



PCE Americas Inc.
711 Commerce Way
Suite 8
Jupiter
FL-33458
USA
From outside US: +1
Tel: (561) 320-9162
Fax: (561) 320-9176
info@pce-americas.com

PCE Instruments UK Ltd.
Unit 11
Southpoint Business Park
Ensign way
Hampshire / Southampton
United Kingdom, SO31 4RF
From Outside UK: +44
Tel: (0) 2380 98703 0
Fax: (0) 2380 98703 9
info@pce-instruments.com

www.pce-instruments.com/english
www.pce-instruments.com

Manual

Crane Scales PCE-CS 3000 / 5000 N



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1 Introduction

Thank you for purchasing Crane Scales PCE-CS 3000 / 5000 N from PCE Instruments. These crane scales are useful for on-site check weighings. Power is provided via an internal rechargeable battery. In order to ensure exact dosing, the crane scales have a tare function and a sum function. The scales are delivered including hook, shackle and remote control in a carton. Due to their very robust design, the scales can be used under tough industrial conditions but also in trade, food, transport and other industries. The scales have been adjusted by the producer when you receive them.

2 Safety notes

2.1 General

Please read this manual carefully and completely before you use the device for the first time. The device may only be used by qualified personnel and repaired by PCE Instruments personnel. There is no warranty of damage or injuries caused by non-observance of the manual.

- The device may only be used in approved temperature ranges as laid down in the specifications. Exposure to extreme temperatures, direct sunlight, extreme atmospheric humidity or wetness (e. g. wet hands) must be avoided.
- The case must only be opened by qualified personnel of PCE Instruments.
- The instrument should never be placed with the user interface facing an object (e.g. keyboard side on a table).
- You should not make any technical changes to the device.
- The appliance should only be cleaned with a damp cloth / use only pH-neutral cleaner, no abrasives or solvents.
- If you do not use the device for a longer period of time, remove the batteries.
- The device may only be used with PCE accessories or equivalent.
- Do not use the device in potentially explosive atmospheres.
- Do not weigh more than the max. capacity.
- To avoid hazards arising from load lifting, the producer as well as the user have to comply with certain duties. The use of the measuring equipment may at no time be hazardous.
- The person responsible for the measuring equipment as well as the user must observe and fulfill the national regulations, e. g. regulations for accident prevention, safety regulations, work protection regulations and all other regulations applicable for the use of the measuring equipment.
- Other directives such as regulations and safety information for the use of the measuring equipment must be borne in mind, for example those of the crane producer, of the load suspension device producer and of the shackle producer.
- In this relation, the measurement equipment may only be mounted, put into service, maintained and operated by qualified personnel using appropriate protective equipment.
- The measuring equipment must not be changed and may only be used for intended purposes.
- The measuring equipment as well as all other equipment (e. g. the crane, the load suspension devices etc.) must be maintained, serviced and accordingly recorded regularly. Before each use of this equipment, you should at least visually inspect it. In case the equipment is incomplete or damaged (e. g. cracks, deformations, split-offs) the equipment must be taken out of service. It is urgently necessary to get advice from your company's responsible safety representative regarding this matter.
- Repairs may only be carried out by qualified personnel and only quality-tested spare parts must be used. All repairs, maintenance work and spare parts must be documented by the service partner.
- The manual as well as the safety notes should always be with the measuring equipment.
- The measuring equipment is **not ex-protected** and may not be used in potentially explosive atmospheres. The environmental conditions such as the temperature ranges can be seen from the manual and must be adhered to. Aggressive or corrosive areas of application must be avoided. When the temperature fluctuates severely, an acclimatization period must be included.
- The measuring equipment is only approved for lifting and weighing freely-moveable loads. Torsion (torsional stress) of the load is not allowed. Carrying persons, pulling, tearing, towing etc. of loads is prohibited.
- The permissible nominal load [MAX] of the measuring equipment and other equipment in use (e. g. crane, lifting fixation device etc.) may under no circumstances be exceeded.

- When you use the equipment, you must always observe the possible danger zone. Do not enter the danger zone during use. This does not only include the area directly under the load but also the areas which can be dangerous due to e. g. swinging ropes or other load suspension devices.

This manual is published by PCE Instruments without any guarantee.

We expressly refer to our general guarantee terms, they can be found in our general terms of business.

If you have any questions please contact PCE Instruments.

2.2 Maintenance and inspection

- Inspection ahead of each use of the measuring equipment

When inspecting the equipment before starting work, the user must make sure that

- there are no visible deformations or other damage such as cracks,
- all attachment parts are complete and in good condition (e. g. safety splits etc.)
- the existing complete system does not inherit any hazards (e. g. faulty mounting etc.)
- the environment does not inherit any hazards and if so, that counter measures are taken.

