in red, otherwise it will be displayed in white.

Number of correction points: Set the number of correction points for the engineering value sensor, up to 10 points.

Resistance threshold: It is used to detect the difference between the two channels of "power supply positive-signal" and "power supply negative-signal". When the difference between the two channels is greater than the set value, the corresponding number will be displayed in red. Set to 0 to cancel the comparison function.

Insulation Threshold: It is used to detect the judgment threshold of insulation resistance. When the insulation resistance is less than this number, the corresponding number will be displayed in red. Set to 0 to cancel the comparison function.

Sensitivity detection threshold: It is used for sensitivity measurement judgment. When the absolute value of the measured value is greater than the set value, the sensitivity number will display red, otherwise it will display white. Set to 0 to cancel the comparison function.

**2、** Engineering calibration, mainly used to calibrate the instrument into a standard dynamometer or weighing instrument, such as kN and kg, the unit is optional.

Unit SEL		kN Engineering value calibration	
Standard	CAL\mV/V	Standard	CAL\mV/V
0	0.00000	500	0.93398
100	0.07789	600	1.24502
200	0.15578	700	1.55629
300	0.31148	800	1.86758
400	0.62285	900	2.17913

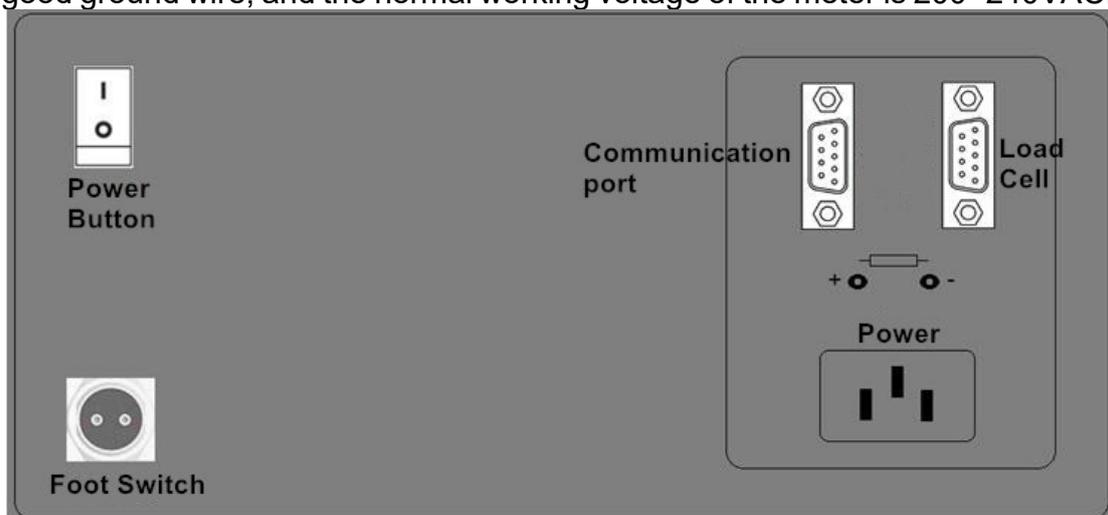
 Save       Return

3、Indicator calibration, mainly used for the self-calibration of the indicator, generally used by the manufacturer or the measurement department and is prohibited by users.

## Indicator wiring

### (1) Interface diagram

The H7000 meter must be connected to a three-phase power socket with a good ground wire, and the normal working voltage of the meter is 200~240VAC.



Rear Panel:

【Power】 : The plug is inserted into the AC 220V socket.

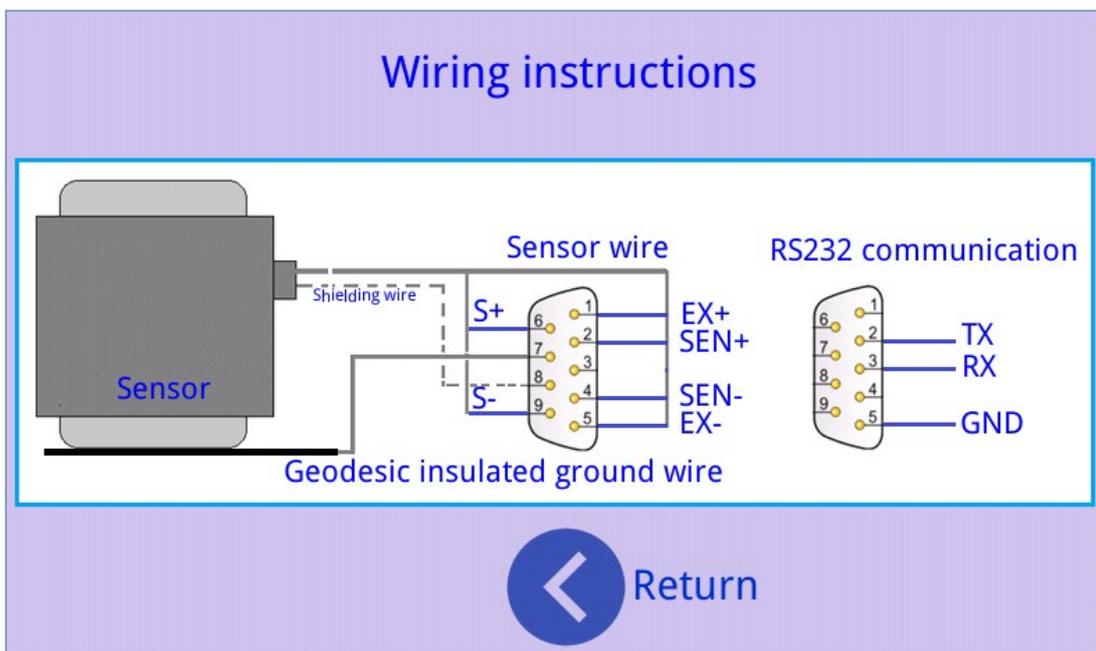
【Power Button】 : Control the power on and off of the instrument.

