LARYEE Testing Machines

LOAD CALIBRATOR

LYLC-100

USER'S INSTRUCTION MANUAL

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I. Characters

◆ It suits for electrical-bridge type sensors such as load cell, torgue sensor and pressure sensor, etc. With high accuracy and resolution, it can display the testing result;

◆ Each sensor can record 20 calibration points parameters， then up to different accuracy;

◆ Each calibrator can record 20 sensors calibration parameters at most.

◆ Unit of the measuring data can changed: N, KN, MN, lbf, kgf, tf, etc.

II. Specification

◆ Accuracy: 0.3%， or 0.1% as special order

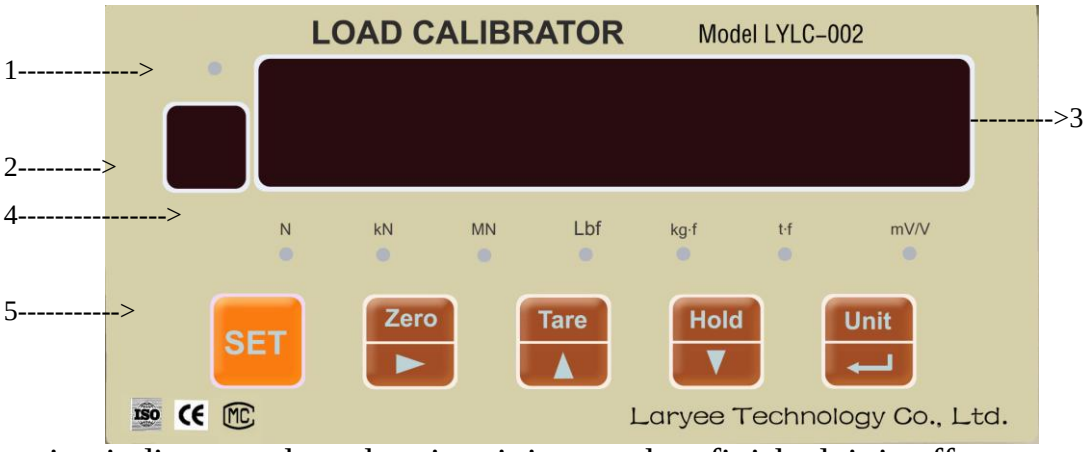
◆ Resolution: 0.001%

◆ Working power: 1 Phase, ~220V, 50HZ

◆ Related load cell: Bridge type load cell, and the output sensitivity is 1~4mV/V

◆ Dimension: 200mm×200mm×100mm Weight: 2KG

III. Control panel instruction



1. charging indicator: when charging, it is on; when finished, it is off

2. sencondary screen: 2-bits, assists main screen, when in measuring state, it shows the channel number. When in holding status, it shows “H”

3. main screen: 7-bits, all main data and function code display.

4. different units indicate light 5. multi-function key

a. key function

SET: press it, enter the setting mode, choose the measuring channel, press again,

return to normal measuring mode.

Zero ►: press it, the showing value clear to zero. In the setting mode, shift the bit.

Hold ▼: press it, the showing value will be hold, press it again, back to normal display. In the setting mode, decrease the data

Tare ▲: press it, enter the tare weight record state, and showing value clear to zero. Press it again, back to normal display. In the setting mode, increase the data.

Unit ↵: change the force measuring unit; in the setting mode, enter to check and sace the calibration parameters.

b. display code definition

CHn: channel　　C: mV/V value

F : calibration point　　L : sensor full range value

H: hold state

IV. operation procedure

After turn on the power, press SET key,, displays "-CHNxx-" and flash, press Tare ▲ or Hold ▼ key to select a certain channel number, then:

- press SET key——quit setting function, and enter measuring state.
- Press Unit ↵ key——enter channel to check and change parameter. The detail information see chapter Ⅴ
- Press Zero ► key—— change the unit light to "mV/V", then press SET key to enter calibrating state. The detail information see chapter Ⅵ

V. check and change sensor parameter

1. in measuring state, press SET, displays "-CHn01-", means select a channel, press

Tare or Hold key to choose a channel, press Unit then;

