Operating Instructions

Compact Scale Puro® – Basic

Checked on the basis of Puro® scale with software version 2.89

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Foreword

Must be followed!

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# Table of contents

1 **Introduction** ............................................................................................................................ 3  
1.1 Read the manual .......................................................................................................................... 3  
1.2 This is what operating instructions look like .................................................................................. 3  
1.3 This is what lists look like .............................................................................................................. 3  
1.4 This is what menu items and softkeys look like ............................................................................ 3  
1.5 This is what the safety instructions look like .................................................................................. 3  

2 **Safety instructions** .................................................................................................................. 5  
2.1 General safety information ............................................................................................................ 5  
2.2 Incoming goods inspection ............................................................................................................ 5  
2.3 Before operational startup ........................................................................................................... 5  

3 **Device installation** .................................................................................................................. 6  
3.1 Package Contents ......................................................................................................................... 6  
3.2 Requirements on location ............................................................................................................ 6  
3.3 Leveling the equipment ................................................................................................................ 6  
3.4 Power supply ................................................................................................................................ 7  
3.4.1 Battery Power .......................................................................................................................... 7  
3.5 Connect printer ............................................................................................................................. 8  

4 **Device description** .................................................................................................................. 9  
4.1 Operating .................................................................................................................................... 9  
4.1.1 Display and operating elements .............................................................................................. 9  

5 **Operation** ............................................................................................................................... 12  
5.1 Basic Weighing Function ............................................................................................................. 12  
5.1.1 Turn on the device .................................................................................................................. 12  
5.1.2 Turn off the device .................................................................................................................. 12  
5.1.3 Adjust GEO setting ............................................................................................................... 12  
5.1.4 Select an application .............................................................................................................. 12  
5.2 Application Programs ................................................................................................................ 12  
5.2.1 Weighing Mode ...................................................................................................................... 12  
5.3 Totalizing and Statistics Mode ................................................................................................... 14  
5.3.1 Procedure on Setting up the Totalization Application ............................................................ 14  
5.3.2 (Totalization) Displayed Values ............................................................................................ 15  
5.3.3 Viewing and Clearing Statistical Data ................................................................................... 16  

6 **Menu Settings** ......................................................................................................................... 19  
6.1 Menu Mode .............................................................................................................................. 19  
6.2 Menu Navigation ....................................................................................................................... 20  
6.2.1 Menu Selection [APPLIC] ..................................................................................................... 20  
6.2.2 Menu Selection [METRO] ..................................................................................................... 21
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.2.3</td>
<td>Menu Selection [UNIT]</td>
<td>21</td>
</tr>
<tr>
<td>6.2.4</td>
<td>Menu Selection [OP,FUNC]</td>
<td>22</td>
</tr>
<tr>
<td>6.2.5</td>
<td>Menu Selection [PRINT]</td>
<td>23</td>
</tr>
<tr>
<td>6.2.6</td>
<td>Menu Selection [PRN.COM]</td>
<td>24</td>
</tr>
<tr>
<td>6.2.7</td>
<td>Menu Selection [PC.OUT]</td>
<td>24</td>
</tr>
<tr>
<td>6.2.8</td>
<td>Menu Selection [PC.COM]</td>
<td>25</td>
</tr>
<tr>
<td>6.2.9</td>
<td>Menu Selection [CAL.ADJ]</td>
<td>25</td>
</tr>
<tr>
<td>6.2.10</td>
<td>Menu Selection [INFO]</td>
<td>26</td>
</tr>
<tr>
<td>6.2.11</td>
<td>Menu Selection [SECURE]</td>
<td>26</td>
</tr>
</tbody>
</table>

7 Calibration and Adjustment | 27 |
7.1 [CAL] Calibration Procedure | 27 |
7.2 [LIN] Linearity Calibration Procedure | 29 |
7.3 [GEO] Geographical Factor Adjustment Procedure | 32 |
7.4 GEO Code Table | 34 |

8 SBI Interface | 36 |

9 Maintenance/repairs/cleaning | 38 |
9.1 Repairs | 38 |
9.2 Cleaning | 38 |
9.2.1 Cleaning instructions | 38 |
9.2.2 Cleaning agents | 38 |

10 Disposal | 39 |

11 Troubleshooting | 40 |
11.1 Service Information | 40 |

12 Technical data | 41 |
12.1 Ambient Conditions | 41 |
12.2 Specifications | 41 |
12.3 Accessories | 43 |
12.4 Dimensions | 43 |

13 Appendix | 54 |
13.1 Printouts | 54 |
13.2 FCC Note | 55 |
1 Introduction

1.1 Read the manual
- Please read this manual carefully and completely before using the product.
- This manual is part of the product. Keep it in a safe and easily accessible location.

