



超载限制器

KQC-C

使用说明书

(VII-1)

2014年08月版

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宁波柯力传感科技股份有限公司

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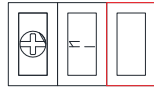
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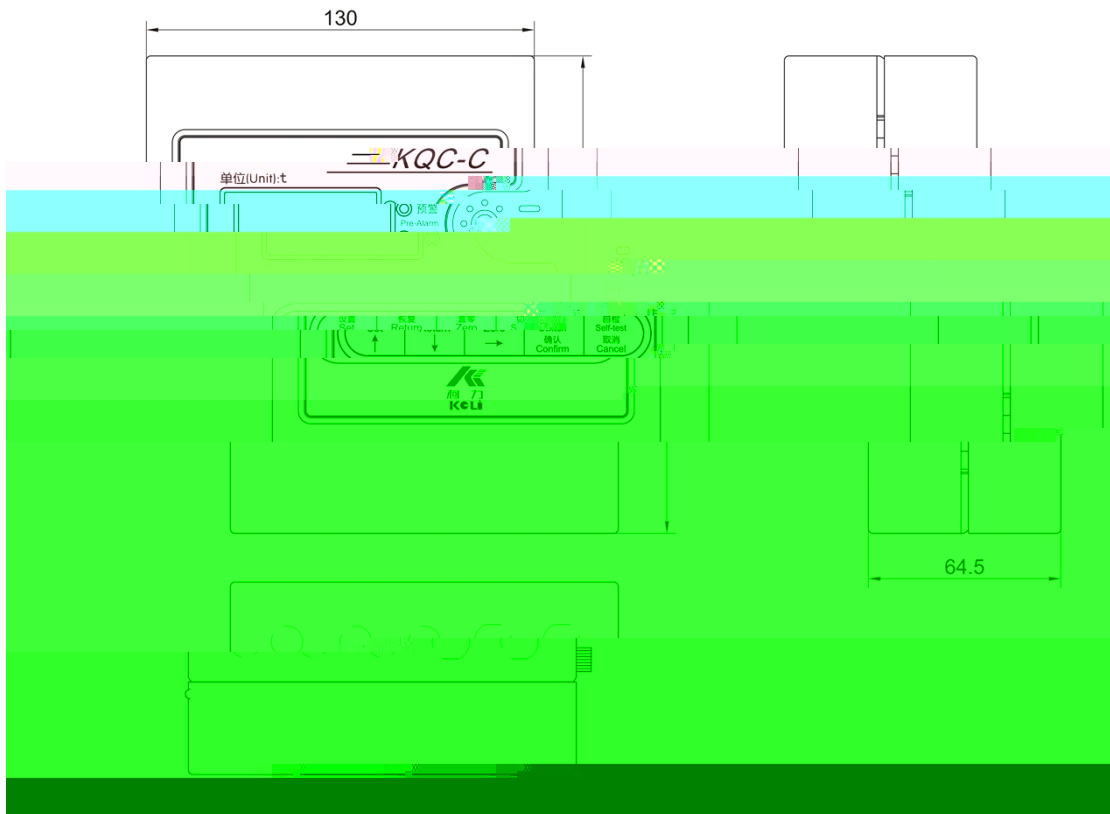
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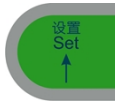
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The First Chapter Outlines

KQC-C type overload limiter is a new type of intelligent weight overload protector, which use the load cell to measurement the load, KQC-C indicator display the actual load, When the load reaches its rated load, it gives an alarm signal, and can give the switch output.

KQC-C type overload limiter has the advantages of reasonable structure, convenient installation, debugging easy and reliable operation, high accuracy advantages, etc.

Using a single load cell can be used for tower crane, hoist; ect. Using two load cells can be used for construction elevator.

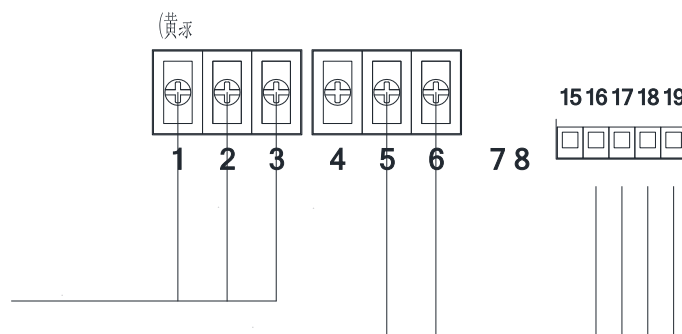
The Second Chapter Technical Parameters

- Working power AC220V/50Hz
- Comprehensive error 5%F.S.
- Power supply DC5V
- Relay output contact capacity 10A/250VAC
- Input signal range 0mV--15mV
- Maximum net input signal 15mV
- Display digit 4 digits
- Work temperature -20°C-60°C
- Relative humidity 85%RH
- Recommended preheating time 10min
- Indicator size 130mm*160mm*64.5mm
- Indicator weight 0.8kg

The Third Chapter Installation and Connection

Because KQC-C type overload limiter adopts industrial chassis with a wiring terminal, therefore the installation is very simple.

