Value Each Gram A professional weighing products manufacturer and supplier

LOAD CELL STIMULATOR **ELS**

User Manual

v.201811

HiWEIGH Weighing system & solution
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Weighing system & solution

1.0 General description

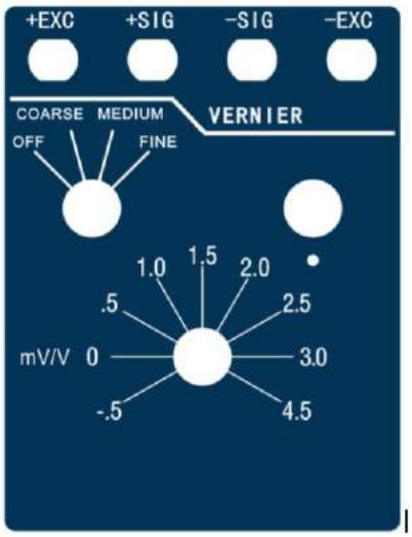
ELS strain gauge load cell simulator is used to simulate strain gauge type load cell to output voltage signal, it can check and calibrate weighing or force measuring indicator.

2.0 Technical parameters

- Input power supply range: 5V - 15V(maximum is 20V)
- Limit: 4.5mV/V
- Nine pieces fixed output: -0.5mV/V，0mV/V，0.5mV/V，1.0mV/V，1.5mV/V，2.0mV/V, 2.5mV/V，3.0mV/V，3.5mV/V，4.5mV/V
- No class adjusting output range
  - Coarse-tuning : 2.5 mV/V/round
  - Medium tuning: 1.5 mV/V/round
  - Fine tuning: 0.5mV/V/round
- Non-linearity: ≤0.02%F.S
- F.S. output temperature coefficient: ≤±5ppm/℃
- Working temperature range: 0 ~ 40℃
- Long term stability: ≤50ppm/month
- Excitation voltage and input current: ≈excitation(V)/350(Ω)+5mA
- Input resistance: ≈350Ω
- Output resistance: ≈350Ω

3.0 Panel and related parts

3.1 Panel picture



Picture 1

3.2 The function of related parts on panel

3.2.1 Input terminal: +EXC to Excitation +

-EXC to Excitation -

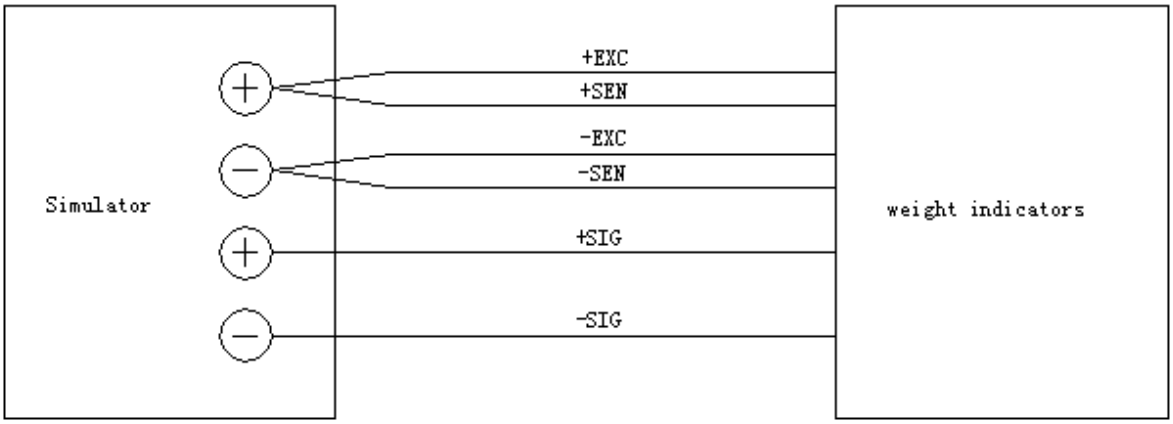
3.2.2 Output terminal: +SIG to signal +
-SIG to signal -

3.3.3 Output fixed signal tuning button: changing to different position to check the non-linearity, repeatability etc. technical parameter of displaying value on indicator.

3.3.4 Output adjustable signal tuning button: used to calibrate analogy indicator, and be in control testing of fixed value control limiting point and zero tracking test etc.

4.0 Operation

Before using, please read user manual of the simulator and related equipment carefully (including weighing indicator which will be tested), know operating methods and notes, do preparation well.



Picture 2：The connection between simulator and weighing indicator

Notes：the feedback of four-wire weighing indicator supply bridge (excitation) is not connected

4.1 As picture 2，connect simulator input and output to output excitation power of indicator, connect excitation feedback (SEN) input to load cell input, make sure contact well to get small enough contact resistance，terminal shall use copper soldering pads, if use steel soldering pads, it will come into being bigger thermal emf to bring in man-made zero unstable factor.

4.2 Check wire connection carefully, confirm everything is okay, connect indicator power, and then power through and warm up for 30 minutes (for high accuracy requirement situation)

4.3 Choose “off”、“coarse”、“medium” and “fine”

4.4 For example：to calibrate a load cell with 2mV/V sensitivity，turn the button at the top

left corner to “OFF”，and turn the button below to “0mV/V”，do zero calibration in indicator. then turn the button at the top left corner to “OFF”，and turn the button below to “2mV/V”，do full span calibration

5.0 Notes

5.1 Pay attention to protect simulator from damp strictly, and can not open it privately.

5.2 Maximum input excitation voltage for simulator can not exceed 20V，otherwise it will result in damaging simulator. Usually the stability is best under 15V.

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