



# ***R35.20E***

Electronic Weighing Indicator  
Technical/operation Manual



warning

- 1、 This product is precision measure equipment, make sure equipment is properly grounded before use.
2. Only authorized person is allowed to debug, test and maintain system.



caution

- 1、 Forbidden hot plugging
- 2、 Cut off power, in 5 second, then connect related electrical device



Anti-static

This indicator is electrostatic sensitive devices, please take anti-static precautions during operation and maintenance

All rights reserved by KELI SENSING TECHNOLOGY (NINGBO) CO., LTD.  
Without the written permission,  
No part of this manual may be copied or transmitted, quoted in any form or by any means for any purpose without the written permission of KELI. To meet marketing requirement, any improvement and updation, KELI SENSING TECHNOLOGY (NINGBO) CO., LTD. receive the right to amend this manual without prior notice

## Content

<b>1</b>	<b>ATTENTIONS</b>	<b>1</b>
<b>2</b>	<b>FUNCTION &amp; FEATURES</b>	<b>2</b>
3	MODEL & TECHNICAL SPECIFICATIONS	2
3.1	TECHNICAL SPECIFICATION	3
<b>4</b>	<b>INSTALLATION AND CONNECTION</b>	<b>4</b>
4.1	INSTALLATION	4
4.2	SYSTEM CREATION	5
4.2.1	power supply	5
4.2.2	Load cell interface	5
4.2.3	serial port	6
4.2.6	Digital I/O connection	6
<b>5</b>	<b>OPERATION</b>	<b>8</b>
5.1	DISPLAY	8
5.2	BATCHING OPERATION	9
5.3	CHECKING STATISTICS OF BATCHING	10
<b>6</b>	<b>INPUT FORMULATION</b>	<b>11</b>
<b>7</b>	<b>WEIGH CALIBRATION MENU</b>	<b>12</b>
7.1	CALIBRATION STEP	12
<b>8</b>	<b>PARAMETERS OF SCALE</b>	<b>13</b>
<b>9</b>	<b>COMMUNICATION PARAMETERS</b>	<b>13</b>
9.1	INSTRUCTIONS OF COMMUNICATION PROTOCOL	13
	Continuous protocol 1	13
	MODBUS protocol	15
	Format of batching result (manually or automatically)	19
	Continuous protocol 2	19
	protocol for remote display	20
<b>10</b>	<b>BATCHING PARAMETERS</b>	<b>20</b>
<b>11</b>	<b>SYSTEM SETTING</b>	<b>23</b>
11.1	I/O TEST	23
11.2	PARAMETER INITIALIZATION	23
11.3	RECIPE INITIALIZATION	23
11.4	DATE AND TIME	25
11.5	BRIGHTNESS ADJUSTMENT	25
11.6	TOUCH SCREEN ADJUSTMENT	25
<b>12</b>	<b>MAINTENANCE</b>	<b>25</b>
12.1	COMMON REPAIR KITS	25
12.2	DAILY CLEAN	25
12.3	SOLUTIONS OF FAQ	26

# 1 Attentions

Thank you for choosing R35 Electronic Weighing Indicator. To operate it properly please read this manual carefully before installation.

Check the package status, then make sure the package contents is comply with the packing list.

Check the product model and type is accordance with your order. The product model information is on the nameplate which is attached the enclosure.

If there is any parts missed, broken, or model inconformity in new carton, please prepare the evidence (such as order No., the date of receiving, product serial No.) and contact our branch office, authorized agency, or KELI service department to deal with.

Ground connection: to ensure the measuring performance, keep off static and shock hazard, the terminal must be well grounded.

Power supply: This terminal is driven by DC power. Rated power supply voltage 18~30VDC, consumption less than 20W, Separate the power supply with any motor driven equipment. Isolation measures is needed.

Environment: R35 is not an intrinsic safe terminal and can not be used in hazardous area of explosive dust and gas directly.

## 2 Function & Features

R35 weighing indicator is based on high-speed single chip microcomputer, be dedicated to quantitative weighing of industrial processing, multi-ingredient batching. R35 is featured with industrial weighing, not only be with many available input/output and various communication ports, but also with extension interface, which enable R35 to communicate with PC, PLC, DCS, ect, R35 is applied onto many industrial fields. Such as metallurgy, chemical industry, construction material industry, painting, cereal & feed, beverage,

R35 main features:

- n Panel-installed, easy mounting
- n Built-in batching accumulation-procedure
- n Batching 1 to 8 ingredient independently
- n Store 10 recipes.
- n 24-bits high resolution SIGMA-DELTA AD, available 100 Hz output rate drop automatically corrects.
- n Falling autocorrection
- n Auto-accumulate and error analysis
- n 12-way triode output
- n Standard configuration,isolated RS232 / RS485 connection
- n Serial port is available to micro-printer
- n MODBUS RTU available
- n 7inch TFT screen, resolution 800×480
- n Preset for batch task

## 3 MODEL & TECHNICAL SPECIFICATIONS

MODEL	P/N	description
R35.20E	Y1035018-0003	1-8 ingredient barch,8-way input, 12-way output ; RS232/RS485 interface; 24VDC

### 3.1 Technical specification

Dimension (WxHxD)	222mm x 122mm x 180mm (include terminal )
Net weigh	2.2kg
enclosure	Panel-configuration 。 Front panel Aluminium , IP65 ; enclosure : Aluminium, IP42。
Load cell Interface	Excitation voltage: 10V DC, drive 6pcs 350Ω load cellat most, or equivalent to load cell with 58Ω。 Input signal range: -30mV ~ +30mV。
A/D conversion	24 bits high resolutionΣ-Conversion with 100 Hz sample rate.
Resolution	Maximum display resolution: 20000d, Minimum sensitivity 0.3μv/d。
display	7inch TFT screen, resolution 800×480, touch screen Refresh display: 10Hz;
Switch input	Max 8 optical electric isolation input settings, Passive input, available when short circuit to common port
Switch output	Max 12 triode output port, capacity 30VDC/200mA。
Communication port	1x Isolated RS232, 1x Isolated RS485
protocol	Format of continuous output, print-output
Application mode	1 to 8 ingredient, accumulation-mode batching
quantity of recipe	10
Power supply	24VDC, consumption<30W
working	temp: - 10° ~ +40° C; humidity: 10% ~ 90%, non-condensing
Storage	temp: - 30° ~ +60° C; humidity: 10% ~ 90%, non-condensing