There are 4 terminals in the internal overload protector, they used to complete the overload protection device of external connection, conventional wiring shown as below:



The terminal instrument in the following arrangement method: open the instrument front cover, the first terminal is defined as first terminals in right to left order, a total of 18 external connecting terminals.

10-14 and 15-19 terminals are the terminal of two load cells, load cell 1 and load cell 2 can be interchangeable, 10-19 terminals of the load cell defined as follows:

14 19 terminal : EXC+

13 18 terminal : SIG+

12 17 terminal : SIG-

11 16 terminal : EXC-

10 15 terminal : SHLD

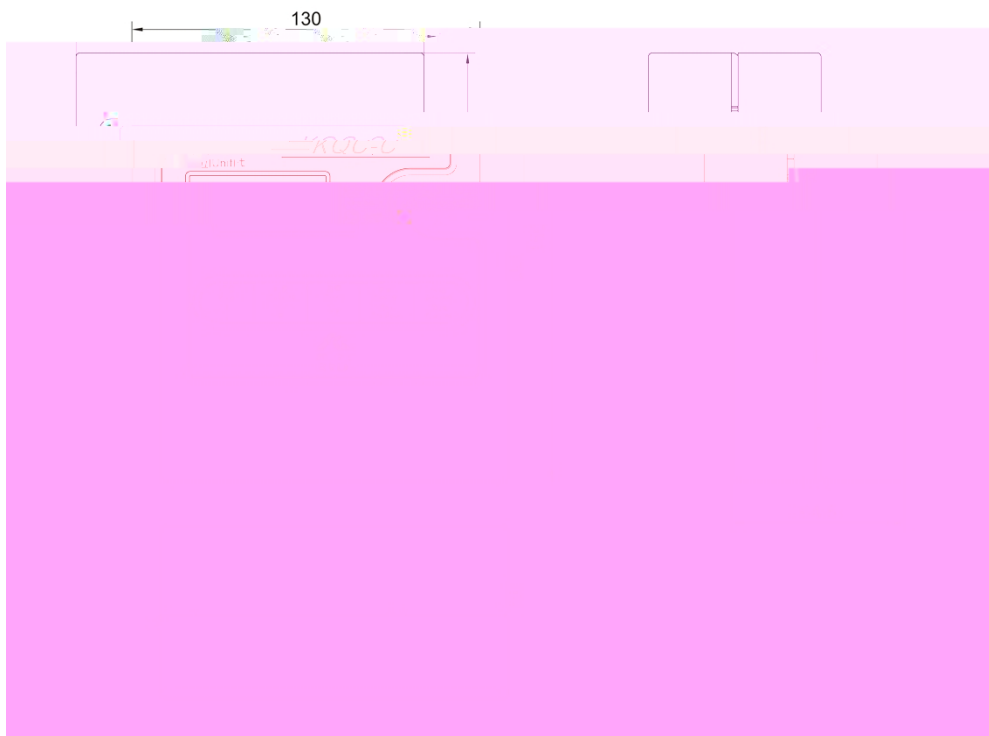
Note: if use the single load cell, the load cell is connected to the terminal CN1, and in the menu (E1) set the load cell number is 1.

7-8 terminal used for setting the control end, when dial to "ON", indicator allows setting, when shift to "OFF", indicator not allows setting.

4-6, terminal is the output of overload relay , the 4-5 terminal is a normally open contact, the 5-6 terminal is normally closed contact When the load exceeds the alarm set value, the relay is energized , the normally open contacts 4-5 terminal are connected, the normally closed contact 5-6 are disconnected

1-3, terminals are the power input of the overload protection device , the input power is AC220V. 3 terminal is FireWire (L), 2 terminal is zero line (N), 1 terminal is ground (E). The indicator requires reliable grounding.

Warning: when the equipment connects the power , terminals have the dangerous voltage, please do not touch!



