

## Instruction Manual Hanging Scales PCE-HS Series



## 1. Introduction

The hanging scale of the PCE-HS series is applied in industrial sectors as well as in private sectors. The scale stands out due to a long life time, a simple design and useful functions. It is delivered as a ready-to-work article, so that you can start as soon as the package has arrived without further ado.

Functions of the hanging scale:

- Auto ON / OFF Function (can be deactivated)
- Various measurement units: kg, lb and N (Newton)
- Mode for weighing animals (Filter for moving objects)
- Several Hold-functions (Auto-HOLD / Key-HOLD / AUTO-button-HOLD)
- Peak-Value indication (PEAK)
- Background lights

## 2. Technical Specifications

	<b>PCE-HS 50</b>	<b>PCE-HS 150</b>
<b>Maximum load</b>	50 kg	150 kg
<b>Minimum load (without indication)</b>	0.20 kg (200 g)	0.50 kg (500 g)
<b>Reading Precision ( d )</b>	0.02 kg (20 g)	0.05 kg (50 g)
<b>Tolerance / Accuracy</b>	± 0.08 kg (80 g)	± 0.20 kg (200 g)
<b>Overload indication -ooooo-</b>	from 50.18 kg	from 150.45 kg
<b>Tare weight</b>	For entire measuring range (Multiple-tare performable)	
<b>Display</b>	LCD backlit (Auto-OFF within 5 sec.) / digit height 19 mm	
<b>Measuring unit</b>	kg / lb / N (Newton)	
<b>Power Supply</b>	3 x 1.5 V AA batteries (3.6 V – 5 V)	
<b>LO Display (weak battery)</b>	from 3.4 V ± 0.1 V	
<b>Power Consumption</b>	< 20 mA	
<b>Enclosure</b>	Synthetics	
<b>Operation temperature</b>	5 °C – 35 °C	
<b>Storage temperature</b>	0 °C – 60 °C	
<b>Weight (incl. hook &amp; carabiner)</b>	approx. 400 g	
<b>Adjustment / Calibration linear</b>	10 kg / 20 kg / 40 kg / 50 kg	40 kg / 80 kg / 120 kg / 150 kg

### 3. Delivery content und montage


Please check immediately, after the package has arrived, whether the following items are included.

**Delivery content:** 1x hanging scale PCE-HS series, 1x hook, 1x shackle, batteries and instruction manual.

#### Montage:

1. Please remove the wrapping from the scale.
2. Insert battery into scale.
3. Hang mounting parts into the scale.

### 4. Precaution

	The scale may only be plugged into a socket with earth conductors (PE) according to regulations. The protective effect cannot be abolished by using an extension line without earth conductors. In case of voltage supplies from networks without connected earth conductor, a comparable protection according to the effective installation guidelines is to build by a specialist.
<ul style="list-style-type: none"><li>- In case of operation in surroundings of more strict safety requirements the relevant guidelines are to follow. Use only extension lines with earth conductors.</li><li>- If the line cord is damaged, the device has to be disconnected from the power network, effective immediately, and the line cord has to be replaced.</li><li>- If there is any reason to doubt a risk-free operation of the scale, the device has to be disconnected from the power network and safeguarded against accidental operation.</li><li>- The instruction manual is to be read by every operator and must be always within reach at the workplace.</li></ul>	
<b>DANGER</b>	
Do not let any flammable material onto, under or aside the device. Do not operate the scale in possibly explosive areas. Please be cautious to not let any fluids get inside the device or rather into the connections at the back of the device. In case a fluid is spilled onto the device, disconnect the device immediately from the power network. The device may only be reinstated, after inspection by a competent PCE-inst. retail specialist.	

#### 4.1 "LO" = Low battery voltage

In case a battery load is lower than  $3.4 \text{ V} \pm 0.1 \text{ V}$ , the scale will indicate an error indication "LO" at the display. Then the batteries should be replaced. You will require three 1.5 V AA batteries.

## 4.2 “oooo” = overload

If the scale is loaded above its maximum range, the display will indicate “oooo” (see table). Please unload the scale and check it afterwards. That error indication may also occur, if the calibration of the scale is wrong and the scale assumes to be overloaded. Please perform a calibration of the scale then.


