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Manual Dynamometer PCE-CS 300



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1 Safety notes

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.

- If the device is not in use for a longer period of time, the batteries should be taken out. Otherwise the device can get damaged.
- Using the device in another way than described in this manual can lead to dangerous situations.
- Do not expose the device to extreme temperatures or humidity, direct sunlight, or moisture.
- Only use it with dry hands.
- It is not allowed to modify the device in any way.
- The device should be cleaned only with a damp cloth. Do not use solvents or abrasives.
- It is only permissible to use the device with spare parts of PCE Instruments or equal, tested products.
- Moreover, the device must only be used under conditions stated in the specifications.
- The device must not be used in explosive atmospheres.
- Never measure higher weights than described in the specifications as this could damage or destroy the device.
- Since the lifting of weights can be dangerous, the manufacturer and the user have the special duty to prevent dangerous situations. Using measuring equipment like this must at no time involve any hazard.
- The people responsible for measuring equipment and the user have to observe national regulations e.g. accident prevention, safety rules, work regulations and other regulations applicable to the use of this measuring equipment.
- When using this device, it is also important to pay attention to the guidelines, regulations and safety instructions made for example by the crane or shackles manufacturer.
- The assembly, commissioning, maintenance and use of the device is only allowed by trained personnel wearing protective clothing.
- Repairs and maintenance work of the equipment must be carried out by trained staff on a regular basis and must be documented along with the spare parts used. The equipment must be at least visually inspected before each use. If you see that any part of the equipment is incomplete or if there is damage like cracks, deformations or split-offs, the equipment must be banned from use. Please talk to the person responsible for safety at your company.
- Manuals and safety instructions must always be with the device.
- The equipment is not ex protected and must not be used in explosive areas. Furthermore, the environmental conditions have to match with the values stated in the specifications of this manual. Aggressive and corrosive areas need to be avoided. When there are considerable temperature fluctuations, some time for acclimatisation must be taken into account.
- The device is suitable for lifting and weighing freely moveable loads only. Torsional stress must not occur. Transporting people, pulling and tearing loads is not allowed.
- The permissible nominal loads [MAX] of the measurement device and other equipment in use should not be exceeded.
- While using the device, you have to make sure not to enter the danger zone which is not just the area below the load but also the area around the load.

This manual is published by PCE Instruments without any guarantee.

We expressly point to our general guarantee terms which can be found in our general terms of business.

If you have any questions please contact PCE Instruments.

2 Maintenance and testing

Check the device before each use

You must examine the device before using it. When checking the device, the user has to convince himself/herself,

- that the device is not deformed or otherwise damaged, (e. g. cracks).
- that every attachment is in flawless condition (e. g. hooks).
- that the complete system works without any hazards (e. g. improper installation).
- that the whole area is free of danger and if not, that countermeasures are taken.

- **Regular control / maintenance**

Every third month or 12,500 measurements, depending on what happens first	<ul style="list-style-type: none"> - Check the degree of wear. - Check the dimensions. - Check for any deformation and damage. - Verify proper function of every part.
Every year or 50,000 measurements, depending on what happens first	<ul style="list-style-type: none"> - Check every load-bearing parts for e. g. hair cracks. This must be carried out by trained staff.
Every 5 years or 250,000 measurements, depending on what happens first	<ul style="list-style-type: none"> - Exchange all load-bearing parts.
Every 10 years or 500,000 measurements, depending on what happens first	<ul style="list-style-type: none"> - Service life of the device has run out. Exchange the complete equipment.

3 Specifications

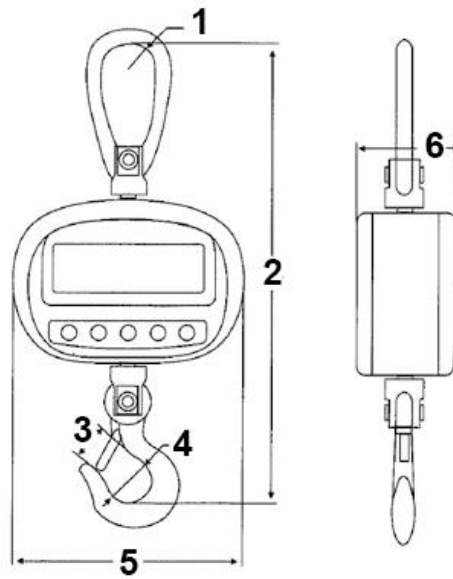
Technical specifications	
Weighing capacity	300 kg / 661.39 lb
Readability	Selectable: 0.1 ... 0.05 kg / 0.22 ... 0.11 lb
Repeatability	0.1 kg / 0.22 lb
Min. weight	2 kg / 4.41 lbs
TARE	full range
Protection	IP 54 (dust and splashproof)
Settling time	<10 s
Max. overload	50%
Display	20 mm LCD
Power supply	four batteries of size 'AA'
General information:	
Operating temperature	-10°C ... +40°C
Operating humidity	30% ... 90%
Weight	1.2 kg / 2.65 lbs incl. batteries

4 Accessories

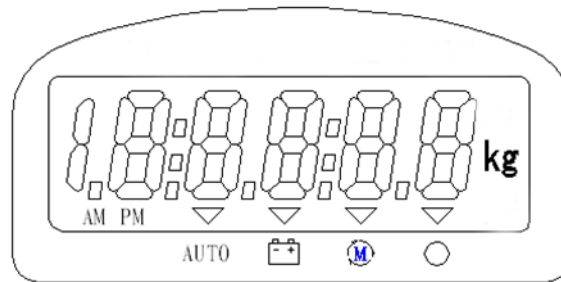
- 1 x PCE-CS 300
- 4 x AA batteries
- 1 x snap hook
- 1 x hook
- 1 x remote control





