Electronic Weighing Meter

Users manual



list

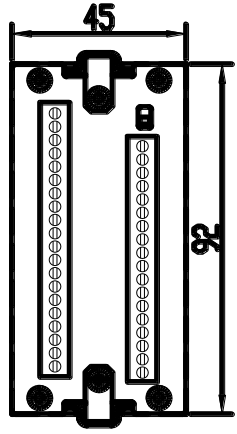
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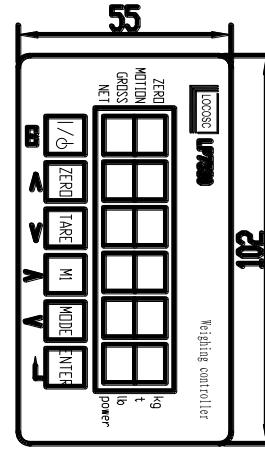
1、overview

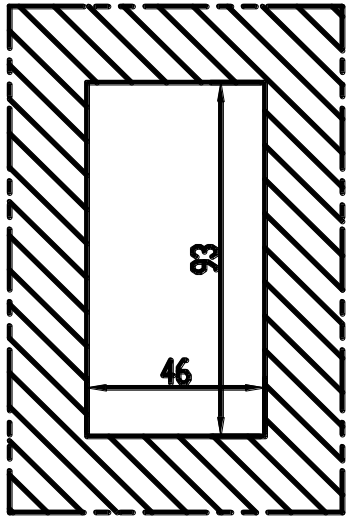
Hardware construction：
power supply：24vDC
load cell excitation voltage： 5vDC±5%
load cell number：up to eight 350Ω
load cell sensitivity：0~3.0mv/v
load cell connections：six wire
keyboard：six key
display：six digits red 7 segment LED display
operating temperature range：-10~40℃
relay output：4 output，AC250v 5A
input：isolation voltage 2500V
analog output：4~20mA/0~5v
serial port：RS232/RS485，baud rate 600~19200bit/s

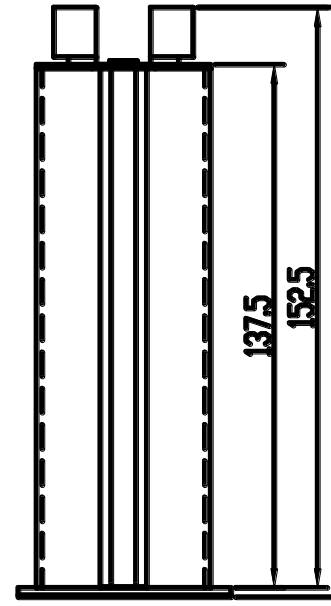
Software feature：
Max sampling speed：120SPS
AD digital filter
digital calibration
batching or dosing functions

Dimension：
housing dimension：92*45mm
front panel dimension：102*55mm
trepanning dimension：93*46mm


45
92

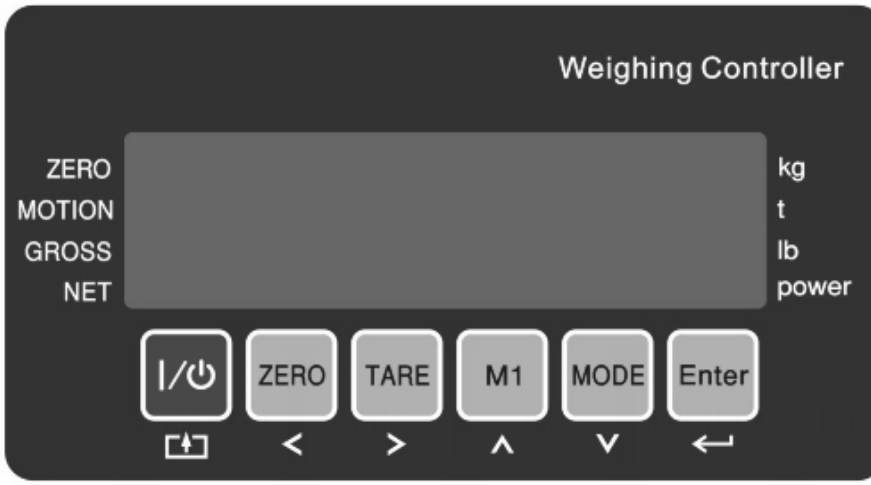

55
102
LOCOSC
ZERO
MOTION
GROSS
NET
kg
t
lb
power
Weighing controller
I/⏻
ZERO
TARE
M1
MODE
ENTER