1.2 This is what operating instructions look like
1. - n. are placed before steps that must be done in sequence.
   ▶ is placed before a step.
   ▶ describes the result of a step.

1.3 This is what lists look like
- indicates an item in a list.

1.4 This is what menu items and softkeys look like
[ ] frame menu items and softkeys.
Example:
[Start] - [Applications] - [Excel]

1.5 This is what the safety instructions look like
Signal words indicate the severity of the danger involved when measures for preventing hazards are not followed.

⚠️ DANGER
Warning of personal injury
DANGER indicates death or severe, irreversible personal injury which will occur if the corresponding safety measures are not observed.
▶ Take the corresponding safety precautions.

⚠️ WARNING
Warning of hazardous area and/or personal injury
WARNING indicates that death or severe, irreversible injury may occur if appropriate safety measures are not observed.
▶ Take the corresponding safety precautions.

⚠️ CAUTION
Warning of personal injury.
CAUTION indicates that minor, reversible injury may occur if appropriate safety measures are not observed.
▶ Take the corresponding safety precautions.
NOTICE

Warning of damage to property and/or the environment.
NOTICE indicates that damage to property and/or the environment may occur if appropriate safety measures are not observed.

► Take the corresponding safety precautions.

Note:

User tips, useful information, and notes.
2 Safety instructions

2.1 General safety information

Follow these safety precautions:

- The equipment may only be used as intended for weighing tasks.
- The device may only be opened by authorised personnel.
- Observe the operating limits of the device.
- Ensure that the supply voltage at the installation site matches the AC input voltage indicated on the data label.
- Avoid shock stress (falling down, hard shocks, falling loads, any impact from the side).
- Do not use the equipment in hazardous areas and unstable environments.
- Do not expose the equipment to aggressive chemical vapors or to unnecessarily extreme temperatures, moisture, or vibration.
- Unplug the device before you connect or disconnect any electronic peripheral devices to or from the interface port.
- Unplug the power cord from the mains supply before cleaning.
- Make sure that no liquid enters the equipment.
- Do not use loads that exceed the capacity of the scale.

2.2 Incoming goods inspection

The shipment must be checked for completeness. A visual inspection must be performed to determine if the shipment has been damaged. If there are grounds for a complaint, this must be brought to the attention of the delivery company immediately. A Minebea Intec sales or service point must be informed. Visit our website http://www.puroscales.com or contact your dealer.

2.3 Before operational startup

NOTICE

Perform visual inspection.

Before operational startup as well as after storage or transport, inspect the product visually for signs of mechanical damage.

► The product may not be put into operation if it has visible damage and/or is defective.
3 Device installation

3.1 Package Contents

- Scale
- Sub-platform
- Safety Instructions and QR code with access to the detailed documentation
- Pan
- USB power supply and cord

3.2 Requirements on location

- Set up the device on a stable, even surface.
- Position the device so that the power plug is freely accessible and the power cord is not an obstacle or trip hazard.
- Avoid placing the device in close proximity to a heater or otherwise exposing the scale to heat or direct sunlight.
- Do not expose the device to excessive temperature fluctuations.
- Protect the device from drafts that come from open windows or doors.
- Avoid exposing the device to extreme vibrations during weighing.
- Protect the device from aggressive chemical vapors.
- Do not expose the device to extreme moisture over long periods.

NOTICE

Acclimatizing the device

Condensation can form on the surfaces of a cold device when it is brought into a substantially warmer area.

► Unplug the device from the power supply and allow it to acclimatize for about 2 hours at room temperature.