5 System description

1. 30 mm
2. 295mm
3. 20 mm
4. 23 mm
5. 152 mm
6. 67 mm









LC display

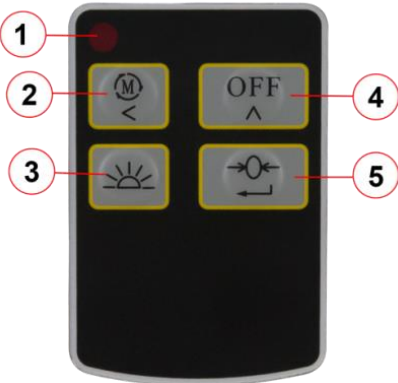


	When the arrow above this icon lights up, this means that the backlight will be on during operation.
	The arrow above this icon lights up when the battery is low.
	This icon indicates that the resolution / readability has been set to 0.10 kg.
	This icon means that the value is stable and can be recorded by the user.

Keys on the scales

	Infrared interface
	Tare
	Resolution between 0.10 kg and 0.05 kg
	Turns device off (Note: In this mode, there will still be high power consumption (approx. 30 mA). Therefore, we recommend to use the red key on the rear side of the scales to power off the scales completely)
	Key not in use
	ON / OFF

Keys on the remote control

<ol style="list-style-type: none"> 1. LED indicator 2. Change readability / Switch on from standby mode and standby 3. Key not in use 4. Off / standby (Note: In this mode, there will still be high power consumption (approx. 30 mA). Therefore, we recommend to use the red key on the rear side of the scales to power off the scales completely) 5. Tare / switch on from standby mode 	 <p>The image shows a black remote control with five numbered callouts: 1 points to a red LED indicator at the top; 2 points to a key with a scale icon and a less-than sign (<); 3 points to a key with a sun icon; 4 points to a key with the word 'OFF' and an upward arrow (^); 5 points to a key with a scale icon and a rightward arrow (→).</p>
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6 Manual

6.1 How to switch on the scales

1. Open the cover on the rear side of the case.
2. Insert the 4 AA batteries and set the sliding switch to “B”. If you have chosen the scales with the optional lithium battery, please set the sliding switch to “A”
3. Close the cover.
4. Apply the mechanical power switch on the rear side of the scales. Then switch on the scales by means of the “On” button. The maximum weighing range will be indicated first, followed by a self-checking sequence.
5. When 0.0 is indicated along with the respective icon, the equipment is ready for weighing. We recommend you to allow 3 to 5 minutes for warm-up before starting the weighing process.

6.2 Zeroing

1. When switched on, the scales normally show 0.0 kg or 0.00 kg. However, when the display indicates a different numerical value, push the “Zero” button to zero the display.
2. When “Aut” is set to zero in the submenu, the backlight will be activated when you press and hold the „Zero“ button for more than 3 seconds. Press and hold the “Zero” button again for 3 seconds to deactivate the backlight. When “Aut” is set to 1 in the submenu, the backlight will be activated automatically when you add load to the scale and will be deactivated when you remove the load.

6.3 Weighing

1. When the load has been attached to the scales completely, the weight will be displayed. When “stable” is indicated, the value can be recorded.
2. For taring, attach the tare weight, e. g. a cable, to the hook and push the “Zero” button to set the display to zero. The weight which is then indicated is the net weight. This weight will only change if the tare weight is modified or when the scale is switched off.

6.4 How to switch off the scales

1. The scales should be switched off after each weighing process. Push the “Off” button twice to switch off the display.
2. Then apply the mechanical Power switch on the rear side of the scales to power off the scales entirely and to prevent the battery from leaking.

6.5 Calibration

1. Turn off the scales.
2. Remove all loads from the scales.
3. Press and hold the ‘Zero’ button and turn on the scale.
4. Release the ‘Zero’ button now. The display shows ‘SPEN’.
5. Briefly press the ‘Zero’ button once again. The display shows ‘SET’ and 00000.
6. Set the weight of the calibration weight by pressing the ‘Off’ button to increase the value. By means of the ‘Set resolution’ button, the set digit is moved left.
7. Press the ‘Zero’ button again to save your settings.

6.6 Settings in the submenu

1. Turn on the scales.
2. While the scales count down from 9 to 0, press the 'Set resolution' button briefly to confirm.
3. The scale now shows 'bEE 0'.
4. By pushing the 'Off' button, you can choose whether there is a beep tone when the value stabilizes ('1') or not ('2').
5. Press the 'Zero' button to confirm.
6. Now the display shows 'CHt 0'. By pressing the 'Off' button you can change the unit.
7. Confirm again with the 'Zero' button.
8. The display now shows 'Aut 0'. You can choose if the backlight is off ('0') or in automatic mode ('1').

6.7 How to recharge the lithium battery

1. Open the cover on the rear side and insert the plug of the charger. Then connect the charger to a socket.
2. When the lithium battery is fully charged, the indicator of the charger will turn from red to green.
3. For optimum efficiency it is recommended to charge the scales when turned off.
4. To ensure ideal battery life, the battery should be recharged every 12 hours of operation.

7 Contact

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

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