2. displays L=xx.xxx，means changing the sensor capacity of this channel, press Unit, displays xx.xxxxx，meanwhile one bit flashing, press Zero、Tare and Hold to change the value, press Unit to confirm;
3. displays L=xx.xxx，meanwhile one unit indicate light is on, means changing the unit of the sensor，press Unit，one unit indicate light flashing, press Tare and Hold to change，press Unit to confirm;
4. displays F1=xx.xx, means the first calibration point value of the sensor, press Unit, press Tare、Hold and Zero to change the value, press Unit to confirm.
5. displays C1=xx.xx，means the mV/V(mA) value of the first calibration point of the sensor, press Unit，press Tare、Hold and Zero to change the value，press Unit to confirm.
6. displays in turn F2=xx.xx，C2=xx.xx……until Fn=xx.xx,Cn=xx.xx, change the value according to the calibration result strictly, after finishing changing each data, press Unit to confirm.
7. each sensor can restore 20 groups calibration data at most, if this sensor only written 5 group calibration data, then in next time checking, only displays 5 group calibration data and one group all zero data（all zero data is for inputting a new group of calibration data.
8. after finishing changing all the calibration data, press SET to return up-grade menu, keep pressing SET until return the measuring state，at this time, the measuring data displays according to the newly input calibration data.

Key attention: the input format of each sensor capacity will affect the measuring speed and accuracy, for example, the sensor capacity is 1000KN

Input Format L=	Measuring speed	Measuring accuracy
1000.000	slow	high
01000.00	medium	medium
001000.0	fast	low

VI. Calibration of the sensor

For example, calibrating a 300KN sensor, 30kN, 60kN, 120kN, 1800kN, 240kN, 300kN are the calibrating points, and the calibration data store in the channel which you choose.

1. after turning on the power, press 

, change the indicate light to mV/V；
2. do not load on sensor, if necessary, press 

， clear the value to zero.
3. load on the sensor to 30kN, when the indicate value have not change, record the showing mV/V value.
4. by the same way, loading in turn to 60kN, 120kN, 180kN, 240kN and 300kN，record each corresponding showing data, as following format：

Num.	mV/V value (C)	Calibrating point（F）
1	F1=300.0000	C1=1.971200
2	F2=240.0000	C2=1.576100
3	F3=180.0000	C3=1.181500
4	F4=120.0000	C4=0.787350
5	F5=60.00000	C5=0.393390
6	F6=30.00000	C6=0.196600
7	F7=0.000000	C7=0.000000

5. begin to input data, press SET, choose the channel which you want to write in, for example "-CHNxx-", press Unit, showing L=0.0000，press Unit, showing 0.000000，in the same time 1 bit flashing，press Zero、Tare and Hold to change to 300.00， press Unit to confirm；
6. showing L=300.0，the same time one unit indicate light lighting, press Unit, unit light flashing, pressing Tare and Hold to change to KN position， press Unit to confirm.
7. showing F1=0.0000, press Unit, showing 0.000000，one bit flashing，press Zero、Tare and Hold to change to 30.0000， press Unit to confirm.
8. showing C1=0.0000，press Unit, showing 0.000000，and one bit flashing，press Zero、Tare and Hold to change to 0.196600， press Unit to confirm.
9. showing F2=0.0000, press Unit, showing 0.000000，and one bit flashing，press Zero、Tare and Hold to change to 60.0000， press Unit to confirm.
10. showing C2=0.0000，press Unit, showing 0.000000，and one bit flashing，press Zero、Tare and Hold to change to 0.393390， press Unit to confirm.
11. the same way in turn，F3 input 120.0000，C3 input 0.787350；F4 input 180.0000，C4 input 1.181500； F5 input 240.0000， C5 input 1.576100； F6 input 300.000，C6 input 1.971200.
12. finishing input， press SET, showing "-CHNxx-", press SET to save result and quit setting， entering measuring state.

REMARKS:

1. Load cell's Calibration Point parameter please refer to the Appendix(1).

2. This load calibrator is equipped with 5 load cell, and verified by the national metrology center, the detail verification certificate is attached.

Appendix(1):

Load cell's Calibration Point parameter

L=100.00

Calibration Point(KN)	calibration parameter (mv/V)
F1=100.0000	C1=1.966180
F2=50.0000	C2=0.982290

Attention:

1. **Write these parameters in an idle channel of your Load Indicator.**
2. **If the indicating value on load indicator is negative value, then please exchange the aviation plug of No.1 and No.5.**