LOCOSC

LP 7510

Weighing Indicator

Operating Manual
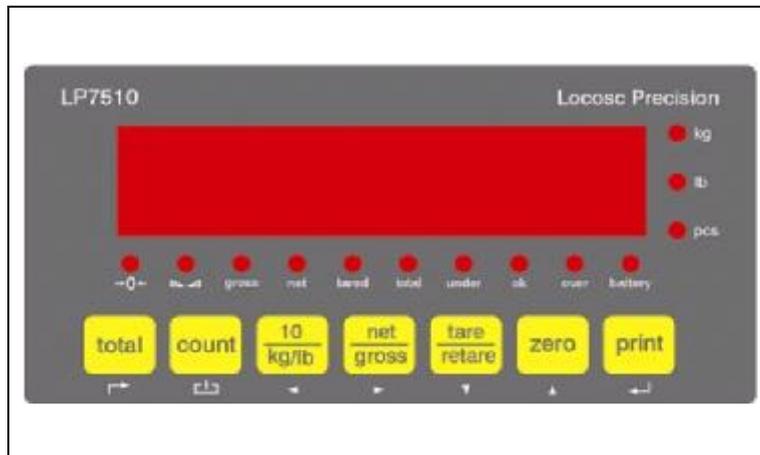
Edition: 01-080606

Locosc Precision

■ Load Cell ■ Controller ■ Scale

1.1   Preface

Locosc Precision thanks you for the confidence and acquisition of this indicator. As each of our indicators is submitted to severe quality check before leaving the factory, you may be sure that you have bought a high-quality and state-of-the-art product. Moreover, this product is the result of extensive market research and meets the requirements of many kinds of scale.

Locosc Precision is devoted to of research, development, manufacture of perfect products besides good service. In case of suggestions, problems or questions, you are invited and grateful to contact your Locosc Precision or local agent.

Locosc Ningbo Precision Technology Co., Ltd.

No 137 Zhenyong Road, Yongjiang, Ningbo, China

Tel.:   (+ 86 574) 8763 0101

Fax.:   (+ 86 574) 8763 0707

Web: www.locosc.com

E-mail: export@locosc.com

1.2   Safety Instructions

This operating manual for indicators LP7510 contains information for persons with and without previous knowledge entrusted with commissioning, use, project planning, installation and service of these instruments. For commissioning without previous knowledge, we recommend following the instructions given in this manual step by step. The instruments sold by Locosc Precision are subject to a repair procedure. In case of defect or functional trouble, please, contact your local Locosc Precision for repair. When returning the instrument for repair, an exact and complete fault description must be supplied. Maintenance work may be carried out only by a trained technician aware of the involved hazards, whereby the relevant precautions must be taken.

2.1   Main functions

LP7510 weighing indicator is the microprocessor controlled with a multitasking operator system consisting Bios and firmware. Equipped with a high precision fast analog-digital converter of 24 bits $\triangle$-Σ, 0.8" LED-display, a multi foil key keyboard and option cards for flexible combinable. In addition to built-in and convenient software functions:

- **n** Usual weighing functions: Gross, Net, Tare and Print.
- **n** Higher resolution display$\times$10 and convert kg to lb or lb to kg.
- **n** Checking, charging control, level alarm control with hysteresis.
- **n** Counting-scale function.
- **n** Animal-Scale function.
- **n** Totalizing-scale function.

2.2   Technical data

Accuracy class	6000 e	
Resolution	display: 30, 000	ADC: 2,000,000
Linearity error	< 0.007 %	
Zero stability error	TK_0 < 0.1µV//K	
Span stability error	$TK_{spn} < \pm 6$ ppm//K	
A/D principle	DC voltage, 24 bits delta-sigma converter, ratiometrical to the load cell supply voltage	
Conversion time	50 ms	
Analog filter	integrated A/D converter	
Digital filter	2 segment for before and after standstill	
Sensitivity (internal)	0.12 µV /count	
Input voltage	-30~30mV DC	
Excitation circuit	5 VDC, 4 wire connection, all strain gauge, min. 50Ω, e.g.: 6 load cell of 350Ω	