3.3 Leveling the equipment

Purpose:
- to compensate for unevenness at the place of installation
- to ensure that the device is placed in a perfectly horizontal position for consistently reproducible weighing results

Always re-level the device any time after it has been moved to a different location.

► Level the scale using the four leveling feet.
► Ensure that all leveling feet make contact with the floor.
► Turn the feet until the air bubble is centered in the level indicator.
   ► Each of the leveling feet must support an equal load.
3.4 Power supply

AC power is used to power the scale when battery power is not needed. Plug the USB-C plug into the USB-C jack on the bottom of the unit, then plug the AC power supply into a wall outlet.

Note:
Do not use the USB-C power supply cable for the PC communication. Instead use a standard USB-C cable.

3.4.1 Battery Power

The scale can be used on AC power immediately. Allow the battery to charge for 12 hours before using the scale on battery power. The Scale will automatically switch to battery operation if there is a power failure or the power cord is removed. With AC power, the scale is constantly charging, so the battery charge indicator (see Chapter 4.1.1.2) will remain lit. The scale can be operated during charging, and the battery is protected against overcharging.

When the device is switched on, the battery status LED lights red while the battery is charging and green when the battery is fully charged.

For maximum operating time, the battery should be charged at room temperature. During battery operation, the battery symbol indicates the battery charge level remaining. The indicator will automatically turn off when the batteries are empty.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Charge level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 to 10 % Remaining</td>
</tr>
<tr>
<td></td>
<td>11 to 40 % Remaining</td>
</tr>
<tr>
<td></td>
<td>41 to 70 % Remaining</td>
</tr>
<tr>
<td></td>
<td>71 to 100 % Remaining</td>
</tr>
</tbody>
</table>

Note:
When battery symbol blinks fast, approximately 30 minutes working time is left. When [lo.bat] is displayed, the scale will shut off.

Charging the scale must be performed in a dry environment.
**WARNING**

Risk of explosion can occur

If the rechargeable battery is replaced with the wrong type or if it is not properly connected.

- Battery is to be replaced only by an authorized Puro® service dealer.
- Dispose of battery according to local laws and regulations.

### 3.5 Connect printer

A printer can be connected to the printer port on the underside of the device.
4 Device description

4.1 Operating

4.1.1 Display and operating elements

4.1.1.1 Overview

Front Control Panel with LCD Display.

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Display elements, see Chapter 4.1.2</td>
</tr>
<tr>
<td>2</td>
<td>Operating elements, see Chapter 4.1.3</td>
</tr>
</tbody>
</table>

4.1.1.2 Display elements

LCD Display

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Busy</td>
<td>7</td>
<td>Auto Taring Symbol</td>
</tr>
<tr>
<td>2</td>
<td>Plus symbol</td>
<td>8</td>
<td>Data transfer</td>
</tr>
<tr>
<td>3</td>
<td>Minus symbol</td>
<td>9</td>
<td>Weight unit</td>
</tr>
<tr>
<td>4</td>
<td>Zero-setting</td>
<td>10</td>
<td>Battery charge</td>
</tr>
<tr>
<td>5</td>
<td>Weighing</td>
<td>11</td>
<td>Printer Icon</td>
</tr>
<tr>
<td>6</td>
<td>Totalization</td>
<td>12</td>
<td>NET, Preset Tare, Gross</td>
</tr>
</tbody>
</table>

Minebea Intec

EN-9
When the device is switched on, the battery status LED (1) lights red while the battery is charging and green when the battery is fully charged.

### LED indicators

When the device is switched on, the battery status LED (1) lights red while the battery is charging and green when the battery is fully charged.