93
46


137.5
152.5

2、front and rear panel

2-1、Interface description



six digits red 7 segment LED display， high 0.4’’

ZERO： zero indication

MOTION： unstable weight indication

GROSS： gross weight indication

NET： net weight indication

kg: kg unit

t： t unit

lb: lb unit

power: indicate power on when off



power down or power up



zero operation



semi-auto tare operation



display gross/net weight

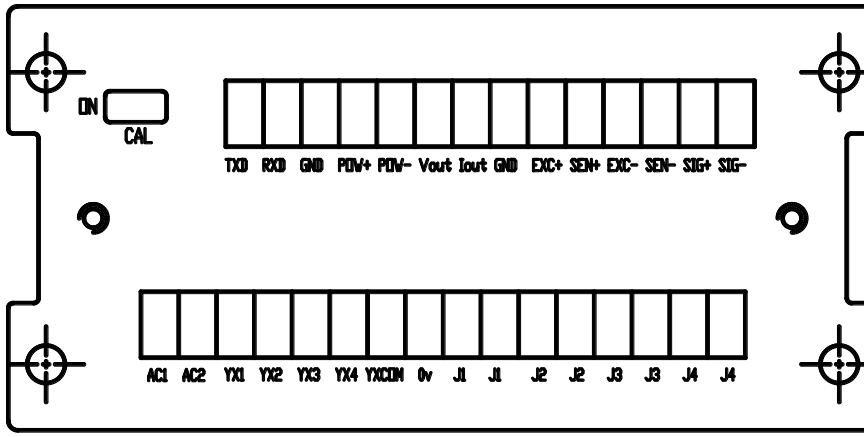


setpoint parameter set



enter key

2-2、rear panel



Connect difinition：

power： POW+ POW- for 24VDC，AC1 AC2 for 220VAC

load cell： EXC+ SEN+ EXC- SEN- SIG+ SIG-

serial communications：TXD RXD GND for RS232，A B for RS485

analog output：Vout Iout GND

relay output：J1 J1 J2 J2 J3 J3 J4 J4

input：YX1 YX2 YX3 YX4 YXCOM 0v

3、general function guide

3-1、function setup and operation procedure

function	operation	display	remark
enter calibration mode	turn the calibration switch to "ON"	01 CSP	4
enter function setting	weight mode，press ↵ and ∨	01 FnC	3.3
check weighing setpoint parameter setting	weight mode，press ∨	1.FinAL	5
enter to test mode	turn power on，press ↵ and ⎋	1. dsp	7.1
reset all parameters back to default	turn power on，turn the calibration switch to "ON", press ↵ and ∨	i.ALL	7.2
reset general function parameters back to default	turn power on，press ↵ and ∨	1 FnC	7.2

3-2、parameter setting key effect

⎋ it means "esc"
< move the flashing digit left
> move the flashing digit right
∧ increments the flashing digit or steps up the select item
∨ decrements the flashing digit or steps down the select item
↵ confirm