Introduction of the keyboard function:



In the weighing condition, enter the parameter setting and calibration status; shows [settings]

In the setting condition, select menu or increase the current parameter values; shows []



In the weighing condition, restore the default settings shows [recover]

In the setting condition, select menu or reduce the current parameter values; shows []



In weighing condition, press this key, the weight will display zero shows [Zero]

In the setting condition, move the flashing to right. shows []



In the weighing condition, the display switching [weight / percentage / code]; shows [switch] .

In the setting condition, confirm and save the setting parameters; shows [confirmed]



In the weighing condition, switching [normal] / warning / alarm switch shows [self-chek]

In the setting condition does not save The current setting parameter; shows [Cancel]

The Fifth Chapter Operation Method

Star-up and start-up automatic setting zero

After the power is switched on, the indicator start "0.0.0.0.", "9.9.9.9." strokes self-test, and then comes to automatic weighing state. , if the weight value deviates from zero, but still in a range of settings, the indicator will automatically boot to zero. Auto zero range 0%FS 2%FS 4%FS 10%FS 20%FS Optional

Manual reset to zero

1.

2.

Restore the default parameters

set 1 2 is set on DIP switch selection

Display parameter switching

switch

Self-checking function

Chapter VI Calibration and related operation

press setting enter menu operation mode,, press or to select If select analog calibration, no need parameter settings.

Note press enter to save the parameter adjustment, and enter to next step,

press cancel not save current parameters, and enter to next step.

Two calibration modes are optional, we suggest analog calibration mode..

Setting of calibration codes

Before calibration, input calibration code, only code is right then calibrate.

1. open the front cover of indicator set the power board set **1** set **2** to **on** position
2. input code

Under“ . ” press confirm to code parameter setting.

Steps	Operation	display	comments
1 input pre-setting code	press or press confirm or cancel	0 0 0 0 Code right display Code wrong display	Display initial code Input pre-setting code 0605 Code right, enter to ZERO parameter setting, code wrong, quite

Note: after power off, indicator code automatically restore to initial code.

Analog calibration model

1. open the front cover of indicator set the power board set **1** set **2** to **on** position
2. ZERO adjustment: do not load anything in the lift
3. ZERO parameter setting

Under“ . ” press confirm enter into ZERO parameter setting

Steps	Operation	display	comments
1 select calibration mode	press or press confirm or cancel		Display calibration mode Adjust calibration mode, select H1 enter into analog calibration mode. Enter into load cell ZERO calibration.
2 Load cell ZERO calibration	press confirm or cancel	9 9 9 9 8 8 8 8 7 7 7 7 6 6 6 6 5 5 5 5 4 4 4 4 3 3 3 3 2 2 2 2 1 1 1 1 0 0 0 0	No-load and stabilize, then press confirm 10S Note Now operators should leave the operation room, after the Buzzer over(at least 1s) quite

4 Analog full-scale calibration parameter setting

under“ . ” press confirm enter into analog full-scale calibration parameter setting

Steps	Operation	display	comments
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1 input
load cell press
sensitivity
y

5. After finishing the calibration, choose switch S2 **setting 1 setting 2** on the source board to off.

Modify the quantity of load cell and correct the direction of force

1. Open the front shell of indicator, choose switch S2 **setting 1 setting 2** on the source board to on..

2. Through or choose menu, under“ ” press enter to enter into setting the number of load cell and the direction of pressure.

Steps	Operation	Display	Notes
setting the number of load cell	press or press enter		Display the number of load cell 2pcs Adjust the number of load cell, if connect 2pcs load cells, change into 2, if connect 1pc load cell, change into 1 Enter into setting the load cell’s director
setting the parameter of the load cell’s direction	press enter press or press enter		Displaying the direction of pressure is positive. Adjust the direction of pressure. ,if the direction of pressure is positive, change into 1, if the direction of pressure is negative, change into -1. Quit.

3. After finishing the calibration, choose switch S2 **setting 1 setting 2** on the source board to off.

Chapter 7 other parameter setting

Open the front shell of indicator, choose switch S2 **setting 1 setting 2** on the source board to on..

Before parameter setting, confirm the correct calibration code

After finishing the calibration, choose switch S2 **setting 1 setting 2** on the source board to off..

7.1 Operating parameters 1 setting

under“ ” press enter enter operating parameters 1 setting

Steps	Operation	Display	Notes
input the rated loading weight	press or or Press enter or cancel	. .	Display current rated load 1.9t. Adjust rated load to 02.0, the mount of 0.1t Enter the warning point setting

Setting the warning point	Press or Press enter or cancel		Display the current elevator warning point 90% Adjust the warning point to 90, the amount of 1% Enter into the setting Delay alarm point
setting Delay alarm point	Press or Press enter or cancel	.	Display the current time delay alarm 100% Adjust the delay alarm point to 100, the amount of 1% Enter into the setting the relay delay time
setting the relay delay time	Press or Press enter or cancel	. .	Display Open delay time 3.0s Regulating relay turn-on delay time to 3.0 Enter into the setting prompt alarm point
setting prompt alarm point	Press or Press enter or cancel		Display prompt alarm point 120% Adjust prompt alarm point to 120, the amount of 1% Quit.