## 4 Installation and Connection

Instruction of installation and system creation

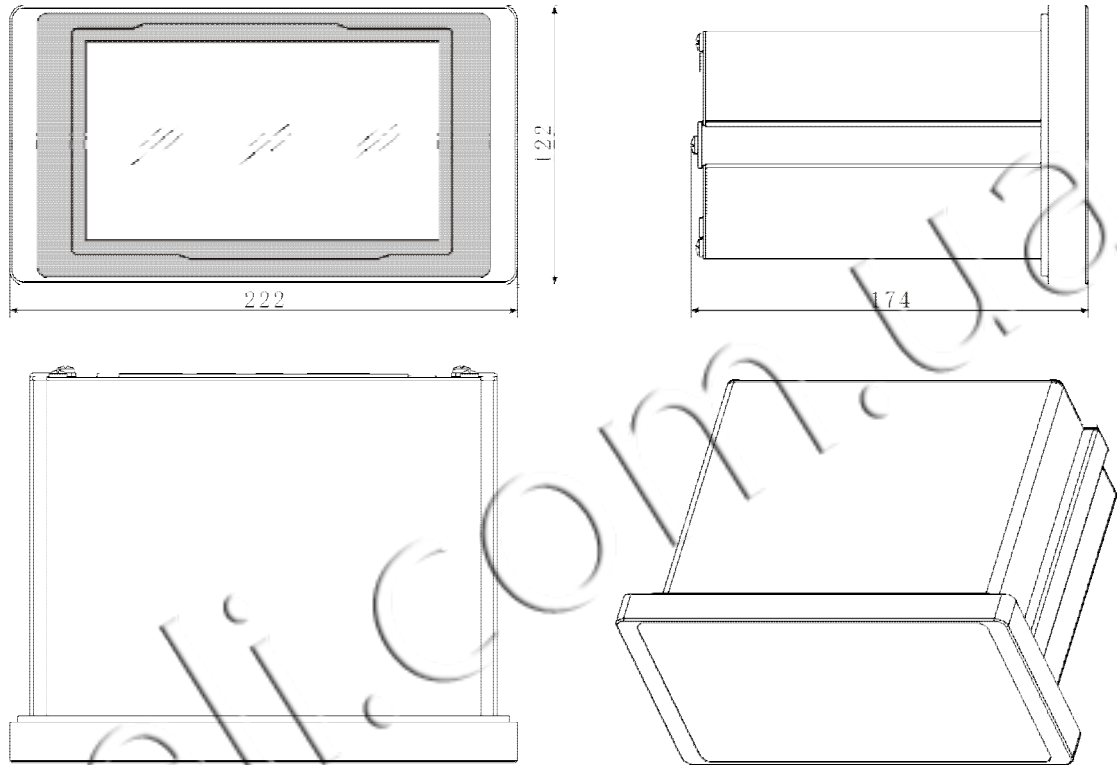
### 4.1 installation

Front panel size (W x H): 222mm X 122mm。

Enclosure size (W x H): 190mm X 100mm。

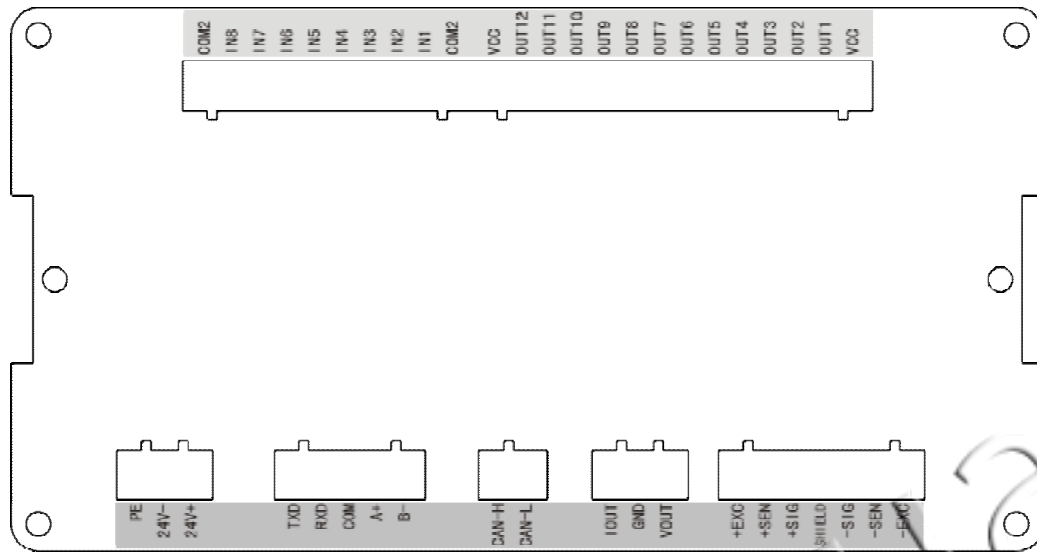
Inside size of controlling cabinet: 191mm X101mm。

Outline (unit: mm) :