【Foot switch】 : Used for foot control measurement.

【Communication port】 : It is used for the communication between the instrument and the computer, and supports custom high-speed protocol, modbusRTU, etc.

【Sensor】 : The sensor interface is used to connect the sensor that outputs the strain signal. It supports 6-wire system and can also be connected to 4-wire system. The wiring method is as follows:

## (2) Sensor interface connection



Terminal	Symbol	Instruction	DB9 Connection
1	EX+	bridge voltage input +	Connect to Excitation + from Load Cell
2	SEN+	bridge induction output+	
3			
4	SEN-	Bridge Induction Output-	Connect to Excitation - from Load Cell
5	EX-	bridge voltage input-	
6	SIG+	Load Cell Signal +	Connect to Signal+
7	SHD	Shield	Connect to Load Cell Shield
8	SHD	Shield	
9	SIG-	Load Cell Signal -	Connect to Signal -

## (3) Communication interface connection

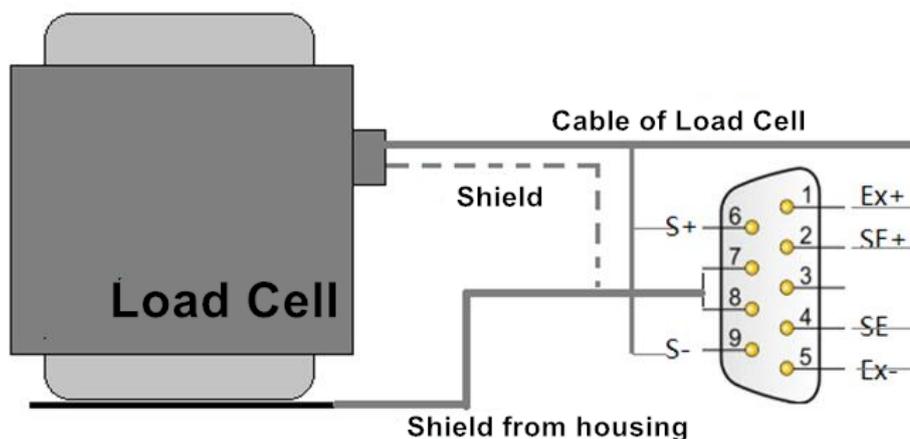
Interface type: 9-pin D-type socket

Pins	Symbol	Instruction
2	232RXD	Serial data input (RS232 level)
3	232TXD	Serial data output (RS232 level)
5	GND	Ground (digital ground)

#### (4) External resistance measurement interface:

For external resistance measurement, insert the lead of the resistance to be measured into the interface, tick the external resistance option in the touch screen, and click to start measurement to measure the resistance. The maximum range is 5000Ω, and the accuracy is 0.01Ω.

#### (5) Insulation resistance measurement wiring:



Schematic diagram of insulation measurement

#### (6) Foot switch wiring:

The foot switch is connected to the back panel of the instrument using the XS12 aerial plug, which can be plugged in. The test can be started by foot pedal, and there is no need to manually press the touch screen, which is convenient for sensor manufacturers to produce.

## Others

(1) This instrument is not an intrinsically safe instrument and cannot be used in an environment with flammable and explosive dangerous substances, but it can be connected to a sensor in a dangerous environment through a safety barrier for detection work.

(2) Please use a soft cotton cloth and neutral detergent (usually clean water) to clean the surface of the instrument. The keys, display windows and casings cannot be cleaned with industrial solvents. The casings, buttons, display windows and power cord and plugs of the instrument are not covered by the product warranty.

(3) There are no adjustable devices and setting switches in the instrument circuit. Some components use one-time programmable encryption devices. Trying to read the internal logic relationship will cause permanent damage to the device. The product supplier does not guarantee the damage caused by the user's unauthorized disassembly, modification or copying of the circuit.

(4) If there are special requirements or products used in strong vibration environment, please specify when ordering.

(5) The product supplier reserves the right to modify the product model, specification and instruction manual without notifying the user.

(6) The accuracy of this product is defined as full-scale accuracy, including linearity and repeatability. The product manufacturer makes no written warranty for mV/V accuracy. If the user needs to obtain the mV/V accuracy index, the product should be sent to the national legal metrology agency for testing, and the accuracy index will be given according to the testing ability of the measuring agency and the actual test results.

(7) The price and service scope of this product do not include the testing and calibration services sent by the indicator to the measurement department. The cost of calibration and testing services shall be borne by the purchaser.

