Additional Information (FZ–*i*/*i*WP/CT/GD series)

Contents

This manual describes additional functions for the FZ–*i* series, FZ–*i*WP series, FZ–CT series and FZ–GD series.

☐ Date and time output ··········· The Date and time can be added to the weighing data format.

☐ The Function switch ············· The description of the switches to protect parameters.

☐ Correcting the internal mass value using an external calibration weight value. The correction method can be selected form either the correction 1 or correction 2.

■ ·The internal mass ··········· Calibrating the balance with internal mass, measuring an external
  correction 1   calibration weight, calculating the correction value, and storing it
                                 in the balance.

■ ·The internal mass ··········· Calibrating the balance with an external calibration weight,
  correction 2   correcting and storing the internal mass value with automatic
                                 calibration using the internal mass.

Caution

☐ The FX–*i* series, FX–*i*WP series, FX–CT series and FX–GD series do not have an internal mass and the date and time function.

☐ In the factory settings, the internal mass correction function can not be changed to protect against unintentional operations. When using the function, change the function switch to "**Permit**".
Refer to "**The Function Switch**" on the next page or "**Permit Or Inhibit**" of the instruction manual.

Date and Time Output

With the parameters of "Time/Date output (5-ʈd)" in "Data output (dauʈ)", **Date** and **time** can be added to the data format of weighing data.
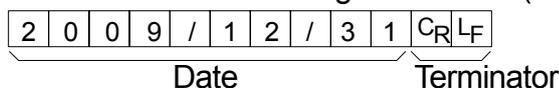
The Function Table For Output Of Date And Time

dauʈ	5-ʈd		
		0	No output (Factory settings)
		1	Time only
Data out	Time/Date output	2	Date only
		3	Time and date

The Data Format Of Date And Time

Date   dauʈ 5-ʈd 2 or 3

This format can be changed in "Clock (Refer to ɛʟ Adʊ)". The year is output in a four-digit format.

2	0	0	9	/	1	2	/	3	1	C$_R$	L$_F$

       Date   Terminator

Time   dauʈ 5-ʈd 1 or 3

This format outputs time in 24-hour format.

1	2	:	3	4	:	5	6	C$_R$	L$_F$

     Time   Terminator

The Function Switch

The balance has function switches to protect the parameters against unintentional operations. When using the internal mass correction function, change each function switch to "**Permit**".
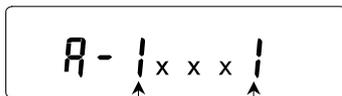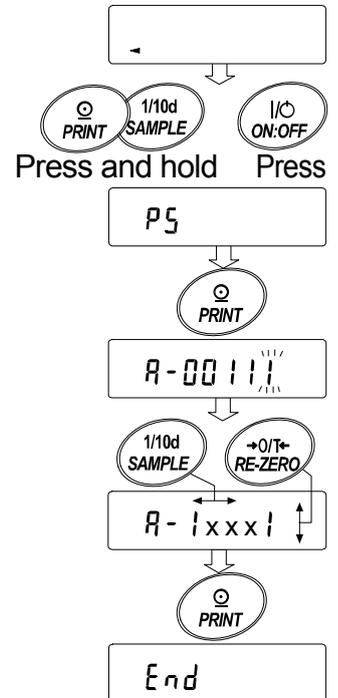
Procedure

Step 1   Press the ON:OFF key to turn off the display.

Step 2   While pressing and holding the PRINT key and the SAMPLE key, press the ON:OFF key to display P5 .

Step 3   Press the PRINT key. Then the balance displays the function switches.

Step 4   Set the switches using the following keys.

SAMPLE key   To select a switch to change the parameter. The selected switch blinks.

RE-ZERO key   To change the parameter of the switch selected.
0 To inhibit the change.
1 To permit the change.

PRINT key   To store the new parameter and return to the weighing mode.

CAL key   To cancel the operation and return to the weighing mode.

The Function Table
0 To inhibit the change.
1 To permit the change. (Factory settings)

Internal Mass Correction
0 To inhibit the correction. (Factory settings)
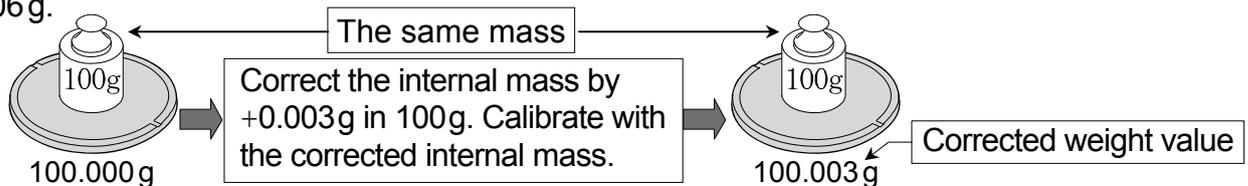1 To permit the correction.

The Internal Mass Correction 1

☐ The correction 1 corrects the internal mass using an external calibration weight.
Calibrate the balance with the internal mass. Measure an external calibration weight. Calculate the correction value. And store it in the balance.