## 4.2 System creation

R35.20 back panel illustration



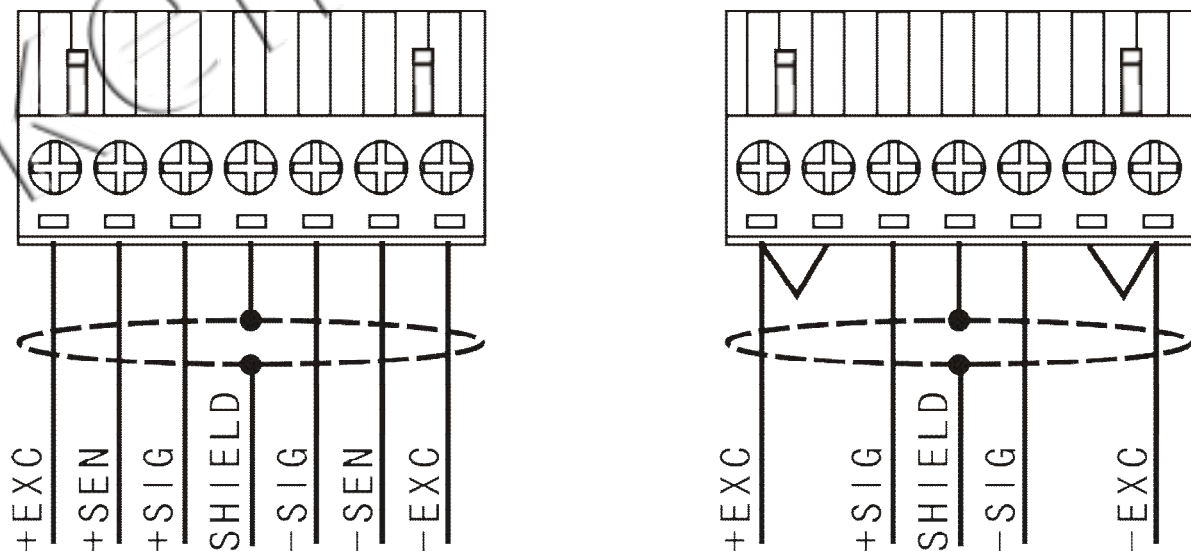
### 4.2.1 power supply

R35 is drive by DC power supply, voltage range 18~30V。 pin definition listed:

Pin	description
24V+	Positive power
24V-	Negative power
PE	Earth

### 4.2.2 Load cell intereface

R35 drive 6pcs 350ohms load cell at most(or equal to 58ohms load)。 The following illustration for load cell interface definition。 When connecting 4-wire load cell, short circuit +EXC and +SEN, short circuit - EXC and- SEN.





Terminal	Description	4 wire	6 wire
+EXC	Positive excitation	Red	Red
+SEN	+Sense terminal. short with +EXC if connecting 4 wire cell	-	Blue
+SIG	positive signal	Green	Green
SHLD	shield ground		
-SIG	negative signal	White	White
-SEN	-Sense terminal. short with -EXC if connecting 4 wire cell	-	Yellow
-EXC	negative excitation	Black	Black

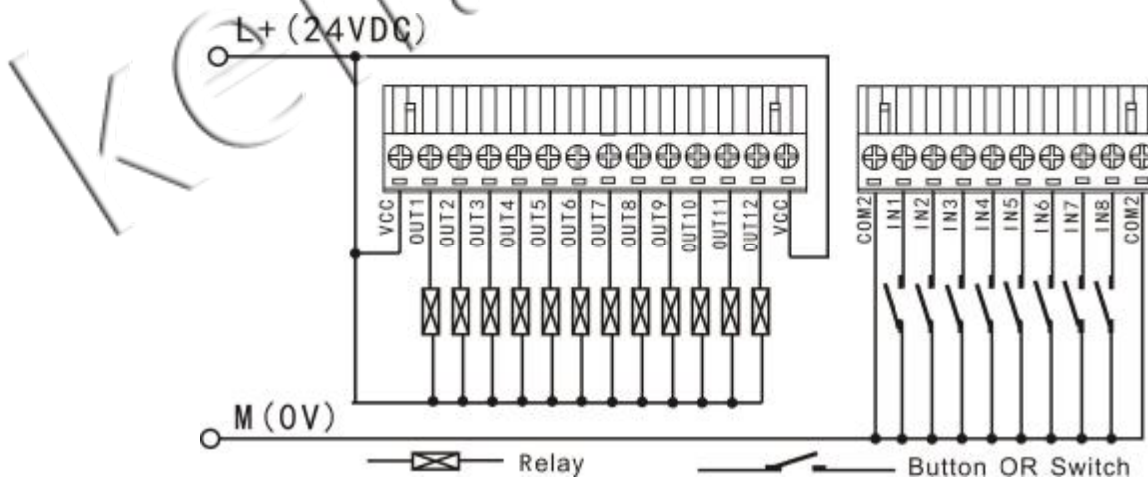
### 4.2.3 serial port

That indicator has isolated series ports, R232 & R485 .

Pin definition		description
Serial port 1	TXD	RS232 sending
	RXD	RS232 receiving,
	COM	Common ground
Serial port 2	A+	RS485 A terminal
	B+	RS485 B terminal

2 port is separate, working at the same time.

### 4.2.6 Digital I/O connection



Note: 24V DC power supply external, not available from indicator itself.  
if only input point works, 24V DC need to be connected.

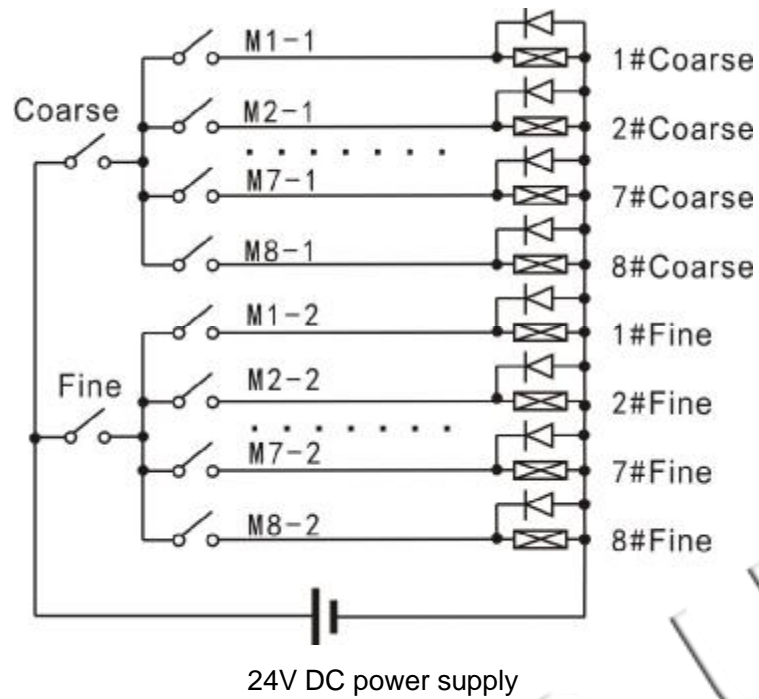
definition of input pin:

Input Pin	Instruction
IN1	start button to batch, press it for single batching, keep pressing for continuous batching
IN2	re-start, once pause or out of tolerance alarming, press it to re-start
IN3	press it to stop batching
IN4	Shortly press it, stop ongoing batching forcibly Note: keep shorting this input pin to COM2, R35 keep stopping batching, any other operation is unavailable to quit status of batching.
IN5	Start/stop semi-automatic discharging, shortly press it (OUT11) to start when stop batching, it stop working once weigh is under zero (refer to F6.1 parameter)
IN6	Manually dispatch, keep pressing to start dispatching when halt (OUT11)
IN7	undefined
IN8	undefined

Output pin

Output pin	Function instruction	Application instruction
OUT1	Ingredient 1 feed control	Max load for each way is 30VDC/200mA.
OUT2	Ingredient 2 feed control	
OUT3	Ingredient 3 feed control	
OUT4	Ingredient 4 feed control	
OUT5	Ingredient 5 feed control	
OUT6	Ingredient 6 feed control	
OUT7	Ingredient 7 feed control	
OUT8	Ingredient 8 feed control	
OUT9	Fast add control (Coarse)	
OUT10	Slow add control (Fine)	
OUT11	Discharging control (Disch)	
OUT12	Over-weighing alarm output	

COARSEt speed and FINE speed batching can be achieved via following relays, logical circuit.



## 5 Operation

### 5.1 Display

Startup picture:



Self-check info:



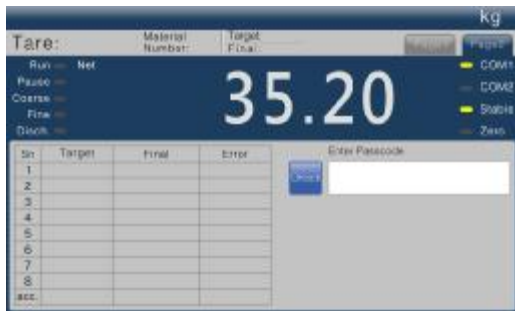
work interface:



Page1



Page2



key to lock



unlock (Passcode 123456)

## 5.2 Batching operation

### n batching procedure

Batching procedure is from the first ingredient, one by one, then discharge, discharging steps is choosed

### n Other instructions of batching procedure

1. if no recipe data(all target value is zero), system will indicate:



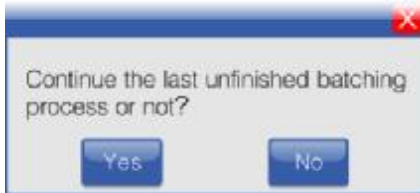
2. if recipe date is incorrect, for sample, some ingredient value is more than zero, not conform to set values,  $Target \geq Fine \geq Preact$ , system indicates error once start:



3. if accumulation volume of all ingredients is more than rated volume, system should indicate:



4. Outage memory function available during batching, system should indicate if unfinished batching:

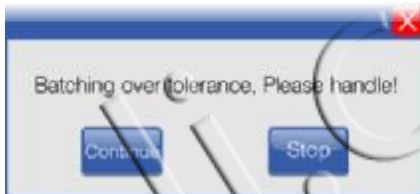


press "yes" to continue last unfinished batching, press "cancel" to restart.

5. if advance bath times is above zero, also already achieved pre-set value, system should indicate:



6. if ingredient is out of tolerance, batching would halt, meantime indicates:



Press "continue", accept the tolerance to continue batching, press "stop" to end ongoing batching

### 5.3 Checking statistics of batching

1. Working interface (page 2) press **【set】**, turn to menu interface.



## 2、 Press 【Batching statistics】

Material Consumption List		Preset Batch:	600
Sn	Dosage	Finished Batch:	300
1	82.00	Remaining Batch:	200
2	82.00		
3	82.00		
4	82.00		
5	82.00		
6	82.00		
7	82.00		
8	82.00		
Total	496.00		

print or clear accumulation under this interface.  
serial port is set by 7-digit, English table to print:

MAT.	ACCUMLATION
MATERIALS CONSUMPTION 2	
-----	
1	82.918
2	81.785
3	15.133
4	15.142
5	15.136
6	15.151
7	15.130
8	15.147
-----	
Total	255.542

## 6 Input formulation

Step:

1、 Work interface (page 2) press 【set】, turn to menu interface。

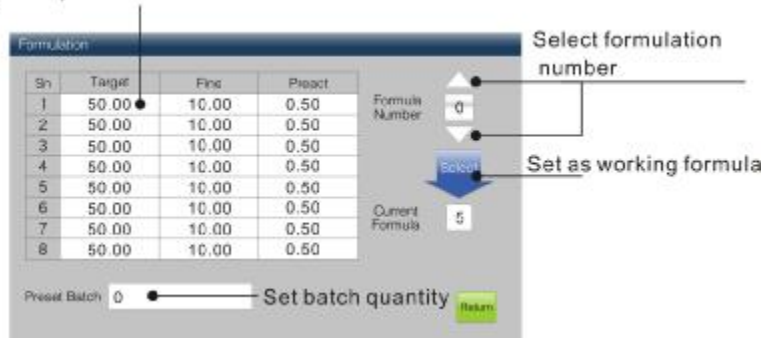


2、 press 【Formulation】, Pop interface of pass word



3、input passcode“123456”， press Enter。

Touch the keyboard, enter the numeric value



## 7 Weigh calibration menu

### 7.1 calibration step

1、work interface (page 2) press **【set】**, turn to menu interface。



2、press **【Calibration】**, pop interface to input passcode.