Display	main: 6 digits, 7-segment red LED
	Status: 13 red LED of Φ5 mm
Keyboard	7 multi foil key
Power Supply	220V AC, + 10 ~ - 15 %, 49 ~ 51Hz, 10VA
	optional: 110VAC or rechargeable battery
Construction type	ABS or stainless steel housing for table, wall,
	or column, IP 54 or IP65
Operation temperature	- 10 °C ~ + 40 °C
Storage temperature	- 40 °C ~ + 70 °C
Humidity	< 95 %, no condensation

Optional Cards:

Serial interface card	RS232/RS485, protocols for printer,
	Remote display (continuous output),
	Command mode from supervisory
	Baud rate: 1200 ... 9600
	Data bit: 8 / 7 bits
	Parity: none, even, odd
I/O card	3 inputs: isolated via opto-coupler passive,
	active status : 10 ~ 31 V DC
	4 outputs: isolated via opto-coupler, passive
	max. switch voltage: 32V DC
	function: configurable
Real clock card	year, month, day, hour, minute, second
Analog output module	Serial interface RS232 transmit gross or net
	to analog output module, which convert digit
	to 0/4-20mA of 16 bits, Power: 24VDC

3.1   Construction & dimension

Housing material: ABS or stainless steel

Mounting type: table, wall, or column, adjustable mounting angle

Protection: IP54, optional: 65

Dimension: 200×140×45mm(L×W×D)

Gross weight: max. 2.9 kg, including battery, adaptor

3.2   Main board construction

-E, -S, Gnd, +S, +E   Left, on   Right, off
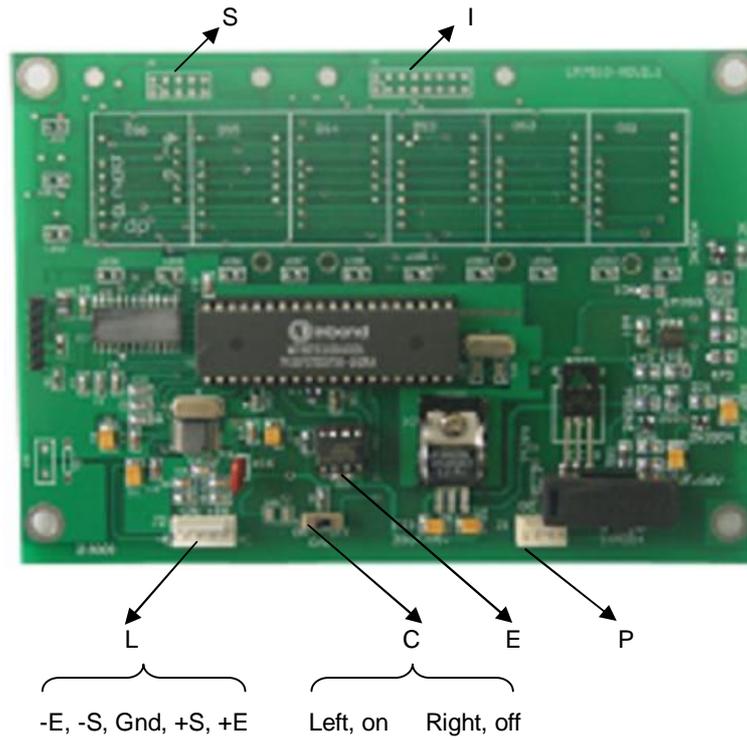
S: slot of serial interface card

I: slot of input and output card

L: connection of load cell

C: switch of CAL, calibration and configuration

E: EEPROM

P: connection of power adaptor and rechargeable battery

3.3   Connection wire of load cell

Excitation of 5 VDC, 4 wire connection, all strain gauge, min. 50Ω, e.g.: 6 load cell of 350Ω, short circuit proof. The measuring signal from the strain gauge load cells is a highly delicate low-voltage signal of approx. 20 mV and must be protected very carefully against electromagnetic interference effects. We recommend: laying the cable in a steel pipe, which is connected to earth potential at a min. distance of 1 m from high voltage cables and the diameter of each wire≥0.5 mm^2. The connector:
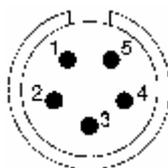
Pole	Connection	Description
1	+Exc	**+** Excitation / input of load cell and + sense
2	+Sig	+ Signal / output of load cell
3	-Exc	- Excitation / input of load cell and + sense
4	-Sig	- Signal / output of load cell
5	Gnd	Ground / shield

3.4   Connection wiring of optional cards

The connection wiring of optional cards refer to corresponding to manual.