#### 4.1.1.3 Operating elements

<table>
<thead>
<tr>
<th>Button</th>
<th>Off</th>
<th>→T←</th>
<th>M+ Menu</th>
<th>F Mode</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Function</strong></td>
<td>On / Zero</td>
<td>Tare</td>
<td>M+</td>
<td>Function</td>
<td>Print</td>
</tr>
<tr>
<td>(short press) &lt; 1 second</td>
<td>Power on the scale (when scale is off). Set zero (when scale is on).</td>
<td>Set a tare value.</td>
<td>Accumulates the weight or display the accumulated information.</td>
<td>Triggers a function.</td>
<td>Sends the current value to the selected COM ports if AUTO-PRINT is set to off.</td>
</tr>
<tr>
<td><strong>Secondary Function</strong></td>
<td>Off</td>
<td>Menu</td>
<td>Mode</td>
<td>Unit</td>
<td></td>
</tr>
<tr>
<td>(long press) hold &gt; 2 second</td>
<td>Power off the scale.</td>
<td>Initiates clearing function of totaling.</td>
<td>Enter the user menu.</td>
<td>Changes the weighing unit.</td>
<td></td>
</tr>
</tbody>
</table>

**Menu Function**

<table>
<thead>
<tr>
<th>(short press) &lt; 1 second</th>
<th>Accepts the current setting on the display.</th>
<th>Exit</th>
<th>Back</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exits the user menu.</td>
<td>Moves back to previous menu items.</td>
<td>Rejects the current setting on the display and advances to the next available setting.</td>
<td>Advances to the next menu or item.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(short press) &gt; 1 second</th>
<th>Accepts the current setting on the display.</th>
<th>Exit</th>
<th>Back</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exits the user menu.</td>
<td>Moves back to previous menu items.</td>
<td>Rejects the current setting on the display and advances to the next available setting.</td>
<td>Advances to the next menu or item.</td>
</tr>
</tbody>
</table>
4.1.1.4 Rear Display

The models LargeTall (LT) and SmallTall (ST) have an additional rear display, which shows the same display elements as the front display. (See Chapter 4.1.2).
5 Operation

5.1 Basic Weighing Function

5.1.1 Turn on the device

Press the button. All elements of the display are shown for 2 seconds.

The software version number is displayed for 2 seconds.

If the scale is turned ON for the very first time then applications "Weighing" plus "Totalizing" (manually) are active.

5.1.2 Turn off the device

Press and hold the button until [OFF] is displayed. The display shows [- OFF -] for about 1 second.

The device switches off, display is dark.

5.1.3 Adjust GEO setting

Adjust the GEO setting according to your location to ensure accurate weighing results. See Chapter 7.3.

5.1.4 Select an application

Applications "Totalization", "Auto Tare" and "Automatic Print" can be activated via Menu.

<table>
<thead>
<tr>
<th>[OP.FUNC]</th>
<th>[A.TARE]</th>
<th>Auto Tare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[TOT.SET]</td>
<td>Totalization</td>
</tr>
<tr>
<td>[PRINT]</td>
<td>[A.PRINT]</td>
<td>Automatic Print</td>
</tr>
</tbody>
</table>

5.2 Application Programs

5.2.1 Weighing Mode

Display the weight of the sample in lb, oz, lb:oz, kg or g.
1. Weighing is always active and displayed with application icon at bottom of the screen.

Release the button. The application is activated.

[0.000] is displayed.

2. Place container on the scale (in this example, 0.598 kg).

5.2.1.1 Stability

If a weighing value is stable, the unit symbol is displayed.

Stable weighing value:

Unstable weighing value:

Stable gross weighing value below zero (no unit visible):
If the gross weight is 20d below zero, [L] is displayed.
If the gross weight is >7d above Maxload, [H] is displayed.

5.2.1.2 Taring

- For taring the container on the scale, press the \text{°T°} button if the pan is loaded.
  - [NET] is shown on the display.

  \begin{center}
  \text{\textbf{Tared value:}}
  \end{center}

\begin{center}
\begin{tabular}{l l}
\text{1.006 kg} & \text{\textbf{NET}} \\
\end{tabular}
\end{center}

5.2.1.3 Weight Unit switch

You can toggle the display of a weight value between different weight units.
- To select the weight unit, press the \text{Unit} button until the desired weight unit is displayed, when these units are activated in menu before. [kg / g / lb / oz / lb:oz]. Release the button to select.

\begin{tabular}{ l | l }
\hline
\text{gram} & [g] \\
\hline
\text{kilogram} & [kg] \\
\hline
\text{pound} & [lb] \\
\hline
\text{ounce} & [oz] \\
\hline
\text{pound-ounces} & [lb:oz] \\
\hline
\end{tabular}

5.2.1.4 Negative weighing value

Negative stable netto weight value is displayed like this:

\begin{center}
\begin{tabular}{l l}
\text{\textbf{NET}} & \text{\textbf{-}} \\
\hline
\text{0.598 kg} & \\
\hline
\end{tabular}
\end{center}

5.3 Totalizing and Statistics Mode

The Totalizing feature enables manual or automatic totalizing of displayed values. Statistical data (total accumulated weight, min/max weights and total number of weighing objects) is stored in memory for review and printing. Totalizing works in combination with each application mode. Totalization manual is set to ON by default.