☐ The correction range of the internal mass value is as follows:

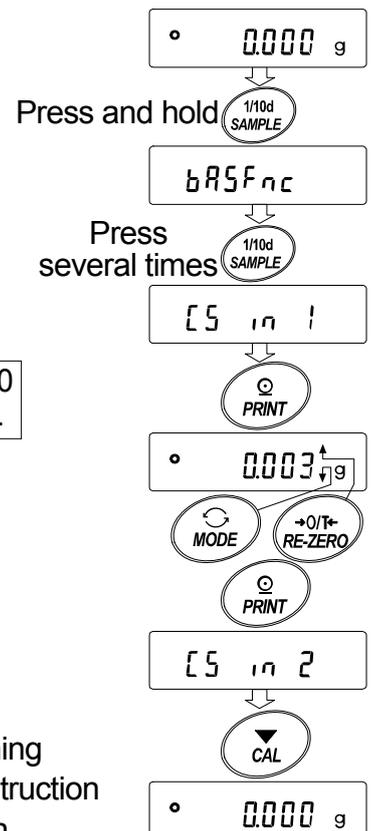| Model			External calibration weight	Allowance range
FZ-300CT			50 g	±0.050 g
FZ-600CT FZ-120*i*	FZ-120*i*WP	FZ-120GD	100 g	
FZ-200*i* FZ-300*i*	FZ-200*i*WP FZ-300*i*WP	FZ-200GD FZ-300GD	200 g	
FZ-1200*i*	FZ-1200*i*WP	FZ-1200GD	1 kg	±0.50 g
FZ-2000*i* FZ-3000*i*	FZ-2000*i*WP FZ-3000*i*WP	FZ-2000GD FZ-3000GD	2 kg	

Procedure

☐ Example : Correcting the weight value by +0.003 g in 100 g using the FZ-120*i*WP. If correcting the weight value by +0.003 g in 50 g, the weight is changed into 100 g, and the correction value is +0.006 g.

The same mass

100g · 100.000 g → Correct the internal mass by +0.003g in 100g. Calibrate with the corrected internal mass. → 100g · 100.003 g — Corrected weight value

Step 1   Perform one-touch calibration. Measure an external calibration weight. Calculate the correction value.

Step 2   Change the function switch of "Internal Mass Correction" and "The Function Table" to "Permit".

Step 3   Press and hold the [SAMPLE] key to enter the function table and release the key when $bASFnc$ is displayed.

Step 4   Press the [SAMPLE] key several times until $[5\ in\ 1]$ is displayed.

Step 5   Press the [PRINT] key to correct the internal mass value using the following keys.

    [RE-ZERO] key ···· To increase the value.
    [MODE] key ········· To decrease the value.
    [PRINT] key ·········· To store the new parameter and return to the weighing mode.
    [CAL] key ·············· To cancel the operation and return to the weighing mode.

| Value is displayed −50 digits after +50 digits. |

Step 6   Press the [CAL] key to return the weighing mode.

Step 7   Press the [CAL] key to perform the one-touch calibration.

Step 8   Measure an external calibration weight and confirm that the weighing error is within the specified value in the "Specifications" of the instruction manual. If not, perform the internal mass correction and calibration.

Press and hold 1/10d SAMPLE

bASFnc

Press several times 1/10d SAMPLE

[5 in 1]

PRINT

0.003 g

MODE / →0/T← RE-ZERO

PRINT

[5 in 2]

CAL

0.000 g

The Internal Mass Correction 2

- The correction 2 corrects the internal mass using an external weight.
  Calibrate the balance with an external calibration weight. Correct and store the internal mass value with automatic calibration using the internal mass.

- The corrected mass value is maintained in memory even if the AC adapter is removed.
  The target range and allowance of an external weight is as follows:

Model			External calibration weight				Allowance range
FZ-300CT			50 g∗	20 g			
FZ-600CT FZ-120*i*	FZ-120*i*WP	FZ-120GD	100 g∗	50 g			−0.050 g 〜 +0.050 g
FZ-200*i*	FZ-200*i*WP	FZ-200GD	200 g∗	100 g	50 g		
FZ-300*i*	FZ-300*i*WP	FZ-300GD	300 g	200 g∗	100 g	50 g	
FZ-1200*i*	FZ-1200*i*WP	FZ-1200GD	1000 g∗	500 g			
FZ-2000*i*	FZ-2000*i*WP	FZ-2000GD	2000 g∗	1000 g	500 g		−0.50 g 〜 +0.50 g
FZ-3000*i*	FZ-3000*i*WP	FZ-3000GD	3000 g	2000 g∗	1000 g	500 g	

∗ Factory settings

Procedure

Step 1 Change the function switch of "Internal Mass Correction" and "The Function Table" to "Permit".

Step 2 Press and hold the ⬚SAMPLE⬚ key in the weighing mode to enter the function table and release the key when ⬚bASFnc⬚ is displayed.

Step 3 Press the ⬚SAMPLE⬚ key several times until ⬚CS in 2⬚ is displayed. If ⬚CS in 2⬚ is not displayed, proceed to step 1.

Step 4 Press the ⬚PRINT⬚ key to display ⬚CAL 0⬚.
Perform the calibration using an external calibration weight. Refer to "**Calibration Using An External Weight**" of the instruction manual.

Step 5 When displaying ⬚rEAdy ?⬚ after the calibration, Remove the weight on the weighing pan and attach the breeze break. Press the ⬚PRINT⬚ key.

Step 6 When displaying ⬚CAL. SET⬚, the balance corrects and stores the new internal mass value.

Step 7 When displaying ⬚CAL. in⬚, the balance performs calibration using the internal mass automatically.

Step 8 The balance displays ⬚End⬚ and returns to the weighing mode automatically.

Step 9 Measure an external calibration weight and confirm that the weighing error is within the specified value in the "Specifications" of the instruction manual. If not, perform the internal mass correction and calibration.

Press and hold ⬚1/10d SAMPLE⬚

Press several times ⬚1/10d SAMPLE⬚

⬚PRINT⬚

Calibration using an external weight

Place weight 200g

⬚PRINT⬚

Remove weight

Attach the breeze break

⬚PRINT⬚

Storing new value   CAL. SET

Calibrating   CAL. in

End