## 5. Disposal

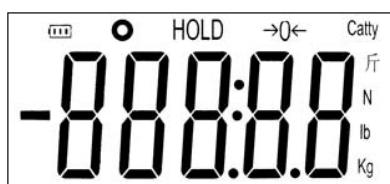
To implement the RoHS (redemption and disposal of electric devices) we take back our devices. They will either be recycled by us or be disposed through a recycling company according to statutory provisions (WEEE-Reg.-Nr. DE69278128 )




## 6. Operation

### 6.1. Starting the scale

In order to start the scale, please press the  button at the control panel. The scale will first shortly activate all segments of the display (1<sup>st</sup> image) and will show than which HOLD-functions are activated (2<sup>nd</sup> image shows HOLD-KEY). Then the scale will automatically skip to the scaling mode (3<sup>rd</sup> image) and the scaling can be started.





Since the scale only indicates weights above 10 d (compare with table “minimum load”) it may occur that later on these values will lead to fault measurements. We advise to press previous to every weighing the  button to delete the values that cannot be indicated anyway.

### 6.2. Tare function

The scale features a tare function, e.g. in order to subtract packages from the gross weight.

- Therefore hang the empty container onto the scale, so it will only indicate the weight of that package.

- Press then the  button, so that the display will show again .

- You can also use the tare - function repeatedly (**multiple tare**).

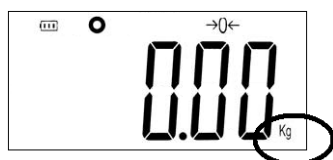
The range for the tare function of the scale covers the entire weighing range. But please consider that the weighing range of the scale cannot be extended with that function. For example, if you have the 50 kg – scale and you use the tare function with a container of 5 kg, you will only have a total weighing range of 45 kg left. So if the maximum weighing range is exceeded, the display will indicate the



following error notice:

### 6.3. Measuring unit “UNIT”


The scale can perform measurements in “kg” (kilogram), in “lb” (pound) and “N” (Newton). The measuring unit is indicated at the right corner of the display. The “unit” switch is installed **at the back** of the scale. The unit that is set will remain active as long as you do not switch to the next unit.

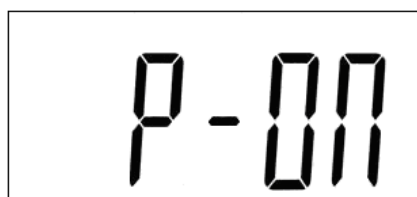



1 kg = 1000 g  
 1 kg = 2.204 lb  
 1 kg = 9.81 N

### 6.4. AUTO Power OFF

The scale features an automatic switch-off to preserve the batteries. If the scale remains inactivated for 5 minutes (no alternation of the weight, no manipulation of the keys), the scale will **switch-off** itself. But this function can also be deactivated. Hold the “UNIT” key at the back of the scale pressed, while also

pressing the  button in order to start the scale. There will occur “P-ON” (power on) at the display for a short time. If you activate the scale this way, it will remain active until you switch off



the scale yourself by pressing the  button or until the batteries die. At the next start of the scale the AUTO Power OFF function will be active again. Thus an unintentional waste of the battery power of the scale will be avoided.



### 6.5. Lightening

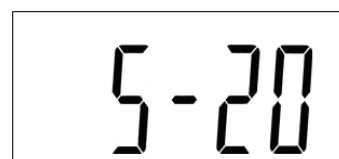
The display lights of the scale will be activated as soon as the scale is in use. If the scale is not operating, the lights will shut down after 5 seconds. This adjustment is preset and cannot be alternated.


### 6.6. Adjustment / Calibration

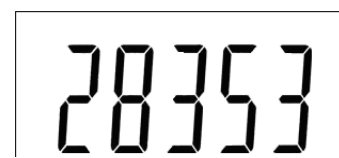
The scale provides the option of a linearly adjustment. Hereby the scale is adjusted with several weights. Thus a more precise accuracy for the entire scaling range is achieved.