5.3.1 Procedure on Setting up the Totalization Application
1. To enter into menu mode, press and hold the \( M \) button until \([\text{M.E.N.U}]\) is displayed.

![M.E.N.U]

Release the button.

▷ The 1\textsuperscript{st} menu item [APPLIC] shown on display.

![APPLIC]

2. Press the \( U \) button to move to the next menu item or \( F \) button to move to the previous menu item.

3. Change menu item until \([\text{OP.FUNC}]\) (operating function) is shown on display.

![OP.FUNC]

4. Press \( O \) (Yes) button to enter into sub-menu item.

5. Change menu item until \([\text{TOT.SET}]\) (totalizing setting) is shown on display.

![TOT.SET]

6. Press the \( O \) (Yes) button to enter the displayed sub-menu, then select one option [OFF / AUTO / MAN] using the \( U \) button and store the selection with the \( O \) (Yes) button.

7. Leave the setup menu with the \( M \) button.

### 5.3.2 (Totalization) Displayed Values

The Totalization Mode is active when \( \Sigma \) icon is displayed.

![0.000 kg]

1. Put the first item on the scale.
5.3.3 Viewing and Clearing Statistical Data

The pan must be empty to view the stored statistics.
1. Empty the weighing pan.

2. Press the \( \text{Menu} \) key to display the stored totalizing data.

The scale will display the statistical information in following order:

Number of weighing done (N = 7):

Totalized value (TOTAL = 5.225 kg)

Minimum value (Min = 0.470 kg):

Maximum value (Max = 1.485 kg)
To clear the totalizing memory:

3. Press and hold the **-T** button while the pan is unloaded and the totalizing data is displayed.
   - The message [CLR.TOT] appears.

4. Press the **-O** (Yes) button to confirm or press the **-A** (No) button to cancel.

To verify the totalizing memory has been cleared:

5. Press the **M** button to display the statistical information.

**Note:**

- The item must be removed from the pan before the next item can be accumulated.
- Only stable weights are stored to totalizing memory.
- Changing the application mode will clear the totalizing memory.
- Gross loads and net loads cannot be added to the same total.
  - If the first load is a gross weight, following loads must also be gross weights.
  - If the first load is a net weight, following loads must also be net weights.
6 Menu Settings

The User Menu (Menu Mode) allows the customizing of scale settings.

Note:
Additional Sub-Menus may be available if Interface Options are installed.
See Interface User Manual for the additional setting information.

6.1 Menu Mode

Enter into Menu Mode:

1. Press and hold ［Menu］ button until ［M.E.N.U］ is displayed.

Release the button.

▷ The 1st menu item ［APPLIC］ shown on display.

2. To enter into menu item (in this example ［APPLIC］ - ［WEIGH］, press ［Off］ (Yes) button.

3. Or press the ［Order］ button to move to the next menu item or ［Mode］ button move to previous menu item.

▷ The 2nd menu item ［METRO］ shown on display.

When viewing the setting (in this example ［METRO］ - ［STAB.RA］ value 0.5d).

4. When viewing the setting (in this example ［METRO］ - ［STAB.RA］ value 0.5d), press ［Off］ (Yes) button to Accept setting or the ［Unit］ (No) button to change setting. The current selection is signed by ［x］.
5. When [END] is displayed, press \( \text{Yes} \) button to return to sub-menu selections.

6. Press the \( \text{No} \) button to return to the first item in the current menu.
7. Press the \( \text{Menu} + \) button to exit the menu.

6.2 Menu Navigation

Overview of Menu Mode options.

