Operating Instructions

METTLER Analytical balance AE 260 DeltaRange



METTLER

Leveling the balance	Calibrating	Integration time	Stability detector	Taring; weighing	
ine stance	100.0000 g Internal	Steps 1/2/3	Steps 1/2/off	Coarse range: 020 Readability: 0.001 g DeltaRange: 60 g Readability: 0.0001	5 Q Q

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USA, Tel. (609) 448-3000, Telex 843352

METTLER AE 260 DeltaRange

Operating elements and connections



Preliminary steps

Checking the operating voltage

The operating voltage setting must agree with your local power-line voltage; please check this setting and, if needed, change if

Admissible power-line voltage in the switch positions: 115 V: 92 V...132 V 220 V: 184 V...265 V

Location

- A stable location; as free from vibration as possible.
- Make sure there are no large temperature fluctuations
- Avoid direct sunlight and drafts.
- Connect the power cable at the work station.

Installing the weighing pan and the windshield ring leveling the holds

Please note:

The display indicates four decimal places in the Delta-Range (60 g). If the DeltaRange is exceeded, the last decimal place blanks out. By pressing the bar again to tare, it is possible to again use the DeltaRange (de-scribed in the Paragraph entitled, "Weighing-in").

Weighing-in (ASd 1 or 2)

- Open the sliding glass door.
- Fill in substance up to the desired target weight (to read the weight accurately, the door must be closed).

If different components are to be weighed, one after the other, into the same container, it is possible to tare after each weighing and start the next weighing from zero (up to 60 g in the DeltaRange). This can be done until the tare container and all the components together reach the end of the weighing range:

DeltaDisplay:



The DeltaDisplay switches on automatically when weighing in substances quickly; the last two digits in the DeltaRange or the last digit in the coarse range are blanked out and the display change sequence speeds up. This allows the increase in weight to be followed better. When weighing in slowly towards the target weight, the two digits (DeltaRange) or the last digit in the coarse range switch back on.

The display change sequence remains rapid. Only when weight changes are very small does the balance switch back to the normal display change with the full number of decimal places.

Stability detector:

When stability is achieved (determined by the step se-

Further capabilities

20 Cover Screw 22 Hook 20 21

GD hanger (for weighing below the balance)

- Open all sliding glass doors. Remove the weighing pan.
- Place the balance on its back.
- Loosen the screw on the bottom of the balance.
- Swing the cover to one side.
- Retignten the screw.

A hook is visible in the opening; the object or substance can be weighed by attaching a hanger from this hook.

- Place the balance back on its feet, place the weighing pan back on and level the balance.
- With the hanger attached to the hook, press tare.

Note: The weighing pan does not have to be placed back on if the hanger is at least as heavy as the pan. The hanger is not available from METTLER!

Care and maintenance

Cleaning

A cloth with some soapy water is sufficient to clean the weighing pan and housing. Do not use any strong solvents. To remove residues from the weighing chamber, use the small artist's brush that is included in the balance standard equipment (do not blow air through the chamber).

Replacing the microfuse

- Disconnect the power cable.
- Turn out the fuse holder (in the power-line connection socket) with a screwdriver.

- Place weighing pan on balance; the conical peg centers the pan in the opening in the base of the weighing chamber.
- The two leveling screws should be adjusted so that the bubble is in the middle of the circle.

Whenever the location of the balance is changed, the balance should be releveled.

Operation

Short-form operating instructions

Short-form operating instructions can be found on a cord that swings out from underneath the balance housing

Switching the display on/off

Briefly press the single control bar; all display segments light up for several seconds:



- Afterwards, the display automatically sets itself to 7ero
- Lightly lift the control bar; the display is switched off.

Calibration

- Make absolutely sure: The balance must be left connected to the power supply for at least 60 minutes before "calibrating".
- Press and hold the single control bar until -CALappears in the display, then release control bar. The display changes to CAL----, then to CAL 100 (blinks).
- Move calibration lever all the way to the rear; the display changes to CAL----, followed by 100.000, then to CALO (blinks).
- Move calibration lever all the way back towards the front of the balance; the display changes to ----, followed by zero.

Measuring cycle/measuring accuracy

By selecting a particular integration cycle, as well as a particular stability detection step, the balance can be configured according to your weighing location and needs

integration time:

- Step 1: Used for very stable, vibration-free weighing table (short measuring cycle).
- Step 2: Normal setting.
- Used for unfavorable ambient conditions (long Step 3: measuring cycle).
- Press the control bar and hold it until -Int- appears in the display, then release the control bar.
- Immediately press the control bar briefly; the display will change to the next step.
- Stop at the step you wish to use and wait for the display to return to the weighing mode (zero).

Stability detector:

- Step 1: Great sensitivity (long pause before data are released)
- Less sensitivity (short pause before data are Step 2: released).

Normal setting

- off The stability detector is switched off. Make sure that when this is the case, DeltaDisplay is also Step: switched off (described in Paragraph entitled, "Weighing-in")
- Press the control bar and hold until -ASd- appears in the display, then release control bar.
- Immediately press control bar again briefly; the display changes to the next step.
- Stop at the step you wish to use and wait for the display returns to the weighing mode (zero).

Note: After selecting the integration time, you can go directly to the selection of the stability detector setting by holding the control bar down.