3、Input pass word“123456”， press Enter。



Calibration step:

1)、select interval; 2)、input rated Range; 3) zero calibration (unload, stable, then press “Enter”); 4)、load weights, then input weight data); 5)light of stability is on, press“Enter”; 6)、press“save”; 7)、press“return”。

## 8 parameters of scale

Note: filter range 0-9, the bigger figure, the filtering is more slower, filtering value should get point during batching, if shake lightly, filtering value should be smaller, system feedback is higher, if shake fiercely, enhance filtering coefficient, meantime advance-value should be enhanced.

## 9 communication parameters

2 serial port can be set separately.

### 9.1 instructions of communication protocol

Continuous protocol 1

R35 send data string initiatively and continuously, this data string contains 18 byte. Baud and frequency: baud rate 9600/19200: 20Hz; baud rate 2400/4800: 10Hz

byte-orders	instructions	
1	start character (=02H)	
2	bit	status word A
	.0	Bit of combination indicates scaling position of weighing data
	.1	001 = xxxxx0      010 = xxxxxx      011 = xxxxx.x
	.2	100 = xxxx.xx      101 = xxx.xxx
	.3	output status of fast feeding      0=close / 1=open
	.4	output status of slow feeding      0=close / 1=open
	.5	Constant 1
3	.6	Constant 0
	bit	status word B
	.0	Tare is zero, current scaling position is 0 / Tare isn't zero, current scaling position is 1
	.1	current weighing data is positive, the digit is 0/current weighing data is negative, the digit is 1



	.2	current weighing data is within defined range, the digit is 0 / current weighing data is out defined range, the digit is 1
	.3	current weighing data is stable, the digit is 0 / current weighing data is dynamic, the digit is 1
	.4	Constant 1
	.5	Constant 1
	.6	Constant 0
4	bit	status word C
	.0	4 Bits of combination indicates current value or batching status
	.1	0000: stop status
	.2	0001: feeding ingredient 1
	.3	0010: feeding ingredient 2 0011: feeding ingredient 3 0100: feeding ingredient 4 0101: feeding ingredient 5 0110: feeding ingredient 6 0111: feeding ingredient 7 1000: feeding ingredient 8 1001: discharging 1010: halted state of batching
	.4	display status of weighing extension 0= common display / 1=20X extension display
	.5	Constant 1
	.6	Constant 0
5		Being normal status, tare is 0, output gross; tare is not 0, output net.
6		real weight of current ingredient when feeding, ;
7		real total weight of remaining ingredients hen discharging.
8		(ASCII code、all without decimal point)
9		
10		
11		it is tare value under normal weighing status。
12		it is target value of current ingredient when feeding
13		real total weight of remaining ingredients hen discharging。
14		(ASCII code、all without decimal point)
15		
16		
17		carriage return (=0DH)
18		check sum, its current value is low byte of arithmetic sum based on front 17 byte.

## MODBUS protocol

MODBUS is based on master slave mode, MODBUS R35 indicator acts as slave station, being required by upper system from MODBUS net, data format is RTU, accord to function of "03" and "06". Weight would be indicated via integer of 16-digit symbol, quantitative range-32768~+32767, once out of this range, data would abnormal. Please contact our engineering team once it happen. If actual data contains decimal point, weight data should be converted, for example, resolution of indicator is 0.02kg, current gross is24.56kg , system reads weight: 0998 (hexadecimal number) via MODBUS net, decimal number is 2456, actual weight is  $2456 \times 0.01 = 24.56$  kg. Similar conversion should be needed when write in. for example, set target value of ingredient 1 to be 50.00kg, system should write it into (decimal number) 40010 register.

register address	bit	Instructions (the followings are read only, function code 03)
40001		gross
40002		net
40003	.0	Ingredient 1 coarse feeding
	.1	Ingredient 1 fine feeding
	.2	Ingredient 2
	.3	Ingredient 2 fine feeding
	.4	Ingredient 3 coarse feeding
	.5	Ingredient 3 fine feeding
	.6	Ingredient 4 coarse feeding
	.7	Ingredient 4 fine feeding
	.8	Ingredient 5 coarse feeding
	.9	Ingredient 5 fine feeding
	.10	Ingredient 6 coarse feeding
	.11	Ingredient 6 fine feeding
	.12	Ingredient 7 coarse feeding
	.13	Ingredient 7 fine feeding
	.14	Ingredient 8 coarse feeding
.15	ingredient8 fine feeding	
40004	.0	current recipes: 0000~1001 =0~9;
	.1	
	.2	
	.3	
	.4	batching ongoing
	.5	batching halting
	.6	discharging
	.7	0
	.8	resolution:
	.9	0000=1      0001=2      0010=5      0011=10 0100=20      0101=50      0110=0.1      0111=0.2
	.10	1000=0.5      1001=0.01      1010=0.02      1011=0.05