3-3、function setting

Press and go into function setting，display“01 FnC” function setting；

press ，display“02 232”serial port interface；

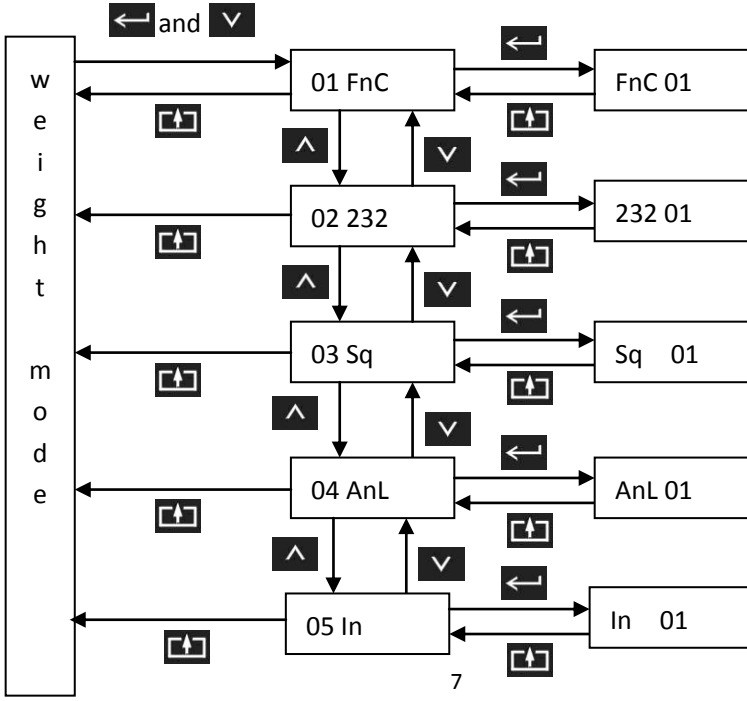
press ，display“03 Sq ”weight comparison procedures；

press ，display“04 AnL”analog current output；

press ，display“05 In ”external input interface；

press ，go into the next level menu；

press ，save and out this menu，restart。



“01 FnC” function parameter code

function	item	parameter	description	default
digital filter 1	FnC 01	=00 =01 … =10	greater ↓ less	03
digital filter 2	FnC 02	=00 =01 =02 =03	less ↓ greater	02
rate for display rewrite	FnC 03	=01 =05 =10 =20 =120	1 times/sec 5 times/sec 10 times/sec 20 times/sec 120 times/sec	10

“02 232” serial port interface

function	item	parameter	description	default
baud rate	232 01	=00 =01 =02 =03 =04 =05	600bit/s 1200bit/s 2400bit/s 4800bit/s 9600bit/s 19200bit/s	04
transmit mode	232 02	=00 =01 =02 =03 =04	close serial port continuous print mode stable send command mode	01
data format	232 03	=00 =01 =02	format 1 format 2 print format	00

transmit time	232 04	=00 =01 =02 =03	open 1 sec 2 sec 5 sec	00
address for multicomputer	232 05	00 01~99	only one address（bcd）	00

“03 Sq ” weight comparison procedures

function	item	parameter	description	default
batching mode	Sq 01	=01 =02 =03 =04	normal batch less-in weight comparison	01
control mode	Sq 02	=01 =02 =03	manual start auto for custom	01
comparison format	Sq 03	=01 =02	net gross	01
start delay	Sq 04	=00 =01 … =10	no delay 1 sec delay … 10 sec delay	01
stable time	Sq 05	=00 =01 … =10	no wait 1 sec wait … 10 sec wait	03

“04 AnL” analog current output

function	item	parameter	description	default
signal output	AnL 01	=00 =01 =02	4~20mA current 0~20mA current 0~5v voltage	00
data	AnL 02	=00	display weight	00

format		=01	gross weight	
weight in Hi	AnL 03	010000	when max analog output weight	010000
zero adjust	AnL 04	4mA/0mA/0v	press ^ or v adjust output	4
linearity adjust	AnL 05	20mA/5v		20
output range limit	AnL 06	=00 =01	no limit limit	00

“05 In ” external input interface

function	item	parameter	description	default
INPUT1	In 01	=00	no function	01
INPUT2	In 02	=01	zero	02
INPUT3	In 03	=02	tare	05
INPUT4	In 04	=03	gross	06
		=04	hold	
		=05	total	
		=06	print	

