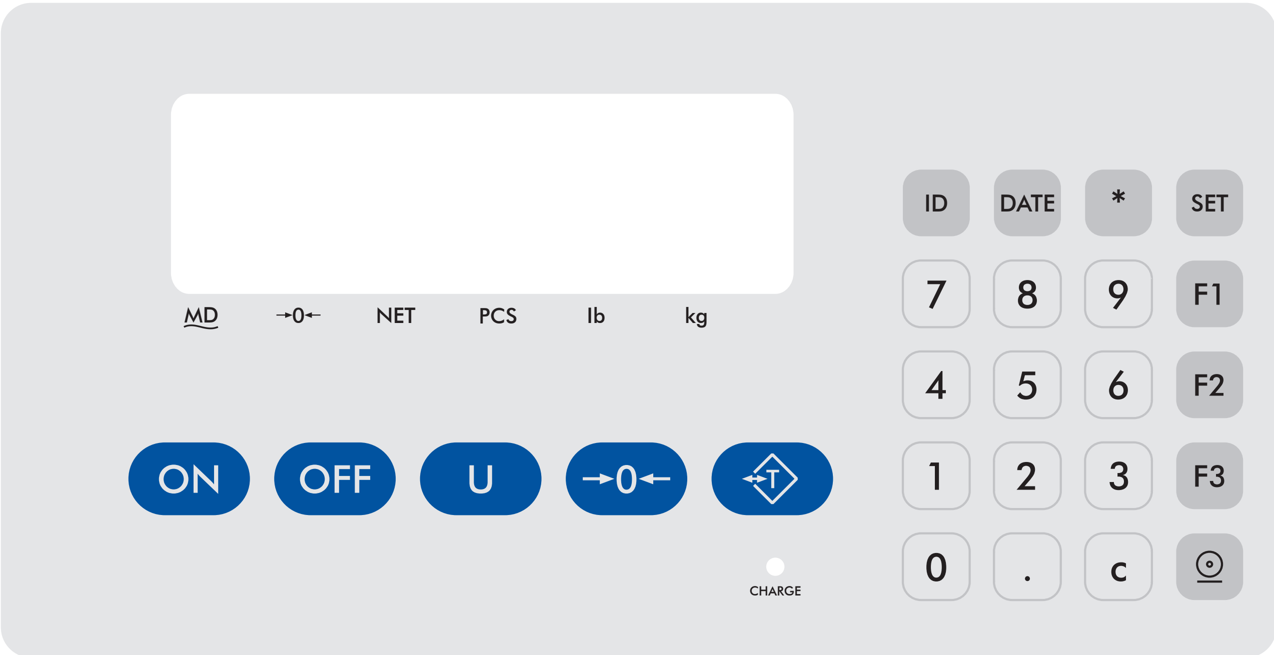
SWISS MADE

MASTER Precisa 410 SRM



Operating Instructions

Precisa
■ The Balance of Quality ■

350-8141-000 a2

Identification

Customer service

Precisa Gravimetrics AG
Moosmattstrasse 32
CH-8953 Dietikon

Tel. +41-44-744 28 28
Fax. +41-44-744 28 38
email **service@precisa.ch**

http://www.precisa.com
Refer to our website for information about local customer service centers and details of their addresses.

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1 Introduction

You have purchased a quality precision weighing instrument that requires handling with care. Read entire contents d this operating instructions prior to operating your new instrument.

To take advantage of its many features, carefully read your operating instructions. It contains step-by-step procedures, examples, and other vital information.

Warning:
Use of this product in a manner not specified by the manufacturer may impair any safety protection provided by the equipment!

1.1 Disclaimer Notice

Calibrate your instrument using reference weights and the appropriate tolerance (class). An instrument can be no more accurate than the standard to which it has been compared. For assistance in the selection of reference weights, please contact the factory.

Caution:
Changes or modifications not expressly approved by the manufacturer could vos authority to operate this equipment.

1.2 Scope of delifery

Thank you for choosing one of our instruments. Your instrument is designed and manufactured to the most rigorous standards in order to give you years of service. First, check the contents of the shipping carton. You should find the following:

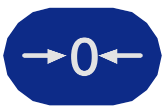
- Operating instructions
- Instrument
- AC Adapter

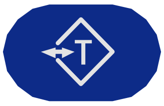
2 Load cell connections

Load cell connections DB-09 female:

Pin No.	**1, 2**	**3**	**4, 5**	**6, 7**	**8, 9**
Function	EXC +	GND	EXC-	SIG +	SIG-

3 Keyboard

Key	Name	Function
	**«ON»**	Turns instrument On
	**«OFF»**	Turns instrument Off
	**«ZERO»**	Captures a new center of zero