4.1.1   Switching on

Switch on power supply, then open the back power switch.

After switching on, the indicators perform an internal and display test,

then set zero according to zero setting range of switching on.

4.1.2   Shutting off display

Configure C 17 for automatic shutting off display for saving on battery.

The display can be shut off automatically after a range of standstill time.

4.1.3   Restoring display

Vary weight value on scale or press any key, the display can be restored.

4.1.4   Switching off

Close the back power switch, then shut off power supply,

When the light of status is on, the means are as follows:

kg lb	weight unit sign	tared	have set tare
pcs	goods quantity	total	totalizing function level
→0←	zero and within ±1/4d	under	lower limit alarm
◣◢	weight is standstill	ok	accepted weight
gross	current weight is gross	over	upper limit alarm
net	current weight is net	battery	battery supply power

4.2   Key functions of weighing level and operation

total	Press 5s to enter into and leave totalizing-scale operation Press 1s to totalize a weighing value during totalizing on
count	Press 5s to enter into and leave totalizing-scale operation Press 1s to convert pcs mode to weight mode for 4s during counting on
10 kg/lb	Press first times to convert display kg/lb to lb/kg for 4s Press second times to higher resolution display×10 for 4s Remarks: pressing two times continuously is invalid
net gross	Press first times to convert gross mode to net mode Press second times to convert net mode to gross mode
tare retare	Press first times to set gross weight > 0 into memory tare, the weight display changes automatically to net mode and light status of net and tared. Press second times to clear memory tare the weight display changes automatically to gross mode and light status of gross. Conditions: status light of standstill is on
zero	Press to set the gross weight to zero within ±1/4d Conditions: status light of standstill is on & actual gross weight is with zero setting range
print	Press to print current weighing documents Conditions: status light of standstill is on
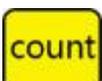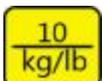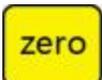
4.3.1 Selecting counting function

Hold pressing【count】until display

PC   on

then automatically to display and light status of pcs

- - - - - -

(--means pcs according to previous unit weight)

4.3.2 Display weight mode

During counting level, press【count】then display weight mode for 4s,

consequently light status of pcs and unit sign

- - - - - -

(---means actual gross / net mode)

for 4s, then automatically to display pcs mode and shut off unit sign.

- - - - - -

(---means pcs)

4.3.3 Leaving counting function

Hold pressing【count】until display

PC   off

then automatically to display and shut off status light of pcs

- - - - - -

(---means actual gross / net weight)

4.3.4 Acquire unit weight by sampling

Have known quantity (< 99 pcs) of the sample

press key 【zero】to set zero, then load the sample on scale,

Hold pressing 【count】until display

| PC   on | **(counting function on)**

then automatically to display and light status of pcs

| - - - - - - | **(pcs mode according to previous unit weight)**

hold pressing key 【 ▬►/ count 】and【 ◢┘/ print 】simultaneously,

until display

| PCS   1 | **(1=acquire unit weight by sampling)**

press key 【 ◢┘ / print 】to accept the value and enter next step,

| PCS 0 <u>0</u> | **(enter the quantity of sample level)**

press key 【 ◄▬ / kg/lb 】or【 ▬►/ gross 】to move flashing digit

press key 【 ▲ / zero 】or【 ▼ / tare 】to change value, until display

| PCS <u>5</u> 0 | **(e.g. : 50 pcs , quantity of sample < 99)**

press key 【 ◢┘ / print 】to accept the value and enter into pcs mode.