4、calibration

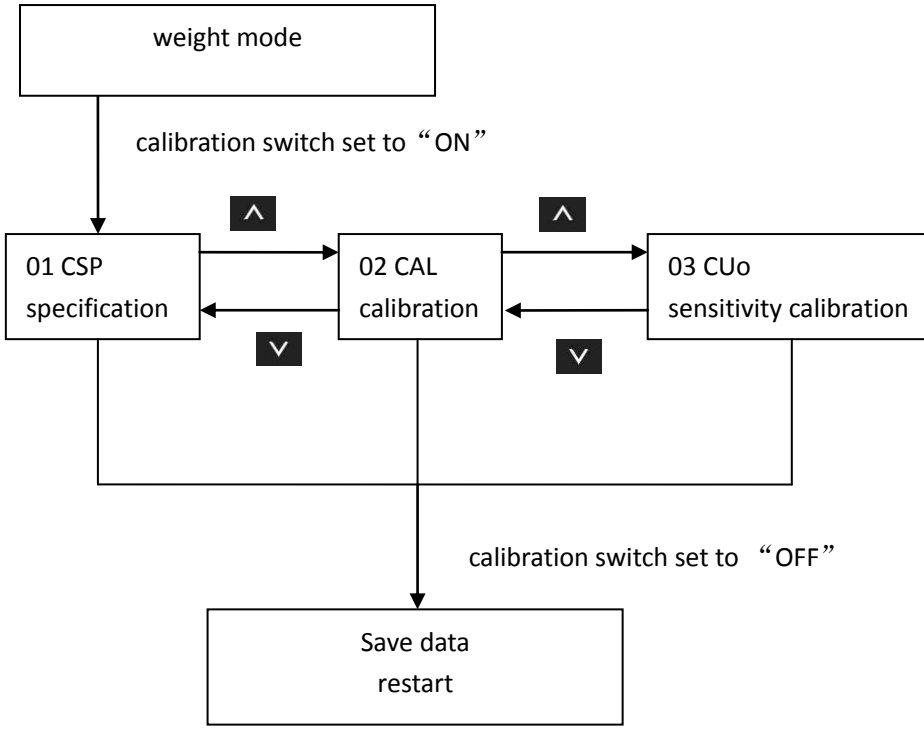
Weight mode，calibration switch set to“ON”，display“01 CSP” calibration parameter code；