7.2 Operating parameters 2 setting

under“ ” press enter enter operating parameters 2 setting

Steps	Operation	Display	Notes
setting division value	Press or Press enter or cancel		Display current division value 2 Adjust division value to 1 Enter into the setting of Manual zero range
setting Manual zero range	Press or Press enter or cancel		Display Manual zero range to 100% Open the function of Manual zero range.Choose on. Enter into Zero range parameter settings.
setting Zero range parameter settings	Press or Press enter or cancel		Display Zero range parameter settings to 0%FS Adjust Zero range, choose 0 Enter into the setting of Zero tracking range.
setting Zero tracking range	Press or Press enter or cancel		Display current Zero tracking range 2e. Adjust Zero tracking range, choose 2 Enter into filtering parameters setting.
setting filtering parameters	Press or Press enter or cancel		Display filtering coefficient powerful. Adjust filtering coefficient to H3 Enter into display mode

mode parameters	Press enter or cancel		parameter setting to H2 Quit.
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Chapter Eight Parameter Setting Menu

Parameter Selection Menu

No	Display	Parameter instructions	Parameter notes
1		Operating parameter1 setting	Press [enter] to do operating parameter1 setting
2		Password parameters setting	Press [enter] to do Password parameter1 setting
3		Zero parameter setting	Press key [enter] to do zero parameter setting
4		Full scale calibration parameter setting	Press key [enter] to do full scale calibration parameter setting
5		Operating parameter2 setting	Press [enter] to do operating parameter2 setting
6		Exit	Press [enter] to do Exit parameter1 setting

Operating Parameter1 Setting Menu

No	Display	Parameter instructions	Parameter notes
1		lifter rated load (net weight) setting	Setting range 0.5t — 20t
2		Warning point setting	Setting range 85% — 95%
3		Delay alarm point setting	Setting range 100% — 110%
4		Warning point Delay time setting	Setting range 0.1s - 9.9s
5		Alarm point setting	Setting range 115% — 130%

Password Parameter1 Setting Menu

No	Display	Parameter instructions	Parameter notes
1		Input calibration password	Input Preset Password 0605 Press key [enter] to do the next step Notes right password goes to Zero Parameter1 Setting wrong password goes to display Exit

Zero Parameter1 Setting Menu

No	Display	Parameter instructions	Parameter notes
1		Choose calibration	X=1 Simulation calibration mode

		mode	X=2 Real calibration mode
2		Load cell zero calibration	empty load and stabilize and then press key [enter]

Simulation Full Scale Setting Menu

No	Display	Parameter instructions	Parameter notes
1	.	Load cell sensitivity setting	Setting range 0.50mV/V — 3.50mV/V
2	.	Load cell rated load setting	Setting range 0.5t — 60.0t This input is single load cell rated load

Real Full Scale Setting Menu

No	Display	Parameter instructions	Parameter notes
1		Load calibrating weight value setting	Setting range 0.2t — 60.0t Load calibrating weight value Closer to full load is better and after stabilization, press key [enter]

Load Cell Qty and Forced Direction Setting Menu

No	Display	Parameter instructions	Parameter notes
1		load cell connection qty setting	X = 1 load cell connection:1pc X = 2 load cell connection 2pcs
2		load cell forced direction parameter setting	XX = 1 Positive direction XX = 1 Negative direction

Operating Parameter 2 Setting Menu

No	Display	Parameter instructions	Parameter notes
1		Dividing valve setting	Setting range 1 2 5 10 20
2		Manual zero range setting	Setting range 0% 4% 10% 20% ON
3		Boot zero range setting	XX= 0 0%FS XX= 2 2%FS XX= 4 4%FS XX=10 10%FS XX=20 20%FS
4		Zero tracking range Setting	X=1 1.0e X=6 6.0e X=2 2.0e X=7 7.0e X=3 3.0e X=8 8.0e X=4 4.0e X=9 9.0e X=5 5.0e X=10 10.0e
5		Filter parameter setting	X=0 Close filter X=1 Low filter coefficient X=2 Medium filter coefficient X=3 High filter coefficient
6		Display Mode Setting	X=1 weight X=2 weight/ percentage

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