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Laboratory Balance PCE-DMS 200

INSTRUCTION MANUAL



FEATURES

- Auto shut off
- Auto zero tracking
- Auto backlight
- Low battery indication
- g, g/m², oz, oz/yd² conversion or kg, g, lb, oz conversion
- Large LCD (6 digits 15 mm high)
- Different kinds of pans available
- Net weight/stability indication
- Auto calibration

SPECIFICATIONS

Maximum Capacity	200g	300g	600g	1500g	5000g
Readability	0.01g	0.02g	0.1g	0.1g	1g
Resolution	1:20,000	1:15000	1:6000	1:15000	1:5000
Repeatability (Std Dev)	0.02g	0.1g	0.1g	0.2g	2g
Linearity	0.02g	0.1g	0.1g	0.2g	2g
Units of measure	g, g/m ² , oz, oz/yd ² or kg, g, lb, oz				
Stabilisation Time	3 seconds				
Operating Temperature	0oC to 40oC 32oF to 104oF				
Power Supply	12VAC @ 150mA adapter or 6x AA batteries				
Calibration	Push button calibration using external mass				
Calibration Mass	200g	300g	600g	1500g	5000g
Display	6 digit LCD, 15mm digits, with backlight or LED				
Draught shield	145 x 145 x 120mm 5.7" x 5.7" x 4.7"		N/A.		
Balance Housing	ABS Plastic				
Pan Size	100mm diam.	145 x 145mm	120x 120mm	145 x 145mm	
Overall Dimensions (w x d x h)	145 x 210 x 40mm without breeze shield				
Gross Weight	1kg, 2.2lb				
Features	Low battery, Stable and Zero indications				

SAFETY PRECAUTIONS

All safety messages are identified by the following words "WARNING" and "CAUTION". These words mean the following:

WARNING	Important information to alert you to a situation that might cause serious injury and damage to your property if instructions are not followed.
CAUTION	Important information that tells how to prevent damage to equipment.

When using the balance, the following safety precautions should always be followed.

WARNING

Use the AC adapter designed by the manufacturer for the balance. Other adapters may cause damage to the balance.

CAUTION

Avoid installing the balance in direct sunlight, this may cause poor performance or malfunctions.

Do not mix the type of batteries. Replace all the batteries at the same time.

If the balance is not to be used for a long period of time, remove all batteries from the battery compartment to avoid leakage which may cause damage to the instrument.

Avoid overloading or dropping material onto the platform as that could cause damage to the balance.

Do not spill liquids on the balance as it is not water-resistant. Liquids may damage the case, or if it gets inside of the balance the electronics can be damaged.

Material that has a static electric charge could influence the weighing. Discharge the static electricity on the samples if possible. Another solution to the problem is to wipe both sides of the pan and the top of the case with an anti-static agent.

PARTS DESCRIPTION

▶ LEFT SIDE

AC adapter
Socket



▶ TOP

Weighing platform
Stainless Steel pan

Packing
Remove it before use

LCD

ON/OFF key
Turns the balance power on/off

UNITS key
Changes weighing units
Used when calibrating

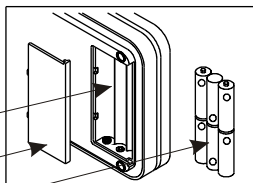
ZERO key
Sets display to zero or
Substrates weight of a container

▶ BOTTOM

Battery compartment

Battery compartment cover

Batteries
Batteries are not included



▶ LCD

ZERO indicator
Indicates when the balance zero is correct.

STABLE indicator
Indicates when the reading is stable.

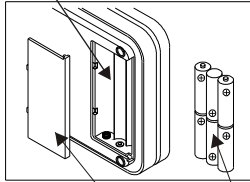
 Low battery indicator



PREPARATION

1.Installing batteries/Connecting the AC adapter Batteries

Battery Compartment

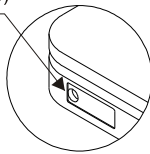


Battery compartment cover

Remove the battery compartment cover and insert six batteries (R6P/LR6 /AAsize) into the battery compartment taking extreme care that the polarities plus and minus is observed.