| - - - - - - | **(pcs mode according to actual unit weight)**

4.3.5   Acquire unit weight by enter known unit weight

Have known unit weight

Hold pressing 【count】 until display

| PC   on | (counting function on)

then automatically to display and light status of pcs

| - - - - - - | (pcs mode according to previous unit weight)

hold pressing key 【 ➞ / count 】 and 【 ↵ / print 】 simultaneously
until display

| PCS   1 | (1=acquire unit weight by sampling)

press key 【 ↥ / zero 】 or 【 ↧ / tare 】 to change value, until display

| PCS   2 | (2=acquire unit weight by enter)

press key 【 ↵ / print 】 to accept the value and enter next step,

| 0 0 0 0. 0 0 | (enter the unit weight level)

press key 【 ◀ / kg/lb 】 or 【 ▶ / gross 】 to move flashing digit
press key 【 ↥ / zero 】 or 【 ↧ / tare 】 to change value, until display

| 0 0 0 1. 4 7 | (e.g. : unit weight= 1.47 kg)

press key 【 ↵ / print 】 to accept the value and enter into pcs mode.

> **The position of decimal point for enter unit weight is fixed and 1/100 of weight mode automatically.**

The application of animal-scale is by configuration of C13 & C14.

C 13   Digital filter 1   Default: 0

It always work until weight display standstill, which affect rate of updating weight display. the higher grade means slower refresh of display.

Select   0, 1, 2, 3, 4, 5, 6   6= slowest and most stable

C 14   Digital filter 2   Default: 5

It begin to work after weight display standstill, which affect rate of updating weight display. the higher grade means slower refresh of display.

Select   0, 1, 2, 3, 4, 5, 6, 7   7= slowest and most stable

Experiential value: C13 =5 or 6, C14=6 or 7, but it is necessary to adjusting the value of C 13 & C 14 according to the kinds of animal, F.S.D and platform size of the scale.

n   During calibration, it must be C 13=0, C 14=5
n   Selecting animal-scale function by adjusting C 05 & C 06

4.5   Selecting totalizing function

press key 【gross】 to convert display net mode to gross mode,

then light status of gross

press key 【zero】 to set zero, then light status of zero →[]←

Hold pressing 【total】 until display.

| SU   on | (**totalizing function on**)

and light status of total

| 0 0 0 0. 0 0 | (**display actual gross**)

Load goods on the scale

| 0 0 4 2. 5 7 | (**e.g.: 42.57 kg**)

after light status of standstill ⊾◿, press keys 【total】
then automatically to display:

| n   0 1 | (**totalizing times: 1 for 3s**)

then automatically to display:

| 4 2. 7 5 | (**totalizing weight: 42.75 kg for 3s**)

then automatically to display:

| 4 2. 7 5 | (**display actual gross**)

R1 step: Unload the totalized goods off scale, must light status of zero.

R2 step: If status light of zero →[]← isn't on, press key【zero】

to set zero, display

| 0 0 0 0. 0 0 | **(display actual gross)**

R3 step: Load goods on the scale

| 3 1. 4 9 | **(e.g.: 31..49 kg)**

R4 step: after light status of standstill ◣◢, press keys【total】
then automatically to display:

| n   0 2 | **(totalizing times: 2 for 3s)**

then automatically to display:

| 7 4. 2 4 | **(totalizing weight: 72.24 kg for 3s)**

then automatically to display:

| 3 1. 4 9 | **(display actual gross)**

Repeat to perform R1 & R2 & R3 & R4 step for more totalizing.

Finish the totalizing goods

Hold pressing【total】until display.

| SU   o f f | **(totalizing function off)**

Have left the totalizing function

and shut off status light of total automatically, display

| 0 0 0 0. 0 0 | **(display actual gross)**

I   **The status of zero →[]← must light before load goods**

 every time. otherwise press key【zero】to set zero.

I   **The status of standstill ⟍⟋ must light before pressing**

 key【total】every time. Otherwise wait for standstill.