- **APPLIC**: Application (see chapter 6.2.1)
- **METRO**: Metrology (see chapter 6.2.2)
- **UNIT**: Weighing units (see chapter 6.2.3)
- **OP.FUNC**: Operation functions (see chapter 6.2.4)
- **PRINT**: Printer outputs (see chapter 6.2.5)
- **PRN.COM**: Printer port communication (see chapter 6.2.6)
- **PC.OUT**: PC output (see chapter 6.2.7)
- **PC.COM**: PC port communication (see chapter 6.2.8)
- **CAL.ADJ**: Calibration / Adjustment (see chapter 6.2.9)
- **INFO**: Information (shows serial number and type designation)
- **SECURE**: Block menu items (see chapter 6.2.11)
- **E.N.D.**: Leave menu

**Note:**

Some modes / units may not be available in all models.

### 6.2.1 Menu Selection [APPLIC]

Enter this menu to select application to be used.

Only activated units will be accessible with the \( \text{Mode} \) button.

Default settings are identified by an "*"

**APPLIC**

- **WEIGH**: Weighing mode
  - **ON**: enabled*
6.2.2  Menu Selection [METRO]

Enter this menu to customize display functionality and scale functionality.
Default settings are identified by an "**"

METRO

- STAB.RA  Stability range
  - 0.5d  1/2 digit
  - 1d   1 digit**
  - 2d   2 digit
  - 4d   4 digit
- FILTER  Adaption Filter
  - LOW  Less precision, short stabilization time
  - MED  Normal precision, medium stabilization time**
  - HI  High Precision, Long stabilization time
- A.ZERO.T  Auto Zero-Tracking
  - OFF  Turn off
  - 0.5d  Drift of 1/2 digit**
  - 1d   Drift of 1 digit
  - 3d   Drift of 3 digit
- AUT.OFF  Auto Off Timer
  - OFF  Turn off**
  - 1 MIN  power off after 1 minute of no activities
  - 5 MIN  power off after 5 minutes of no activities
  - 10 MIN  power off after 10 minutes of no activities
- DYN.TIM  has no effect in this device
  - 5 SEC  has no effect in this device
  - 10 SEC  has no effect in this device
  - 15 SEC  has no effect in this device
  - 20 SEC  has no effect in this device
  - 25 SEC  has no effect in this device
  - 30 SEC  has no effect in this device
- RESET  Factory setting
  - NO  not restored**
  - YES  enabled
- END  Leave menu level

6.2.3  Menu Selection [UNIT]

Enter this menu to customize weighing unit to be used.
Default settings are identified by an "**"

UNIT

- kg  Kilogram
  - OFF  disabled
  - ON  enabled**
- g
  - OFF  disabled
  - ON  enabled**
- lb  Pound
## 6.2.4 Menu Selection [OP.FUNC]

Enter this menu to setup scale parameters.

Default settings are identified by an "*"

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>Zero Range</td>
<td>disabled</td>
</tr>
<tr>
<td>ON</td>
<td></td>
<td>enabled*</td>
</tr>
<tr>
<td>oz</td>
<td>Ounce</td>
<td>OFF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ON</td>
</tr>
<tr>
<td>lb:oz</td>
<td>Pound / Ounces</td>
<td>OFF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ON</td>
</tr>
<tr>
<td>RESET</td>
<td>Factory setting</td>
<td>OFF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ON</td>
</tr>
<tr>
<td>NO</td>
<td>not restored*</td>
<td>OFF</td>
</tr>
<tr>
<td>YES</td>
<td>enabled</td>
<td>ON</td>
</tr>
<tr>
<td>END</td>
<td>Leave menu level</td>
<td>OFF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ON</td>
</tr>
</tbody>
</table>

### OP.FUNC

#### ZERO.R
- 2%  
- 10%

#### A.TARE
- OFF  
- ON   
- ON-ACC

#### BEEP.SI
- OFF  
- ACCEPT
- UNDER
- OVER
- UNDOVR

#### BEEP.KE
- OFF  
- ON   

#### TOT.SET
- OFF  
- AUTO  
- MAN   

#### LIGHT.T
- 3 SEC
- 5 SEC
- 8 SEC

#### D.LIGHT
- OFF  
- ON   
- AUTO

#### COM.EQU
- OFF  
- BLUE.TH
- WIFI
6.2.5 Menu Selection [PRINT]

Enter this menu to print scale parameters.