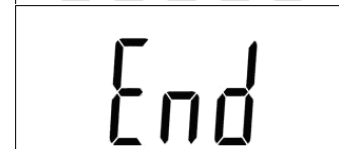
Therefore press the  key and the “UNIT” key at the back of the scale, hold both keys pressed while starting the scale via the  key. There will occur “CAL” at the display. Now release the keys and the display will indicate “S-20”. Via the “Unit”-key, you can now search for the weighing range of the scale, e.g. S-150, which can




then be confirmed by pressing the  key. After that there will occur a number, e.g. 28353, at the display. Now you have to set the scale into the wanted calibration



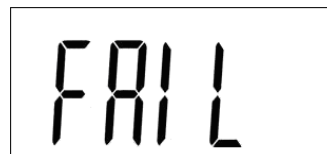
position and press then the  key.



As soon as the weight, that is required for the calibration, will be indicated shortly at the display, the adequate calibration weight is to hang onto the scale. Then you have to wait until the value is stabilized.


Then press  and the next weight to hang on for calibration, will be indicated at the display (e.g. PCE-HS 150 shows: *40 kg / 80 kg / 120 kg and 150 kg*). You have to hang each of these weights one after another onto the scale for proper calibration. Follow each step until the display indicates "End".

If there is written "FAIL" at the display, the adjustment went wrong and you are advised to repeat all adjustment steps.



## 6.7. HOLD function (MAX. and weighing animals)

The scale supports various "HOLD"-functions. The HOLD-functions determine when to show a result at the display of the scale.

In order to access the adjustment-options for the "HOLD"-function, press and hold the  key, so that several HOLD-functions will be shown one after another.



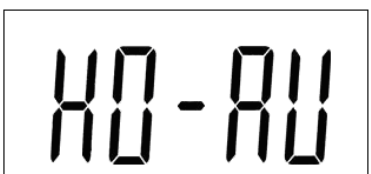
### **HOLD / ANIMAL      Mode to weight animals**

This function allows showing moving objects. Therefore the scale automatically calculates an average value out of several weights. The average value will be indicated after 6-8 seconds at the display. The average value is calculated from approx. 14-16 measurements.



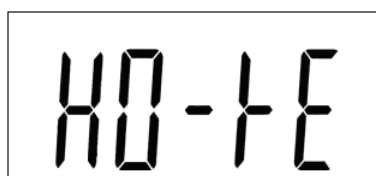
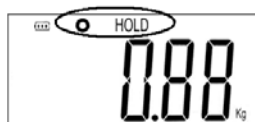
### **PEAK                      Indication of maximum value**

This function saves the maximum value at the display until that value is exceeded. This function is often used for tensile tests (500ms- 0.5 sec.).



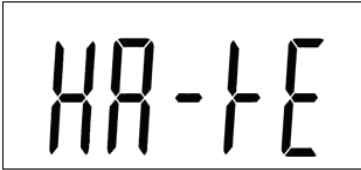
### **HOLD / AUTO            Automatic Hold of value**

This function automatically freezes the value at the display, as soon as it is stable. The stability will be indicated at the left upper corner of the display as a circle. Further weighings can be performed by pressing the "HOLD" button. During the measuring process the "HOLD" symbol blinks. As soon as a stable value is reached the "HOLD" symbol will freeze in the middle upper area of the display and will not blink anymore.



### **HOLD / KEY              Freezing value by key press**

This function freezes the value at the display that is indicated during pressing the "HOLD" button. Therefore the value does not need to be stable. For further weighing please press the "HOLD" button again.



## **HOLD / AUTO / KEY HOLD by key press for stable values**

The value will be only frozen on the display after the "HOLD" key is pressed and the value on the display is stable enough.

**For further questions and information on calibration, please contact us: PCE Inst.**

In this direction will find a vision of the measurement technique:

<http://www.industrial-needs.com/measuring-instruments.htm>

To implement the RoHS (redemption and disposal of electric devices) we take back our devices. They will either be recycled by us or be disposed through a recycling company according to statutory provisions.



**WEEE-Reg.-Nr. DE69278128**