Taring

- Open the sliding glass door.
- Place a tare container on the weighing pan.
- Close the sliding glass door. Press the control bar briefly; the display changes to Zero

Note: It is possible to carry out external taring by using the handkey or foot pedal from the "accessories, optional" (connection sockets on rear of balance).

The weight of the container is now tared out. To weighin, the balance weighing range - minus the weight of the tare container - is now available.

display goes out. The result is then stable.

Note: When the green dot lights up in the display, the data interface is blocked; when the green dot goes out (stability), the data interface is unblocked.

DeltaRange:



Your AE260 has a coarse range from 0...205 g; in this range, readability is 1 mg. The DeltaRange (fine range) turns your "milligram balance" into an "analytical balance". This means that the readability is increased to 0.1 mg in a range of 60 g (by pressing tare each time, it can be moved throughout the entire weighing range). Every time the fine range is exceeded, the last decimal goes out; you are then weighing in the coarse range.

Specifications

			60 c
Readability			0.1
Weighing range			0
Tare range (subtractive)			0(
Reproducibility (standard deviation)			0.11 + 0
Stabilization time	(typically)		5 00
Integration time ((diustable)		1.57
Display sequence	e – Mettler DeltaDisplay off		0.4
· · ·	 Mettler DeltaDisplay on 		0.2/
Stability detector	ctable in three steps		1/2
Sensitivity drift (1	030°C)		
Calibration weigh	t (built-in), adjusted to an		
opporant mass o of 1200 mg/l	18.0 g/cm² in un air density		100
Dimensions:	Weighing pan (stainless steel)		80 n
	Open space above weighing pan		215
	Balance housing (W x D x H)		205
	Net weight		10.3
Power supply:	Voltage, adjustable		115
	Admissible voltage range		92
	Frequency		50
A	Power consumption		10 V.
Admissible amble	ent conditions during operation:		10
Pelative humidity	(non-condensing)		10
Noidine Humbirg	(non-condensing)		20,,
What's wrong	lf		the
the entire disp	lay does not light up?	_	nor
	···; ·····a	-	the
the OFF displa	y appears?	-	a te
			(Pre
only the upper horizontal segments			the
ngin up in ine	aispiay?	-	ther
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the weighing r	esult is unstable?	-	ther
•••		-	me
		-	the -
			10.0

the weighing result is obviously incorrect?

only a portion of the display lights up?

the middle horizontal segments in the display are blinking (for more than 30 sec)?

CAL Err appears in the display?

no CAL appears in the display?

a zero display does not appear after pressing fare?

- Place the fuse holder back on.
- Plug the power-line cable back in.

Accessories

Optional equipment	nt (Order No.
 Windshield ring, c 	an be stacked: 1 unit	38594
 Tweezers, 210 mm Density (specific ç Foot pedal Handkey Microfuses, 160 m Data interfaces: 011 Option - Cl /f 	long (with plastic tips) gravity) determination kit A slow-blowing (set of 3 RS232C unidirectional	70209 33340 46278 42500 55144 38750
012 Option – CL/RS232C bidirectional 013 Option – IEEE488 040 Data Output (unidirectional mode)		38751 38752 38795
Standard equipme	int	
- Power-line cable	neutral Switzerland Germany USA	87576 87920 87925 88668
– Weighing pan, 80 mm dia.		38590
 Centering disk (fo Hair-brisite brush Windshield ring 	r windshield ring)	38609 70114 38689
AE 260 DeltaRange	•	
60 a DeltaRanae	200 a	
01 mg	1 ma	

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	60 a DeltaRanae	200 a
	0.1 mg	1 mg
	060 g	0205 g
	060 g	0205 g
	0.1 mg	0.5 mg
	±0.2 mg	±1 mg
	5 Sec	·
	1.5/3/6 Sec	
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	1/2/off	
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	80 mm dia.	
n	215 mm	
	205 x 410 x 290 mm	
	10.3 Kg	······································
	115 V/220 V	
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	2585%	
	th	
		h a 1m a thu an a said
	- no power reaching n - the fuse is defective	ne instrument.
	 a temporary nower f 	ailure bas taken niace
	(Press the control bo	II.)
•	 the weighing range t 	nas been exceeded.
-	 the calibration weight 	it has been activated.
	 mere was weight on was switched on 	me pan when me instrument
-	 the weighing pan is i 	not installed.
	- there was weight on	the pan when the instrument
	was switched on.	
-	 There are too many d 	Irafts.
	 me weigning toble is the integration time (unsigne.
	 the object being weight 	and is not at room temperature.
-	- the balance must be	calibrated or has been cali-
	brated using the wro	ng external weight.
•	 a temporary malfund 	tion has occurred (pull out
	power cable and plu	g if back in).

- the weighing table or the load is too unsteady (close
- the weighing table or the total is too unstatuty (c sliding glass doors, set a longer integration time and/or change the stability detection setting), the weighing pan was not unloaded before cali-brating the balance, or the wrong external cali-bration weight was used (return to the weighing mode by pressing and holding the control bar).
- a temporary malfunction has occured (recalibrate balance).
- the weighing table or the load is too unsteady (close sliding glass doors, set a longer integration time and/or change the stability detection setting).

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Subject to technical changes and to the availability of the accessories supplied with the instruments.