Default settings are identified by an "*"

**PRINT**

- **STABLE**
  - OFF
  - ON
  - **A.PRINT**
    - OFF
    - ON.STAB
    - INTER
      - 1…3600
    - CONT
    - ACCEPT
  - **CONTNT**
    - RESULT
    - GROSS
    - NET
    - TARE
    - HEADER
    - FOOTER
    - MODE
    - INFO
    - TOTAL
    - **LI.SET**

- **ETHER.N** Ethernet Enabled (when Ethernet module is installed)
- **RESET** Factory setting
  - NO
  - **YES** enabled
  - **END** Leave menu level

**Print**

- **OFF**
  - **ON** values are only printed when stable*
- **A.PRINT**
  - **OFF**
  - **ON.STAB**
  - **INTER**
    - 1…3600
  - **CONT**
  - ACCEPT
  - **CONTNT**
    - RESULT
    - GROSS
    - NET
    - TARE
    - HEADER
    - FOOTER
    - MODE
    - INFO
    - TOTAL

* **OFF**
  - **ON** enabled

**OFF**

---

Minebea Intec

EN-23
6.2.6 Menu Selection [PRN.COM]

Enter this menu to setup Print Communication parameters. Default settings are identified by an "*

PRN.COM

-- BAUD          Baud Rate
  -- 2400        2400
  -- 4800        4800
  -- 9600        9600*
  -- 19200       19200
  -- 38400       38400
  -- 57600       57600
  -- 115200      115200

-- PARITY        Parity
  -- 7 EVEN      7 data bits, even parity
  -- 7 Odd       7 data bits, odd parity
  -- 7 NONE      7 data bits, no parity
  -- 8 NONE      8 data bits, no parity*

-- STOP          Stop Bit
  -- 1           1*
  -- 2           2

-- RESET         Factory setting
  -- NO          not restored*
  -- YES         enabled

-- END

Leave menu level

6.2.7 Menu Selection [PC.OUT]

Enter this menu to define PC Output parameters. Default settings are identified by an "*

PC.OUT

-- MODE          PC Output Mode
  -- OFF         disabled*
  -- MAN.OUT     Manual output
  -- MAN.STA     Manual output
  -- INT.OUT     Interval output
  -- AUT.OUT     Automatic output
  -- AUT.STA     Automatic output when data is stable

-- INTERV        Set the output interval (when INT.OUT is selected)
  -- 1 CYC      Each display cycle
6.2.8 Menu Selection [PC.COM]

Enter this menu to define PC Communication parameters.
Default settings are identified by an "*"

**PC.COM**

<table>
<thead>
<tr>
<th>BAUD</th>
<th>Baud Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>4800</td>
<td>4800</td>
</tr>
<tr>
<td>9600*</td>
<td>9600</td>
</tr>
<tr>
<td>19200</td>
<td>19200</td>
</tr>
<tr>
<td>38400</td>
<td>38400</td>
</tr>
<tr>
<td>57600</td>
<td>57600</td>
</tr>
<tr>
<td>115200</td>
<td>115200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PARITY</th>
<th>Parity</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 EVEN</td>
<td>7 data bits, even parity</td>
</tr>
<tr>
<td>7 Odd</td>
<td>7 data bits, odd parity</td>
</tr>
<tr>
<td>7 NONE</td>
<td>7 data bits, no parity</td>
</tr>
<tr>
<td>8 NONE*</td>
<td>8 data bits, no parity*</td>
</tr>
<tr>
<td>7 MARK</td>
<td>7 data bits, no parity</td>
</tr>
<tr>
<td>7 SPACE</td>
<td>7 data bits, no parity</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STOP</th>
<th>Stop Bit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1*</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HAND.SH</th>
<th>Handshake</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>No Handshaking*</td>
</tr>
<tr>
<td>XON.XOF</td>
<td>has no function</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESET</th>
<th>Factory setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>not restored*</td>
</tr>
<tr>
<td>YES</td>
<td>enabled</td>
</tr>
</tbody>
</table>

| END       | Leave menu level |

6.2.9 Menu Selection [CAL.ADJ]

Enter this menu to perform calibration and adjustment of your scale (see chapter 7).