	.11	1100=0.001	1101=0.002	1110=0.005	1111: 无定义
	.12	out of tolerance			
	.13	dynamic			
	.14	0			
	.15	0			
40005	current ingredient 1 actual value of batching(being held by next batching)				
40006	current ingredient 2 actual value of batching(being held by next batching)				
40007	current ingredient 3 actual value of batching(being held by next batching)				
40008	current ingredient 4 actual value of batching(being held by next batching)				
40009	current ingredient 5 actual value of batching(being held by next batching)				
400010	current ingredient 6 actual value of batching(being held by next batching)				
400011	current ingredient 7 actual value of batching(being held by next batching)				
400012	current ingredient 8 actual value of batching(being held by next batching)				

register address	bit	Instructions (the followings are read-write function code 03、06)
40013		Ingredient 1 (Target)
40014		Ingredient 2target value (Target)
40015		Ingredient 3target value (Target)
40016		Ingredient 4target value (Target)
40017		Ingredient 5target value (Target)
40018		Ingredient 6target value (Target)
40019		Ingredient 7target value (Target)
40020		Ingredient 8target value (Target)
40021		Ingredient 1coarse feeding
40022		Ingredient 2coarse feeding
40023		Ingredient 3coarse feeding
40024		Ingredient 4coarse feeding
40025		Ingredient 5coarse feeding
40026		Ingredient 6coarse feeding
40027		Ingredient 7coarse feeding
40028		Ingredient 8coarse feeding
40029		Ingredient 1 pre-load
40030		Ingredient 2 pre-load
40031		Ingredient 3 pre-load
40032		Ingredient 4 pre-load
40033		Ingredient 5 pre-load
40034		Ingredient 6 pre-load

40035	Ingredient 7 pre-load
40036	Ingredient 8 pre-load
40037	controlling mode
40038	zero allowance tolerance
40039	times to check automatic drop correction
40040	delayed start time
40041	time of comparison prohibition
40042	delay time of checking time
40043	delay time of discharging
40044	frequency of tolerance judgement
40045	range of allowance tolerance
40046	interval of auto-tareing
40047	discharge mode
40048	quantity of batching
40049	start mode of coarse-fine feeding
40050	memory of batching status, outage/halt
40051	set recipe number (0-9)
40052	obligate
40053	obligate
40054	obligate
40055	obligate
40056	obligate
40057	obligate
40058	obligate
40059	obligate
40060	preset value of batches 0-65535
40061	finished batching, write "0" to clear , meantime ingredient aggregate-value to be cleared.
40062	ingredient1consumption high-order (Note 1), only read
40063	ingredient1consumption lower-order (Note 1), only read
40064	ingredient2consumption high-order (Note 1), only read
40065	ingredient2consumption lower-order (Note 1), only read
40066	ingredient3consumption high-order (Note 1), only read
40067	ingredient3consumption lower-order (Note 1), only read
40068	ingredient4consumption high-order (Note 1), only read
40069	ingredient4consumption lower-order (Note 1), only read
40070	ingredient5consumption high-order (Note 1), only read
40071	ingredient5consumption lower-order (Note 1), only read
40072	ingredient6consumption high-order (Note 1), only read
40073	ingredient6consumption lower-order (Note 1), only read
40074	ingredient7consumption high-order (Note 1), only read
40075	ingredient7consumption lower-order (Note 1), only read

40076	ingredient8consumption high-order (Note 1), only read	
40077	ingredient8consumption lower-order (Note 1), only read	
40078	40078~40100obligate	
....		
40099	obligate	
40100	obligate	
40101	.0	zeroing ( non-batching and stable , also weight within allowance tolerance )
	.1	tareing ( non-batching and nondynamic weighing , also tare functionF2.2=1 )
	.2	Clear tare
	.3	
	.4	zero calibration
	.5	capacity calibration
	.6	
	.7	
	.8	start batching
	.9	pause batching
	.10	continue batching
	.11	stop batching
	.12	start manual discharging
	.13	stop manual discharging
	.14	start semi-auto discharging
.15	stop semi-auto discharging	
40102	load weights	
40103	If write“0x5555” into register, allow calibration via serial port, also allow status to be held until outage or written i。 for example zero calibration, firstly write“0x5555” into this register, 然 then set 40101 register bit4 to be“1”; capacity calibration, then se 将 40101 register bit5 to be“1”;	

Note 1: 2pcs register form 32-digit data, for example, consumption of ingredient 1 is 1223768, hexadecimal 12AC58, 40062 register is AC58 (hexadecimal number), 40063 register is 0012 (hexadecimal)

## Format of batching result (manually or automatically)

set serial port to be with 7-digit data, print english format:

BATCHING RESULT (No. 2)			
MAT.	TARGET	RESULT	TOL.
1	1.002	1.009	0.007
2	1.003	1.010	0.007
3	1.004	1.008	0.004
4	1.005	1.010	0.005
5	1.006	1.009	0.003
6	1.007	1.009	0.002
7	1.008	1.008	0.000
8	1.009	1.010	0.001
-----			
	8.044	8.073	0.029

Auto-print protocol, each dispatch is completed, above list of ingredients would be sent via serial port

external print can select mini printer with 32-digit serial port. If need print in Chinese, printer should be with word stock of national standard.

Continuous protocol 2

each group data contains 18 byte

No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Instruction	status 1		,	status 2		,	symbol	Weigh data						weight unit		Control code		
For example	S	T	,	G	S	,	+				1	2	8	8	k	g	C	L
																	R	F

Status 1: ST stable; US unstable.

Status 2: NT net; GS gross.

weigh data: spacing to replace invalid bit at high-order.

control code: CR, LF.

protocol for remote display

Baud rate: 600 (common) 9-bit, 1-bit start , 1-bit stop, No parity bit.  
 each group data contains 3-frame data, contents are followings.