	**«TARE»**	Reduce gross weight on pan as tare weight
U	**«Unit»**	Cyclically change kg ➔ lb ➔ PCS ➔ kg ➔ lb ➔ … (PCS will only displayed if reference weight is available)
ID	**«ID»**	For ID number setting
*	**«*»**	Only used in programing mode
DATE	**«DATE»**	For date setting
SET	**«SET»**	Only used in programing mode
	**«PRINT»**	Printout key, when mode manual is selected
F1	**«F1»**	Set current weight as reference for pieces counting: - enter then number “n“ of pieces placed on the pan (e.g. 25) - Press «**F1**» ➔Set n (e.g. 25) as the current number of pieces and switch into piece counting, display „PCS“ symbol on the indicator
F2	**«F2»**	Direct piece weight setting: - enter a number (e.g. 1.234) - Press «**F2**» ➔Set 1.234 of the current unit (kg, lb) as the reference weight for 1 piece, and switch into piece counting, display „PCS“ symbol on the indicator
F3	**«F3»**	Direct tare entry: - enter a tare weight (e.g. 1.234) - Press «**F3**» ➔Set tare weight (e.g. 1.234), display “N“ symbol on the indicator (if tare weight is not 0)
0 9	**«0» ~ «9»**	For numerical input
.	**«Decimal»**	For input a decimal point
C	**«Clear»**	Clear data entry

4 Setup the terminal for the attached platform

Follow the instructions for setup your instrument.

- First **remove** the jumper **Jp3** switch **inside** of the **terminal** before you start to calibrate the terminal.
- Hold any key and then press **«ON»**, the display shows „CAL“
- Press **«F1»** key to enter the setup menu and for menu review.
- Press **«F2»** key to change the available parameters.
- Press **«SET»** to save the settings and go to the next step.

The menu looks as follows:

Units	**Unit 0** **Unit 1** **Unit 2**	lb kg **kg / lb**
Readability	**d= 0.001** **d= 0.002** **d= 0.005** **d= 0.01** **d= 0.02** **d= 0.05** **d= 0.1** **d= 0.2** **d= 0.5** **d= 1.0** **d= 2.0** **d= 5.0**	
Auto zero	**A0 0** **A0 0.5** **A0 1.0** **A0 2.0**	Off 0.5 divisions 1 divisions 2 divisions
Re-zero range	**0r. 0** **0r. 1**	Re-zero range 100% of capacity Re-zero range 2% of capacity
Weight calibration	**CAL=**	Enter into the weight calibration with **«SET»**

4.1 Weight Calibration

- When the balance shows „CAL=“ press **«SET»** key to enter into the weight calibration procedure.
- The display shows now the offset value in a range from 5000~60000. If the value is not in this range, ***sw1*** inside of the terminal needs to be adjusted.
- Press **«ZERO»** to set the zero point. Zero will be displayed.
- Put the calibrating weight on the platform, e.g. 50kg. Minimum acceptable calibrating weights are 1/4, 1/3 or1/2 of the full capacity.
  (The span value is from 50000 - 150000 at full capacity.)
- Enter the value of the calibration weight using the numerical and decimal keypads, e.g. 50.00. Press **«SET»** to complete the calibration.
- Set the maximum capacity using the numerical keypads:
  maximum capacity= full capacity + over range, e.g. 150.09 kg.
  The over range can be 9d or 5% of full capacity.
- Press **«SET»** to save the capacity setting.
- **Put** the **Jp3** switch **back** and **close** the **terminal**.
- Now you are ready to weigh.

5 Operation

Now you are ready to begin using your instrument. To take advantage of its many features, carefully read your operating instructions. It contains step-by-step procedures, examples, and other vital information.

5.1 Getting Started

- Ensure nothing is on the platform than press **«ON»** to turn the instrument ON.
- The display will run through a self diagnostic digit check 8.8.8.8.8.8... and will then indicate zero.
- **Allow the instrument to warm-up for 30 minutes.**

5.2 Weighing Units

- Press **«Unit»** to toggle between the different weighing units and piece counting if a reference weight is available.

5.3 Taring (Zeroing)

All models have taring (zeroing) capabilities up to their total weight capacity. To weigh a sample in its container with the display showing the weight of the sample use the following ZERO (tare) procedure.

- Place sample container on pan and then press **«TARE»** the „NET“ indicator will appear.
- Now place sample in the container.
- When the scale is stable, the display shows the weight of the sample.

5.4 Battery charge

There is a build in rechargeable battery. When the message „Lo.bAt“ is displayed the instrument should be charged to ensure best performance.

5.5 Motion Detect

When the scale is unstable, „ MD “ indicator signal will show on the display.