- Regular inspection / maintenance

| | |
|--|---|
| Every 3 months or 12500 measurements, whatever happens first. | <ul style="list-style-type: none">- Control the wear and tear of the attachment parts.- Control all dimensions.- Consider all possible deformations and damage.- Make sure that all parts work properly. |
| Every 12 months or 50000 measurements, whatever happens first. | <ul style="list-style-type: none">- Inspect all load-bearing parts, e. g. check for hairline cracks etc. Have maintenance carried out by qualified personnel. |
| Every 5 years or 250000 measurements, whatever happens first. | <ul style="list-style-type: none">- All load-bearing parts must be replaced. |
| Every 10 years or 500000 measurements, whatever happens first. | <ul style="list-style-type: none">- Service life of the equipment is over. Equipment must be replaced. |

Only the owner or user is responsible for damage and injuries resulting from improper use or non-observance of the regulations. The producer assumes no liability for improper use. The safety notes are extracts from the valid norms and regulations along with some notes and tips. These do not replace the valid regulations and norms but must be seen as assistance for safe use of the equipment. Please read the valid national norms and regulations.

If you have any questions, please contact PCE.

3 Specifications

| Technical data | |
|---|--|
| Measurement range PCE-CS 3000N PCE-CS 5000N | 3000 kg / 3 t 5000 kg / 5 t |
| Resolution PCE-CS 3000N PCE-CS 5000N | 0.5 kg 1 kg |
| Tare range | 100 % f. s. |
| Zero range | 4 % f. s. |
| Value measured after | ≥ 2 seconds |
| Overload | 100 % f. s. + 9 verification scale interval (v. s. i.) |
| Limit load | 150 % |
| Display | 2.2 cm x 1.1 cm HTN LCD with backlight |
| General | |
| Ambient temperature | -10 °C ~ +40 °C |
| Atmospheric humidity during use | 20 °C ≤ 90 % |
| Power supply | 3 x 1.5 v AAA battery |
| Weight | 140 g (without batteries) |
| Dimensions (depth of the meter) | 130 x 80 x 60 mm |

Delivery contents

- 1 x crane scales
- 1 x charger
- 1 x remote control (incl. batteries)
- 1 x manual

4 System description

4.1 Meter

- 4-1 Infrared sensor
- 4-2 "Zero" key
- 4-3 "Power" key
- 4-4 Display
- 4-5 "Tare" key
- 4-6 "Hold" key



| | |
|-----------------|------------------------------------|
| Display | shows the measurement values |
| "Power" key | switches the device on or off |
| Infrared sensor | sensor for remote control |
| "Tare" key | to tare the device |
| "Zero" key | calibrates the measurement to zero |
| "Hold" key | holds the measured value |

4.2 Remote control

- 4-1 Up / Zero
- 4-2 Hold key / Enter
- 4-3 Down
- 4-4 Change unit
- 4-5 Switches the device off
- 4-6 Right / Tare
- 4-7 Decimal point
- 4-8 Left
- 4-9 Setup



| | |
|------------------|--|
| Up / Zero | to go up one value to set the measurement value to zero |
| Hold key / Enter | to hold the value confirms what you have entered |
| Down | to go down one value |
| Change unit | to change the unit |
| Right / Tare | to go right one value to tare the measurement value |
| Decimal point | to put a decimal point |
| Left | to go left one value |
| Setup | to enter settings |

5 Instructions

5.1 To switch the device on and off

- Press the "On/Off" key until you hear an acoustic signal. The display will now indicate "8.8.8.8.8." After this, the maximum weight "3000.0" is shown. This means 3000 kilogrammes or 3 tonnes. At the end, the battery level is indicated in per cent. "Bat (percentage value)".
- Hold the "On/Off" key until you hear an acoustic signal. Then release the button. The device switches off. The display will again show the battery level "Bat (percentage value)". The word "off" appears on the display and the device is off.
- You can also use the remote control to switch off the device. To do so, press the "Power" key on the remote control.
- The device cannot be switched on by the remote control.

5.2 Zero

- As soon as "STB" appears on the display, the measured value is stable. Now you can use the zero function.
- Press the "Zero" key. The display will now show "Zero".
- You can also use the remote control for this purpose. To do so, press "→0←".

5.3 Tare

- Press the "Tare" key. The display will now show "TARE".
- You can also use the remote control. To do so, press "→T←".
- Make sure that the value is stable. Otherwise, "Err" appears and the scales have not been set to 0.

5.4 To accumulate values

If you would like to sum the measured values you can do that with the scales.

- Attach the object to be measured to the scales.
- Wait until the value has stabilised and "STB" is displayed.
- Press "ACC" on the remote control. The display will now show "ACC". The value was added.
- To get the sum, press the F1 key. The value is now displayed. To go back to normal measurement mode, press and immediately release the "Power" button.
- To delete the result, you must switch off the scales.
- You can also delete the value last saved. To do so, press the "DEL" key on the remote control.