During totalizing level, when light the status of zero →[]← ,
Pressing key【total】can display totalized times and weight for
3s without affecting on totalizing procedure and result.
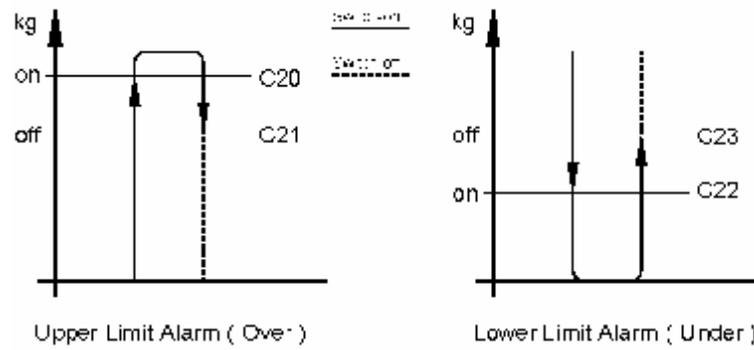
Upper Limit Alarm (Over)   Lower Limit Alarm (Under)

C 20   Upper limit alarm on value   Default: 000000

Configurable within F.S.D.

C 21   Upper limit alarm off value   Default: 000000

Configurable within F.S.D.

C 22   Lower limit alarm on value   Default: 000000

Configurable within F.S.D.

C 23   Lower limit alarm off value   Default: 000000

Configurable within F.S.D.

> **C 20 = C 21 = C22 = C23 = 0,switch-off upper and under alarms**
> **conditions: C20 ≥C21, C22 ≤ C23**
> **Upper and lower limit alarm can be used separately or together**

e.g. 1 : The application of checking-scale

The accepted range to a bag of rice is 24.90~25.10 kg, thus configure:

C 20 = C 21 = 25.10 kg, C 22 = C 23 = 24.90 kg

If the actual weight is 25.00 kg, thus light the status of ok.

If the actual weight is 24.80 kg, thus light the status of under.

If the actual weight is 25.20 kg, thus light the status of over.

e.g. 2 : The application of charging control

The weight range of a hopper scale is controlled within 100~500kg, open or close the charging valve by optional opto-coupler outputs, thus configure:

C 22 = 100 kg,   C 23 = 500 kg

If the actual weight is under 100 kg, light the status of under

and switch on opto-coupler outputs for charging until actual weight is over 500 kg, then shut off light the status of under and switch off opto-coupler outputs.

e.g. 3 : The application of level alarm control

The accepted range of a silo scale is 12.00~90.00t, when above 90.00t open alarms of upper limit and under12.00t open alarms of lower limit, thus configuration:

C20=C21=90.00t,   C22=C23=12.00t,

But in order to define a hysteresis of 0.50t with the two limits, thus new configure:

C20=90.00t, C21=89.50t, C22=12.00t, C23=12.50t.

> **I/O card:**
>
> **Optional, passive, opto-coupler, 3 inputs & 4 outputs**

5.1.1   Key function of set-up level

total	⌐▶	**Back**: e.g.: C 1 <u>2</u> to C 1 <u>1</u> jump to previous parameter
count	⌐▲⌐	**Exit**: e.g.: C 1 2 <u>1</u> to C 1 <u>2</u> , can back to usual weighing and auto-store value finally
10 kg/lb	◀	**Left**: e.g.: C 1 <u>2</u> to C 1 2 move flashing digit to left
net gross	▶	**Right**: e.g.: C <u>1</u> 2 to C 1 <u>2</u> move flashing digit to right
tare retare	▼	**Down**: e.g.: C 1 2 <u>1</u> to C 1 2 <u>2</u> scroll value or choice dowm
zero	▲	**Up**: e.g.: C 1 2 <u>2</u> to C 1 2 <u>1</u> scroll value or choice up
print	↵	**Enter**: e.g.: C 1 2 <u>1</u> to C 1 <u>3</u> accept the value and jump to next step
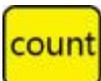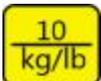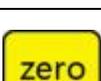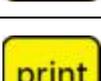
> **If the old indicator must be replaced with new indictor, re-configuration and re-calibration isn't necessary by using the old EEPROM, which can be replaced conveniently.**

5.1.2   Switching on configuration

move switch CAL to left.