R6P/LR6/AA size
Dry batteries.
(batteries are not included)

AC adapter (optional)



Plug the AC adapter to the AC adapter socket on the side. The AC input requirement could be 100,120,220,230 or 240Volts (50/60Hz) depending on the area where used, so please verify that the adapter is correct

2.Setting up the balance

CAUTION

Avoid installing the balance in direct sunlight, that may cause poor performance or malfunctions. Place your balance on a firm weighing table so that the balance is level. (The balance will not perform accurately when it is not level).

Remove all packing from around the top platform and install the platform.

Place the balance on the firm surface that is flat and level for accurate weighing.

WEIGHING

When to calibrate

Before weighing

Be aware of the Automatic power-off function.

If the Automatic power-off function is active it may turn the balance off after 2 minutes of inactivity.

Weighing procedures

1. Press [ON/OFF] to turn on the balance.

When power is turned on, all display segments appear on LCD for a few seconds and finally "0" will appear on the display.

2. Select the weighing unit with [UNITS].

Press [UNITS] to select a weighing unit, g, g/m², oz, oz/yd²

Once the unit has been selected, the weight will be displayed in the selected unit and a symbol for the weight will be shown.

3. Start weighing

If you do not use a container for weighing

Verify the reading is "0". If not, press [ZERO] to display "0".

Place the objects on the weighing pan to weigh.

When the reading becomes stable, the stable indicator is displayed.

If you use a container for weighing

Place an empty container on the pan.

Wait for the stability indicator to be displayed and press [ZERO].

Place the objects to be weighed in the container.

When the reading becomes stable, the stable indicator is displayed.

FUNCTION SETTINGS

1. Enter function setting mode

Press [ON/OFF] to turn the power off. Press [ZERO] first, then press [ON/OFF], while keeping [ZERO] pressed, the display will show "A-ON", "A-OFF".

2. Selection of auto shut off mode

Press [UNITS] to select auto shut off setting mode (the display will show "A-ON" or "A-OFF").

Press [ZERO] to choose "ON" or "OFF" mode, "ON" means auto shut off function active. "OFF" means this function inactive.

Turn off power, then turn on power again to enter the normal weighing mode. The delay time will be about 2 minutes.

3. Selection of auto backlight mode

Press [UNITS] to select auto backlight setting mode (the display will show "L-ON" or "L-OFF").

Press [ZERO] to choose "ON" or "OFF" mode, "ON" means auto backlight function active. "OFF" means this function inactive. I.e. shut off backlight.

Turn off power, then turn on power again to enter the normal weighing mode.

CALIBRATION

When to calibrate

Calibration may be required when the balance is initially installed, and if the balance is moved.

With time and use, mechanical deviations may occur. Therefore calibrate the balance whenever the best accuracy is required or when any deviation is observed when weighing a test weight.

How to calibrate

Before calibrating it is necessary to have the proper calibration weights. The weights should be OIML Class M1 or better.

Capacity	200	300	500D	600	1500	5000
Calibration Weight	200g	300g	500g	600g	1500g	5000g

1. Before entering calibration mode, press [ON/OFF] to turn the power on for 1 minutes.

2. Enter calibration mode

Press [ON/OFF] to turn the power off.

Press [UNITS] first, then Press [ON/OFF] , while keeping pressing [UNITS], the display will show the A/D value.

3. Calibration

Wait for the stable indicator to be displayed,

Press [UNITS] the display will show "00SAVE", after 2 seconds, the display will return to A/D value.

Place the maximum weight (eg.200g for 200) on the platform.

After the stable indicator is displayed, then press [UNITS],

The display will show "00SAVE"and now calibration in finished.

4. Press [ON/OFF], turn off the power,

Press [ON/OFF] turn on the power again,

Place full weight (eg.200g for 200) on the platform to make sure whether weighing is correct, if not, repeat steps 2-5.

Error messages

EEEEEE: Overload

EEEELO: A/D value too low

 : Low battery

LO-BAT: Lighted, indicates the power of dry cell is too low

Calibration may be required before weighing.

Read "CALIBRATION" first and if necessary, calibrate your balance for accurate weighing