No.1 frame:

(bit)	0	1	2	3	4	5	6	7	8
content	scaling position			symbol position	gross/net	undefined	G16	G17	flag bit , common 0

No.2 frame:

(bit)	0	1	2	3	4	5	6	7	8
content	G8	G9	G10	G11	G12	G13	G14	G15	flag bit , common 0

No.3 frame:

(bit)	0	1	2	3	4	5	6	7	8
content	G0	G1	G2	G3	G4	G5	G6	G7	flag bit , common 1

No.1 frame data: No.9 bit“0”

- D0、D1、D2---scaling position (0-3)
- D3 — weigh symbol (1-negative、0-positive)
- D4 — gross/net (1-net、0-gross)
- D5 — undefined
- G17, G16: weigh data

No.2 frame data: No.9 bit“0”

- G15~G8: weigh data

No.3 frame data: No.9 bit“1”

- G7~G0: weigh data
- G0~G17: 18-bit binary code from high-bit to low-bit to form weigh data

## 10 Batching parameters

Batching Parameters			
Control Model	Sequential Feeding	Error Estimation Frequency	0
Error Of Zero	0.020	Allowable Error Range	9.9 %
Automatic Correction Frequency Of Fall	0	Automatic Tare Interval	1
Start Time Delay	1.0 S	Discharge Mode	Auto.
Forbidden Comparing Time	0.5 S	Number Of Batching	8
Delay Check Time	1.0 S	Two Speed Feeding Sequence	Simultaneous
Discharge Delay Time	1.0 S	Batching State Save	Disable
Return			

Instruction	parameters
control mode	Sequential Feeding
Error of zero	means discharging value is less than defined value, indicator should delay some time (discharging delay time), then close gate of discharging via valve.
Automatic Correction Frequency of Fall	dropping weight between stop discharging to stable, indicator use dropping weight to compensate overshoot. For example: target value 100kg, dropping weight 1.5kg, when batching scale feed ingredients by 98.5kg, close gate. Pre-load correction theory followings: when weighing scale detect offset data of certain times at the same direction (recent feeding actual values are more than target value or less than it), indicator should adjust by average of offset data. modifier formula 为: new pre-load = previous pre-load + average offset data. 0: prohibition advance correction. Max range of advance correction: 0~coarse feeding.
Working timer parameters	related parameters of this group, please refer to illustration of time parameter during batching
start time delay	sdt = (0.0~9.9s)
Forbidden comparing time	cit = (0.0~9.9s)
delay check time	ttc = (0.0~9.9s)
Discharge delay time	tdc = (0.0~9.9s)
Error Estimation frequency	Range 0~99, to be set 0, checking out of tolerance is forbidden, to set 1~99, every 1 to 99 times batching, check out of tolerance of each ingredient after final feeding, if tolerance of related ingredients exceed defined value, then indicator would alarm.
allowance Error range	Define target value of each ingredient as percentage (0.0~9.9%). For example: F6.4A range 1.0%, target value of certain ingredient is 100KG, if actual value of this is not within range 99~101kg, then 'TOL' of indicator would alarm. Meantime indicator entry halt status of batchin.
Automatic tare interval	Range 0~99 0 = prohibition auto-tare 1 ~99 = auto-tare every 1~99 times
Discharge mode	Auto or manually
Number of Batching	1 to 8 ingredient to be selected
Two speed feeding sequence	Sequential or Simultaneous
Batching State Save	Enable or Disable



Attachment: Illustration of time parameters during batching

**n** start delay time (SDT)

Start delay time should be executed every batching. When gate of discharging is closed, scale hopper will shake due to mechanical action, weigh hopper will shake for some period, weight data will vary at zero around, start delay some time (SDT). Indicator receive signal to start, delay (0~9.9s), then begin to work, period can be set.

**n** comparison prohibition time (CIT)

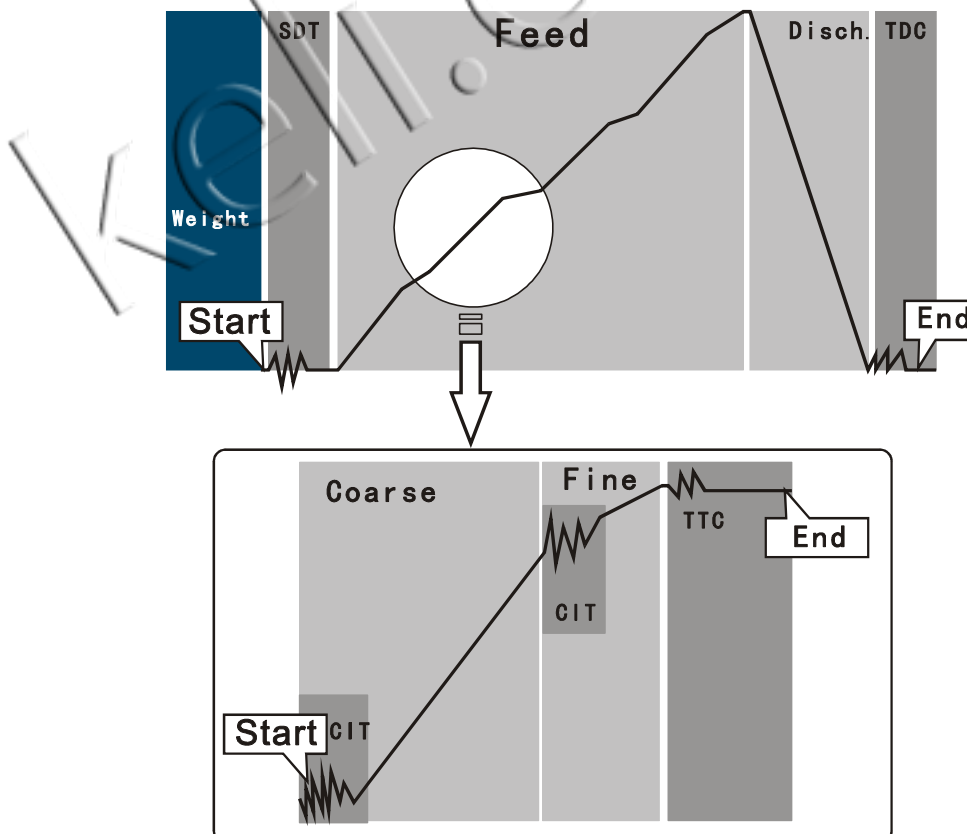
CIT will be executed 2 times when feeding each ingredient. When begin to feed ingredient to weigh hopper or stop feeding, weigh hopper will shake due to ingredients shock or suddenly stop, weigh data is not, probably it is more than defined target value, indicator would define that feeding value has reached target value wrongly, (this issue is significant, especially weigh hopper is too light). So beginning of feeding ingredient to weigh hopper or stop feeding for some time, comparison between indicated weigh data and defined target value is forbidden, to avoid disturb due to shaking during this period, time can be set properly.