5.1.3   Selecting the configuration level

press keys 【 ⟶ / total 】 and 【 ⟵⏌ / print 】 simultaneously,

until display

| C 0 1 | **(‗means flashing digit)**

5.1.4   Leaving the configuration level

press key 【 ⟂ / count 】 to leave and all new value are auto- stored.

5.1.5   Switching off configuration

move switch CAL to right.

5.1.6   e.g. : configuration C 12   to 10

move switch CAL to left.

press keys 【 ⟶/ total 】 and 【 ⟵⏌ / print 】 simultaneously,

until display

| C 0 1 | **(‗means flashing digit)**

press key 【 ⬇ / zero 】 or 【 ⬇ / tare 】 to change value, until display

| C 0 2 |

press key 【 ◄▬ / kg/lb 】or 【 ▬► / gross 】 to move flashing digit

until display

C <u>0</u> 2

press key 【 ▲ / zero 】or 【 ▼ / tare 】 to change value, until display

C <u>1</u> 2

press key 【 ◄┘ / print 】 to enter into

C 1 2   <u>--</u>

(-- means old value)

press key 【 ▲ / zero 】or 【 ▼ / tare 】 , until display

C 1 2   <u>10</u>

(e.g.: 10)

press key 【 ◄┘ / print 】 to accept new value and enter next step

C 1 <u>3</u>

press key 【 ─▲─ / count 】 to leave and all new value are auto- stored.

move switch CAL to right.

If CAL switch is always on, the indicator can work well and all stored value is not able to loss even if power supply is off.

5.2.1   Switching on calibration

move switch CAL to left.

5.2.2   Selecting the calibration level

press keys 【 —▸/ total 】 and 【 ↵ / print 】 simultaneously,

until display

| C 0 <u>1</u> | (_ **means flashing digit**)

5.2.3   Calibration procedure

| C 0 <u>1</u> | (**Unit sign**)

press key 【 ↵ / print 】 to enter into

| C 1   <u>-</u> | (**- - means old value**)

press key 【 ▲ / zero 】 or 【 ▼ / tare 】 , until display

| C 1   <u>1</u> | (**e.g.: 1=kg**)

Select   1=kg, 2=lb

press key 【 ↵ / print 】 to accept new value and enter next step

---

> **During calibration, the value of C 13 and C 14 must be:**
> **C13 (digital filter 1)=0, C14 (digital filter 2)=5**

C 0 <u>2</u>   (**Decimal point**)

press key 【 ⤶ / print 】 to enter into

- - - - - -   (**- -** means old value)

press key 【 ⚖ / zero 】 or 【 ⚖ / tare 】 , until display

0 0 0 0 0 . 0   (**e.g.: 00000.0**)

Select   0, 0.0, 0.00, 000.000, 00.0000

press key 【 ⤶ / print 】 to accept new value and enter next step

C 0 <u>3</u>   (**Step width / division**)

press key 【 ⤶ / print 】 to enter into

C 3   - -   (**- -** means old value)

press key 【 ⚖ / zero 】 or 【 ⚖ / tare 】 , until display

C 3   2   (**e.g.: 2**)

Select   1, 2, 5, 10, 20, 50

press key 【 ⤶ / print 】 to accept new value and enter next step

C 0 <u>4</u>   (**Full scale Deflection**)

press key 【 ⌁⏎ / print 】 to enter

- - - - - -

(**- -** means old value)

press key 【 ⏅ / zero 】 or 【 ⏇ / tare 】 to change value

press key 【 ⏴ / kg/lb 】 or 【 ⏵ / gross 】 to move flashing digit

until display

00850.0

(**e.g.: 850.0**)

press key 【 ⌁⏎ / print 】 to accept new value and enter next step

C 0 5

(**Calibration of deadload / zero**)

press key 【 ⌁⏎ / print 】 to enter into

C 5   0

press key 【 ⏅ / zero 】 or 【 ⏇ / tare 】 until display

C 5   1

(**e.g.: 1=do**)