5.5 To hold a value

- To freeze the displayed value, press  on the remote control. The value will now be frozen. The display will now show "H".
- To go on with the measurement, press  again.

5.6 To change the measurement unit

- Use the remote control to change the measurement unit. Press the "F2" key to switch between "KG" and "LB".
- If both units are hidden, they are in the user unit. Here, the user unit value you have set beforehand is displayed (8,8.1,8.1.10).

5.7 Device setup

- To go to the device setup, you need the remote control. Press the  key and directly after this the  key. The display will now indicate "Setup" which means that you are in the device setup.

5.7.1 To set automatic switch-off

- Press . The display will now show “off (time)”.
- Now press “→0←” to change the time in minutes.
- To save the settings, press  until “End” is displayed.

5.7.2 To set the backlight

- To set the backlight, press  twice. The display will now show “br (brightness)”.
- Press “→T←” now to set the backlight. You can choose between 0, 1, 2 and 3.
- To save the settings, press  until “End” is displayed.

5.7.3 To set the backlight duration

- To set the backlight duration, press  once. The display will now show “ldl (backlight duration)”.
- Now press “→T←” to set the duration. You can choose between 0, 5, 10, 15, 30 and 60 seconds.
- To save the settings, press  until “End” is displayed.

5.8 Troubleshooting

| Symptom | Reason | Solution |
|------------------------------------|--|---|
| Device does not switch on anymore. | The battery is flat or broken. | Charge the device. Have the device repaired. |
| Backlight is flashing. | The battery is almost flat. | Charge the scales. |
| The keys do not work anymore. | The keys are broken. | Have the device repaired. |
| Display does not remain stable. | Device is broken. | Have the device repaired. |
| | The attached product does not stand still. | Stabilise the product. |
| “Err” during taring and zero. | The attached load does not stand still. | Stabilise the attached product. |

5.9 Special setup

5.9.1 General

Important: The following settings should not be made by lay persons. Incorrect settings can disable the scales. Be absolutely sure before you use the special setup!

- To go to the special setup of the device, you need the remote control. To do so, press the “▲” key twice. The display will now show “P0000”. Here, you can now enter the codes for the individual sections by means of the blue arrow key and the remote control. You confirm the code by pressing .

5.9.2 Device configuration

- The code for this configuration is “0258”.
- Press  to confirm the code. “Scale” is displayed.

5.9.2.1 To change the accuracy of the measurement

- Press the  key again. “E (accuracy)” is displayed.
- By means of the arrow keys on the remote control, you can change the accuracy. You can choose between 0.001, 0.002, 0.005, 0.01, 0.02, 0.05, 0.1, 0.2, 0.5, 1, 2, 5, 10, 20 and 50.
- To save the settings, press and hold  until “End” is displayed.

5.9.2.2 Automatic zero tolerance

- To set automatic zero tolerance, press  twice. “A:” (percentage value) is displayed.
- By means of the arrow keys on the remote control, you can adjust the tolerance. You can choose between 0 (off), 2 (± 2 % f. s.), 3 (± 3 % f. s.), 4 (± 4 % f. s.), 10 (± 10 % f. s.), 20 (± 20 % f. s.) and 100 (± 100 % f. s.).

- To save the settings, press and hold  until “End” is displayed.

5.9.2.3 Manual zero tolerance

- To set automatic zero tolerance, press  three times. “n:” (percentage value) is displayed.
- By means of the arrow keys on the remote control, you can adjust the tolerance. You can choose between 0 (off), 2 (± 2 % f. s.), 3 (± 3 % f. s.), 4 (± 4 % f. s.), 10 (± 10 % f. s.), 20 (± 20 % f. s.) and 100 (± 100 % f. s.).

- To save the settings, press and hold  until “End” is displayed.

5.9.2.4 Zero tracking range tolerance

- To set the zero tracking range tolerance, press  four times. “:t” (value) is displayed.
- By means of the arrow keys on the remote control, you can adjust the tolerance. You can choose between 0 (off), 2 (± 2 % v. s. i.), 3 (± 3 % v. s. i.), 4 (± 4 % v. s. i.), 10 (± 10 % v. s. i.), 20 (± 20 % v. s. i.) and 100 (± 100 % e.).

- To save the settings, press and hold  until “End” is displayed.

5.9.2.5 Function not explained

- Now press  five times. “:” (value) is displayed. This function is not explained.

5.9.2.6 To secure zero

- To switch zero securing on or off, press  six times. “5:(on/off)” is displayed.
- By means of the “up” and “down” arrow keys, you can activate (on) or deactivate (off) this function. If you activate this function, the automatic zero function is deactivated.