5.6 Error Message

<table>
<tr><th>Symptom</th><th>Cause</th><th>Solution</th></tr>
<tr><td>+ - - - - +
| |</td><td>Overload:
weighing range exceed</td><td>- Unload scale or reduce preload</td></tr>
<tr><td>| |
+ - - - - +</td><td>Underload:
- Weighing pan not in place
- Weighing range below zero
- Contact between weighing</td><td>- Ensure the weighing pan is correctly installed
- Set scale to zero
- Apply pre-load</td></tr>
<tr><td>- ol -</td><td>Zeroing not possible:
- zeroing outside the zero setting range</td><td>Ensure that zeroing is performed in the admissible range (20% of Cap.)</td></tr>
</table>

6 Program the terminal functions

- Hold any key and then press **«ON»** and the display shows „CAL“.
- Press **«*»** to to enter the program menu and for menu review.
- Press **«DATE»** key to change the available settings.
- Press **«SET»** key to save the settings and go to the next step.

The menu looks as follows:

Auto power off	**AoFF 0** **AoFF 1** **AoFF 2** **AoFF 3** **AoFF 4**	None **In 5 minutes** In 10 minutes In 20 minutes In 30 minutes
Backlight	**bL 0** **bL 1** **bL 2**	Off Active **Auto lighting while loading**
Zero setting	**o.SEt 0** **o.SEt 1**	**Initial zero auto** Initial zero memorized
Display rate	**rate 0** **rate 1** **rate 2**	Fast Medium Low
Printout	**Pr 0** **Pr 1**	None **Manual** printout with **«PRINT»**
Baud rate	**br 9600** **br 2400**	**Baud rate 9600** Baud rate 2400
ID#	**Id. _0** **Id. _1**	None **Enable Id printout**
Date	**dAtE _0** **dAtE _1**	None **Enable date printout**
Format	**Form _0** **Form _1** **Form _2** **Form _3** **Form _4**	Accumulation (manual printout with **«PRINT»**) Accumulation (auto printout after load change) **Label (manual printout) «PRINT»** Label (auto printout after load change) Continuous printout
Weighing lock (set stability of display)	**Loc 0** **Loc 1** **Loc 2** **- Loc.r 0** **- Loc.r 1** **- Loc.r 2**	**None** Lock up once Lock up with range: - 1d - 2d - 3d

7 Dataoutput RS232C

- Baud rate: 2400 or 9600 selectable, Parity: none, Data bit: 8, Stop bit: 1

RS232C connector DB-09 male

Pin No.	**2**	**5**	**others**
Function	TXD	GND	NC

7.1 Output format

Accumulation	**Label**	**Continuous**
ID: 123456 DATA: 01/01/02 S/N WEIGHT/kg TOTAL --------------------------------------- 001 10.0 10.0 002 5.5 15.5 003 2.8 18.3 004 15.5 33.8 005 5.0 38.8 --------------------------------------- 005 TOTAL 38.8 ID: 123456 DATA: 01/01/02 REF: 0.50 kg S/N PCS TOTAL --------------------------------------- 001 10 10 002 5 5 003 2 2 004 1 1 005 5 5 --------------------------------------- 005 TOTAL 23	ID: 123456 DATE: 01/01/02 5.5kg REF: 0.50kg 11PCS ID: 123456 DATE: 01/01/02 150kg REF: 0.50kg 300PCS ID: 123456 DATE: 01/01/02 75.5kg REF: 0.50 kg 151PCS	0.0kg 1.1 kg 2.2 kg 3.3 kg 4.4 kg 5.5 kg 6.6 kg 7.0 kg 8.5 kg 9.0 kg

Declaration of confirmity

Declaration of conformity for apparatus with CE mark
Konformitätserklärung für Geräte mit CE-Zeichen
Déclaration de conformité pour appareils portant la marque CE
Declaración de conformidad para aparatos con disitintivo CE
Dichiarazione di cofnromitá per apparecchi contrassegnati con la marcatura CE

English We hereby declare that the product to which this declaration refers conforms with the following standards.

Deutsch Wir erklären hiermit, dass das Produkt, auf das sich diese Erklärung bezieht, mit den nachstehenden Normen übereinstimmt.

Français Nous déclarons avec cela responsabilité que le produit, auquel se rapporte la présente déclaration, est conforme aux normes citées ci-après.

Español Manifestamos en la presente que el producto al que se refiere esta declaración est´a de acuerdo con las normas siguientes

Italiano Dichiariamo con ciò che il prodotto al quale la presente dichiarazione si riferisce è conforme alle norme di seguito citate.

Electronic Balance: Precisa Series 410

Mark applied	EU Directive	Standards
CE	89/336/EEC 73/23/EEC	EN61326 EN61010

Date: 24.02.2009

Signature:

R. Grolimund R & D Manager

Precisa Gravimetrics AG , Moosmattstrasse 32 , Postfach 352 , CH-8953 Dietikon