Select   0 = not, 1=do

Unload scale completely!

press key 【 ⌁⏎ / print 】 to perform calibration, display

C A L   10

count down from 10 to 0, then display

0.0

press key 【 ◄┘ / print 】 to accept new value and enter next step

C 0 <u>6</u>	(**Calibration of span**)

press key 【 ◄┘ / print 】 to enter

C 6   <u>0</u>

press key 【 ▲ / zero 】 or 【 ▼ / tare 】 until display

C 6 <u>1</u>	(**e.g.: 1=do**)

Select   0 = not, 1=do

Load scale with calibration weights

press key 【 ◄┘ / print 】 to enter calibration weight, display

0 . <u>0</u>

press key 【 ▲ / zero 】 or 【 ▼ / tare 】 to change value

press key 【 ◄ / kg/lb 】 or 【 ► / gross 】 to move flashing digit

until display

> **The minimum calibration weight is 15% of F.S.D. and more the calibration weight corresponds to F.S.D., the more accurately the span will be adjusted.**

| 0 0 <u>5</u> 0 0 . 0 | **(e.g.: 500.0)**

press key 【 ↲ / print 】 to perform calibration, display

| **C A L   10** |

count down from 10 to 0, then display

| **5 0 0 . 0** |

press key 【 ↲ / print 】 to accept new value and enter next step

| **C 0 <u>7</u>** | **(Zero setting range)**

5.2.4   Leaving the calibration level

press key 【 ⊥ / count 】 to leave and all new value are auto- stored.

5.2.5   Switching off Calibration

move switch CAL to right.

Every step of calibrations and configuration procedure can be performed separately. e.g.: only do C05 (calibrate deadload)

If CAL switch is always on, the indicator can work well and all stored value is not able to loss even if power supply is off.

C 01   Unit sign   Default: 1
Select   1=kg, 2=lb

C 02   Decimal point   Default: 0
Select   0, 0.0, 0.00, 000.000, 0000.00

C 03   Step width (division)   Default: 1
Select   1, 2, 5, 10, 20, 50

C 04   Full scale Deflection   Default: 10000
Configurable F.S.D. freely within 999990

C 05   Calibration of Deadload   Default: 0
Select   0 = not, 1=do

C 06   Calibration of Span   Default: 0
Select   0 = not, 1=do

C 07   Zero setting range   Default: 2
Determination of a range ±% FSD around the zero point, within which
the displayed gross weight can be set to zero by pressing key 【zero】
or by a corresponding external command. the range apply for total zero
setting many times besides automatic zero tracking. If total zero is
beyond 20% of FSD, which is necessary to re-calibrate deadload.
Select   0=0%, 2=2%, 4=4%, 5=5%, 10=10%,20=20% of FSD

C 08   Initial zero setting range   Default: 2
When switching on the indictor, a ±% FSD of zero setting can be
performed automatically.
Select   0=0%, 2=2%, 4=4%, 5=5%, 10=10%,20=20% FSD

C 09   Automatic zero tracking range   Default: 0.5

Automatic zero tracking can be set for a ± range of 0.0d to 5.0d around the adjusted zero point, range is n×0.5d.

Select   0 ＝switch off, 0.5 = ±0.5d, 1.0 = ±1.0d, ~ 5.0 = ±5.0d

C 10   Interval time of automatic zero tracking   Default: 1

Definition of a time period between two correcting steps of automatic zero tracking.

Select   0 ＝switch off,   1 ＝1 s,   2 ＝2 s,   3 ＝3s

C 11   Overload range   Default: 09

select   in n x division, n=0~99

C 12   Negative display range   Default: 10

select   0 =-9d, 4=4%, 10=10%, 20=20%,50=50%,99=100% F.S.D

C 13   Digital filter 1   Default: 0

It always work until weight display standstill, which affect rate of updating weight display. The higher grade means slower refresh of display.