- To save the settings, press and hold  until “End” is displayed.

5.9.2.7 To set the measurement interval

- To set the stability strength, press  seven times. “Stb (strength)” is displayed.
- By means of the arrow keys on the remote control, you can adjust the strength. You can choose between 0 (off), 1 (weakest), 2 (weak), 3 (normal), 4 (strong) and 5 (strongest).

- To save the settings, press and hold  until “End” is displayed.

5.9.2.8 Dynamic weighing

If you need a quick weight reading and the accuracy is not that important, this function is advantageous for you.

- To switch the “dynamic weighing” function on or off, press  eight times. “dy(on/off)” is displayed.
- By means of the arrow keys “Up” and “Down” you can activate (on) or deactivate (off) this function.

- To save the settings, press and hold  until “End” is displayed.

5.9.2.9 To set the gravitational acceleration

- To set the gravitational acceleration, press  nine times. “G (value)” will be displayed.
- You can change the value by means of the arrow keys on the remote control. The lowest value is 0,000 and the highest value is 9,999. 9,794 is the standard value.
- To save the settings, press and hold  until “End” is displayed.

5.9.2.10 To set the user unit

In case you have your own unit or want the weight to be displayed in a unit quantity, this function is suitable for you.

- To change the user unit, press  ten times. “U (value)” is displayed.
- You can change the value by means of the arrow keys on the remote control. You can choose between 0,000 and 9,999. To use this function you must switch the measurement unit to “UN” when carrying out the weight measurement. The user unit depends on the kilogrammes.

5.9.3 Calibration

- The code for this configuration is “8416”.
- You can confirm the code with . “CAL” is displayed.
- Now press  once. “Un(YG/LB)” is displayed.
- With the arrow keys “Up” and “Down”, you can now switch between YG (kg) and Lb (lb).

5.9.3.1 To set the gravitational acceleration for calibration

- To change the gravitational acceleration for calibration, press  again. “G(value)” is displayed.
- You can change the value by means of the arrow keys on the remote control. You can choose between 0,000 and 9,999. The standard value is 9,794 and the world average is 9.810.

5.9.3.2 Maximum capacity

- To change the maximum capacity, press  again. 5 numbers are displayed.
- You can change the value by means of the arrow keys on the remote control. You can choose between 0,000 and 9,999. The standard value is 01000. **Do not exceed the maximum value of 3/5 tonnes (depending on model)!!!**
- To save the settings, press and hold  until “End” is displayed.

5.9.3.3 Linear calibration

For calibration, 3 different weights with high weight differences are recommended. The scales must hang freely at each measurement.

- To change the linear calibration, press  again. "LoAd0" is displayed.
- Press  again to start the measurement.
- Wait until the measurement is stable.
- Press  again. The display will now show "LoAd1".
- Then press  again. The display will show 00000. By means of the arrow keys you can now enter the weight that you want to attach first. You can also set lower values by pressing the F1 key.
- Confirm your entry with .
- Wait until the measurement is stable.
- Press  again. The display will now show "LoAd2".
- In case this is sufficient, switch the device off or press  to carry on.
- Press  again. The display will show 00000.
- By means of the arrow keys on the remote control you can now enter the second weight unit. Attach the second weight unit to the scales. With F1, you can also make smaller entries.
- Press  and wait until the value stabilises.
- Now press . The display will show "LoAd3".
- If this is sufficient, switch the device off or press  to carry on.
- Press  again. The display will show 00000.
- By means of the arrow keys on the remote control you can now enter the third weight unit. Attach the third weight unit to the scales. With F1, you can also make smaller entries.
- Press the  key. Another measurement is carried out.
- Wait until the measurement is stable and then press the  key to finish the calibration.

6 Disposal

For the disposal of batteries, the 2006/66/EC directive of the European Parliament applies. Due to the contained pollutants, batteries must not be disposed of as household waste. They must be given to collection points designed for that purpose.

In order to comply with the EU directive 2012/19/EU we take our devices back. We either re-use them or give them to a recycling company which disposes of the devices in line with law.

If you have any questions, please contact PCE Instruments.

7 Contact

If you have any questions about our range of products or measuring instruments please contact PCE Instruments.

7.1 PCE Instruments UK

By post:

PCE Instruments UK Ltd.
Units 12/13 Southpoint Business Park
Ensign Way, Southampton
Hampshire

United Kingdom, SO31 4RF

By phone:

Support: 02380 987 035
Sales: 02380 987 030

7.2 PCE Americas

By post:

PCE Americas Inc.
711 Commerce Way
Suite 8
Jupiter
33458 FL
USA

By phone:

Phone: 410-387-7703
Fax: 410-387-7714