press ^，display“02 CAL”general calibration；

press ^，display“03 CUo” sensitivity calibration。

press ↵，go into next level step；

calibration end，calibration switch set to“OFF”，display“End ” save data，restart。

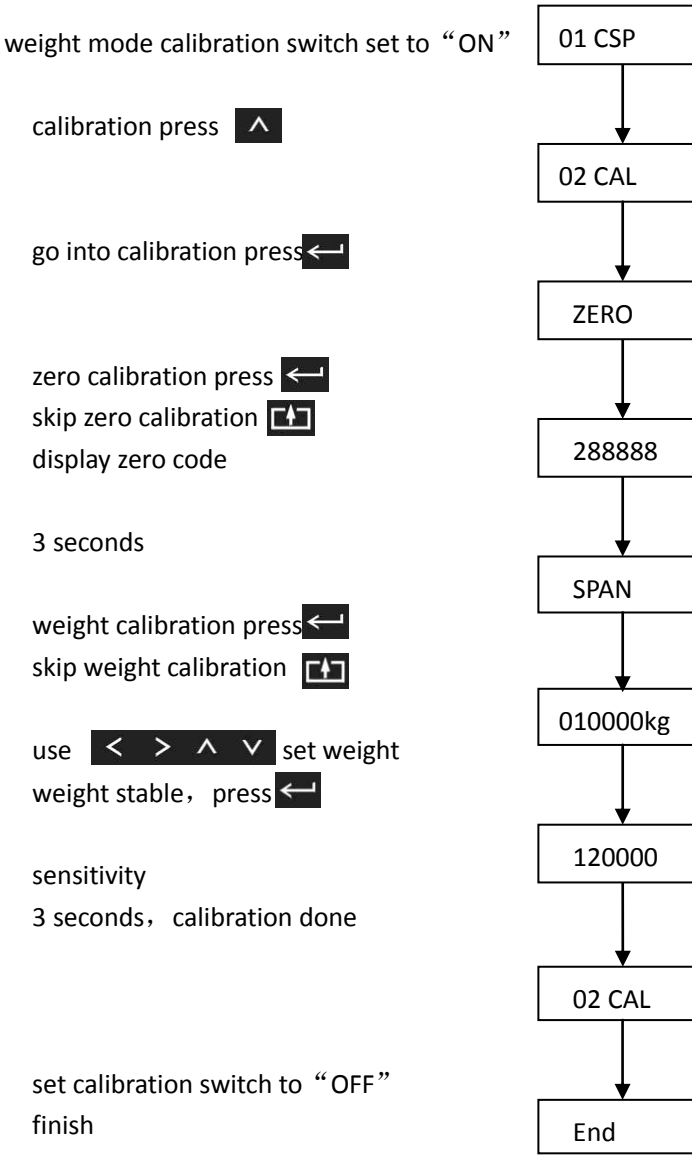


“01 CSP” calibration parameter code

function	item	parameter	description	default
unit	CSP 01	01 02 03	kg lb t	01
decimal point	CSP 02	00 01 02 03 04	none 1decimal point 2decimal point 3decimal point 4decimal point	00
division	CSP 03	01 02 05	division size	02
Max capacity	CSP 04	010000	Max capacity	10000
zero-setting range	CSP 05	00 01 02	0 ±1% ±2%	02
initial zero-setting range	CSP 06	00 01 02 05 10	0 ±1% ±2% ±5% ±10%	10
automatic zero-setting range	CSP 07	00 05 10 20	0 0.5d 1d 2d	05
automatic zero-setting time	CSP 08	00 01 02 03	0 1sec 2sec 3sec	01

stable time	CSP 09	00 01 02	fast medium slow	01
stable range	CSP 10	01 02 05 10	1d 2d 5d 10d	02
automatic zero	CSP 11	00 02 05 10 20	no -2d -5d -10d -20d	02
preserved menu	CSP 12			

“02 CAL” calibration



note：zero calibration no more than 5mv。

“03 CUo” sensitivity calibration

weight mode calibration switch set to “ON”

sensitivity calibration press V

go into calibration press ↵

zero calibration press ↵

skip zero calibration ⇧

auto gather zero code

or press < set zero code

enter zero calibration ↵

sensitivity calibration press ↵

skip sensitivity calibration ⇧

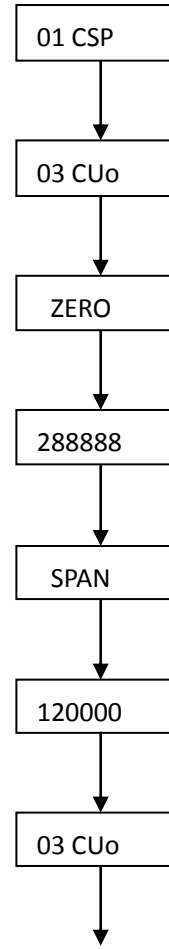
use < > ^ V set sensitivity

enter press ↵

sensitivity calibration done

set calibration switch to “OFF”

finish



sensitivity =100000*load cell full scale output*weighing meter capacity /（N*Load cell capacity），

5、check weighing configuration

weight mode press ∨ go into parameter

display	function
1.FinAL	final value
2. SP1	SP1 value
3. SP2	SP2 value
4. SP3	SP3 value
5.F.FALL	free fall value
6. oUEr	over value
7.UndEr	under value
8.Z.bAnd	zero band

warning： set FinAL >SP1>SP2>SP3> F.FALL

set Sq01=1：net weigh

signal	output condition	Relay output
SP1	Net≧Final-SP1	J1
SP2	Net≧Final-SP2	J2
SP3	Net≧Final-SP3	J3
Free fall	Net≧Final-F.FALL	J4

Set Sq01=3：

signal	output condition	Relay output
HI	Net>SP1	J1
OK	SP1≧Net≧SP2	J2
LO	Net< SP2	J3

6、cable connect manual

6-1、power

POW+ 24VDC+

POW- 24VDC-

AC1 220VAC

AC2 220VAC

6-2、Load cell

EXC+

SEN+

EXC-

SEN-

SIG+

SIG-

NOTE：use 4-wire load cell need EXC+ and SEN+ short connect，EXC- and SEN- short connect。