**n** delay checking time (TTC)

TTC should be executed to feed each ingredient on time. To avoid possible disturb, weigh scale should delayed for some period after feed certain ingredient, then record weigh data of ingredient and check out of tolerance, to ensure recording weigh data of ingredient and checking is processed when weigh data is stable, time can be set properly.

**n** delay discharging time (TDC)

TTC should be executed for each dispatching. When discharging, ingredient in weigh hopper is less than zero, gate of discharging will be close for some period time can be set properly.

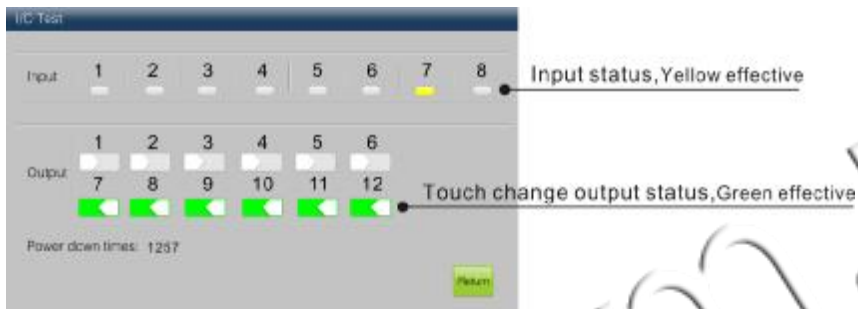


## 11 System setting



### 11.1 I/O test

! when test I/O interface, disconnect test interface from other system, avoid any uncontrollable machine operation



### 11.2 parameter initialization



press **【cancel】** not any change.

### 11.3 recipe initialization



press **【cancel】** , not any change.

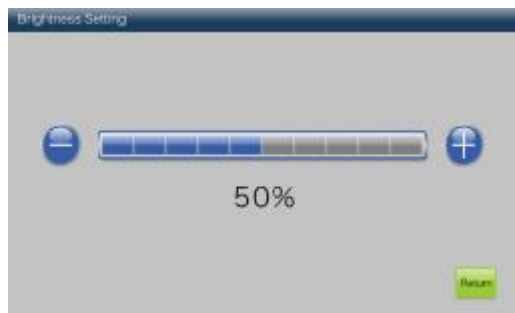
list of default parameters

instruction	parameters
Scale Parameters	1、 Manual Tare :allow 2、 Manual zero range :20% 3、 tracing zero range:Prohibit 4、 dynamic detecting range: 5d 5、 Digital Filtering Intensity:5 6、 Zero Rang of Boot : Prohibit
parameters of communication	COM1: RS232 1、 continuous protocol 1 2、 Baud rate 9600 3、 8-bit data bits, no parity bit
	COM2: RS485 1、 MODBUS RTU protocol 2、 Baud rate 9600 3、 8-bit data bits, no parity bit
	communication node address: 1
batching parameters	1、 <b>control mode:</b> Sequential Feeding 2、 Error of zero: 20 3、 Automatic Correction Frequency of Fall: 0 (forbidden compensation) 4、 start time delay: 1.0S 5、 Forbidden comparing time: 0.5S 6、 delay check time: 1.0S 7、 Discharge delay time: 1.0S 8、 Error Estimation frequency: 0 (no judgement to out of tolerance) 9、 allowance Error range: 9.9% 10: Automatic tare interval: 1 11: Discharge mode: automatically 12: Number of Batching: 8 13: Two speed feeding sequence: start at the same time 14: Batching State Save: Disable
initialization of recipe data	0-9 recipe data: target: 500 Fine: 100 Preact: 50 Formula No.: 0 Preset batches: 0 clear ingredient accumulated consumption , already completed clearing to batches。

## 11.4 Date and time



## 11.5 brightness adjustment



## 11.6 touch screen adjustment



3-point calibration, press "+" symbol in sequence, back automatically.

## 12 Maintenance

### 12.1 Common repair kits

multimeter, stimulator of load cell, 2.5mm slot type screwdriver, cross screwdriver, ect.

### 12.2 Daily clean

Clean surface of indicator by soft cotton cloth with neutral detergent.

Ask major serviceman to inspect at regular intervals, ensure indicator to work at optimum condition.

### 12.3 Solutions of FAQ

phenomenon	reason	solution
Not vary while load or unload onto weighing scale	<ol style="list-style-type: none"><li>1、 No calibration, or calibration coefficient is lost;</li><li>2、 Wires of load cells are loose;</li></ol>	<ol style="list-style-type: none"><li>1、 re-calibrate;</li><li>2、 checking connection of load cells;</li></ol>
calibration failure	<ol style="list-style-type: none"><li>1、 scale is unstable;</li><li>2、 wires of load cells are loose or connect wrongly;</li></ol>	<ol style="list-style-type: none"><li>1、 calibrate when scale is stable;</li><li>2、 checking connection of load cells;</li></ol>
“out of range ”	weigh data is less than displaying range at negative;	<ol style="list-style-type: none"><li>1、 zero value of system is offset, check installation status, then re-calibrate;</li><li>2、 wires of load cells are connect improperly or loose;</li><li>3、 load cells are damaged.</li></ol>

Packing list

please check related content whether they accord with lists as followings.

No.	content	quantity	remarks
1	R35 indicator	1	
2	R35 technical/operation manual	1	
3	certificate of quality	1	

note: 5pcs connectors, inserted into indicator.

packager:

inspector:

Kell.com.ua

Keli.com.ua



Keli sensing technology (Ningbo)co.,ltd

Address:NO199,Changxingroad,Jiangbei istrict,Ningbo,China

Post code:315033

Service hotline: 400-887-4165

800-857-4165

Fax: 0574-87562271

<http://www.kelichina.com>

49031020004

201607V0. 12