Select   0, 1, 2, 3, 4, 5, 6   6= slowest and most stable

C 14   Digital filter 2   Default: 5

It begin to work after weight display standstill, which affect rate of updating weight display. The higher grade means slower refresh of display.

Select   0, 1, 2, 3, 4, 5, 6, 7   7= slowest and most stable

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n   During calibration, it must be C 13=0, C 14=5
n   Animal-scale bring into effect by adjusting C 13 & C 14

C15   Standstill time   Default: 1

Determination of a time range in addition to the standstill range, in which a weight display standstill must be detected.

Select   0 =switch off,   1 =1 s,   2 =2 s

C 16   Standstill range   Default: 2

In which a weight display standstill must be detected. Display standstill is as long as the difference between smallest and highest measured value of the time range.

Select   1 =1 d,   2 =2 d,   5 =5 d,   10=10d

C 17   Automatic shutting off display time   Default: 0

For saving on battery, the standstill display can be shut off automatically after a range of time. When varying weight value or pressing any key, the display can be restored.

select   0 = switch off, 1=3 minutes, 2= 5 minutes

C 18   Reserved and no function

C 19   Reserved and no function

C 20   Upper limit alarm on value   Default: 000000

Configurable within F.S.D.

C 21   Upper limit alarm off value   Default: 000000

Configurable within F.S.D.

C 22   Lower limit alarm on value   Default: 000000

Configurable within F.S.D.

C 23   Lower limit alarm off value   Default: 000000

Configurable within F.S.D.

C 24   Function of inputs   Default: 0

Refer to corresponding to manual of I/O optional card.

C 25   Function of outputs   Default: 0

Refer to corresponding to manual of I/O optional card.

C 26   Reserved and no function

C 27   Communication protocol of serial interface   Default: 0

Select   0=shut off,   1=remote display (continuous output),
          2=printer,   3= command mode from supervisory

C 28   Baud rate of serial interface   Default: 3

Select   0=1200, 1=2400, 2=4800, 3=9600

C 29   Bit and parity   Default: 0

Select   0=8, none   1=7, even   2=7, odd

C 30~C37   Reserved and no function

C 38   Date

Refer to corresponding to manual of real clock optional card.

C 39   Time

Refer to corresponding to manual of real clock optional card.

**C40   Restore all parameters to default (factory-setting)**   Default: 0

Select   0=none,   1=do

Error Code	Meaning
u u u u u u	Overflow: measuring value is above FSD + overload range
n n n n n n	Underflow: measuring value is below negative display range
ERR 1	During calibration: no enter the calibration weight value
EER 2	During calibration: the used calibration weight value is too low
ERR 3	During calibration: input voltage is negative
ERR 4	During calibration: measuring value is not standstill
EER 5	Checksum error of EEPROM
Lobat	The voltage of rechargeable battery is too low

LP7510 weighing indicator can receive ASCII command directly from the supervisory of computer or PLC. Commands as follows:

Command	Meaning
"T"	first times to set gross weight > 0 into memory tare, second times to clear memory tare
"Z"	set the gross weight to zero within ±1/4d
"P"	print current weighing documents
"G"	first times to convert gross mode to net mode second times to convert net mode to gross mode
"R"	read the current display of gross or net weight

Reaction of command "R" are same as continuous output

	,		,										CR	LF

  S 1   **S 2**   **S 3**   **Data**   **S 4**
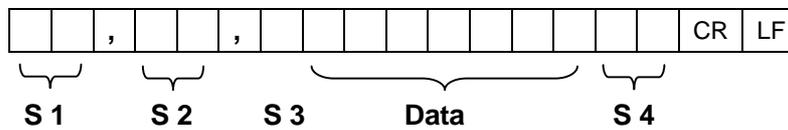
S1: weight status, ST=standstill, US= not standstill,
               OL= overload

S2: weight mode, GS=gross weight, NT=net weight

S3: weight value sign, "+" or " –"

S4: weight unit sign, "kg" or "lb"

Data: weight value, including decimal point

CR: carriage return

LF: line feed