6-3、serial port

TXD RS232 transmission

RXD RS232 receive

GND RS232 GND

A RS485 A

B RS485 B

6-4、analog output

Vout 0~5v voltage，load more than 1kΩ

Iout 4~20mA current，load span 100~500Ω

GND GND

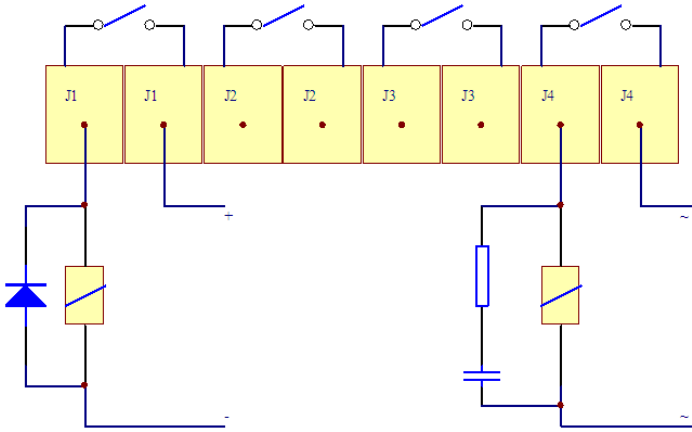
6-5、relay output

J1 J1 first group relay output

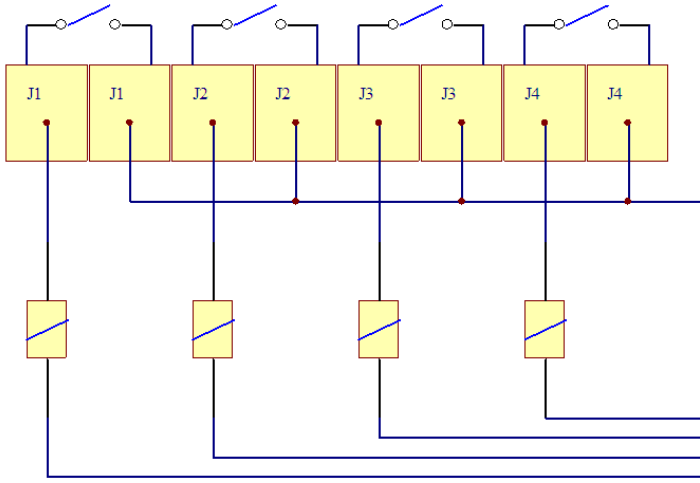
J2 J2 second group relay output

J3 J3 third group relay output

J4 J4 fourth group relay output



Relay output connection diagram



Common connection diagram

neto：use common connection，put one of J1，J2，J3，J4 short connect.

6-6、input

YX1 first group input

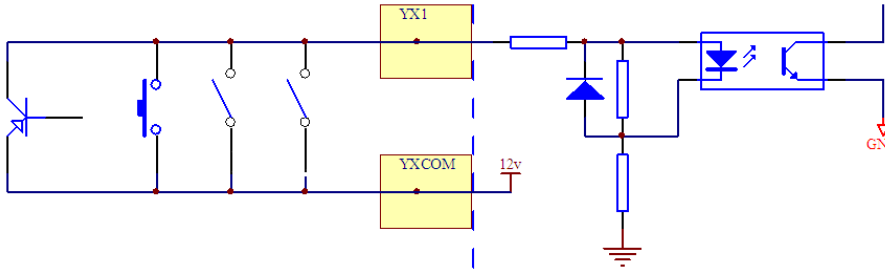
YX2 second group input

YX3 third group input

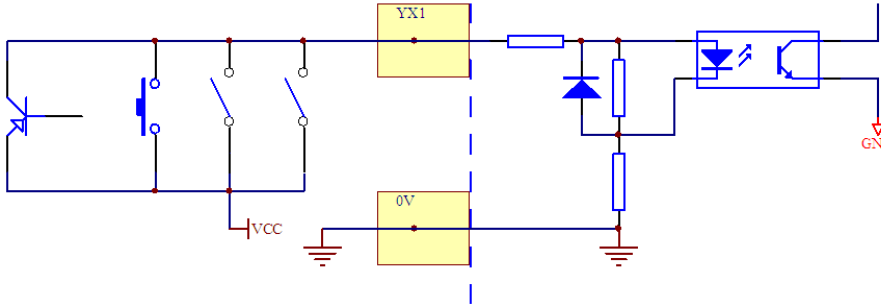
YX4 fourth group input

YXCOM input common

0v out connect power GND



Input diagram



Out connect power input diagram

note： using out electric power needs more than 3V battery charge , out electric power less than 24V。