**CAL.ADJ**

<table>
<thead>
<tr>
<th>CAL</th>
<th>Initiates a span calibration procedure (zero and span)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIN</td>
<td>Initiates a linearity calibration procedure (zero, mid-point and span)</td>
</tr>
<tr>
<td>GEO</td>
<td>Geographical Adjustment Factor (GEO) is used to adjust the calibration based on the current location. (Settings from 0 ... 31, default 12)</td>
</tr>
<tr>
<td>END</td>
<td>Leave menu level</td>
</tr>
</tbody>
</table>

---

Minebea Intec

EN-25
6.2.10  Menu Selection [INFO]

INFO
  — TYPE  show model name
  — SER.NUM show serial number

6.2.11  Menu Selection [SECURE]

Enter this menu to define Security setting (Lock) on menu option to prevent tampering.
Default settings are identified by an “*”

SECURE
  — S.APPLI  Application Menu
    — OFF Unlock*
    — ON Locked
  — S.UNIT  Unit Menu
    — OFF Unlock*
    — ON Locked
  — S.OP.FUN  Operation Function Menu
    — OFF Unlock*
    — ON Locked
  — S.METRO  Metrology Menu
    — OFF Unlock*
    — ON Locked
  — S.PRINT  Print Menu
    — OFF Unlock*
    — ON Locked
  — S.PR.COM  Communication Menu
    — OFF Unlock*
    — ON Locked
  — S.PC.OUT  PC Output Menu
    — OFF Unlock*
    — ON Locked
  — S.PC.COM  PC Communication Menu
    — OFF Unlock*
    — ON Locked
  — S.CAL.AD  Calibration / Adjustment Menu
    — OFF Unlock*
    — ON Locked
  — RESET  Restore factory setting of current menu
    — OFF Unlock*
    — ON Locked
  — END  Leave menu level
7 Calibration and Adjustment

Enter this menu to perform calibration and adjustment of your scale.

Initial Calibration

When the scale is operated for the first time, a Span Calibration is recommend to ensure accurate weighing results. Before performing the calibration, be sure to have the appropriate calibration weights.

Adjust the GEO setting according to your location (see table 7.4).

CAL.ADJ

- CAL
  Initiates a span calibration procedure (zero and span)
- LIN
  Initiates a linearity calibration procedure (zero, mid-point and span)
- GEO
  Geographical Adjustment Factor (GEO) is used to adjust the calibration based on the current location. (Settings from 0 … 31, default 12)
- END
  Leave menu level

7.1 [CAL] Calibration Procedure

Enter into Menu Mode:

1. Press and hold Menu button until [M.E.N.U] displayed.

2. Press the Unit button move to next menu item or Mode button move to previous menu item.

3. Change menu item until [CAL.ADJ] is displayed.

4. Press Yes button to enter into sub-menu item.

   ▶ Sub-menu item [CAL] (Calibration) is displayed.
5. Press \( \text{Yes} \) button enter into sub-menu item. 
   \( \rightarrow \) [0 kg] is displayed. [0] is blinking.

6. Empty the weighing pan.

7. Press \( \text{Yes} \) button to start zero point calibration. 
   \( \rightarrow \) [--C-->] is displayed while zero reading is stored.

The display shows the calibration weight value with all digit blinking [001500.0] (in this example, 150 kg)

8. For changing the calibration weight value, press the \( \text{No} \) button to edit the value. 
   \( \rightarrow \) The first digit is blinking [._015.000 kg].

9. Press \( \text{Yes} \) button to accept and highlight the next digit. 
   \( \rightarrow \) The 2nd digit is blinking [0._15.000 kg].
In case of any mistake during the calibration process [CALE] (Calibration Error) is displayed.

7.2 [LIN] Linearity Calibration Procedure

Enter into Menu Mode:

10. Press the button to increase or the button to decrease the digit value.
11. Repeat until all the digits are correct.
    ▶ The Display shows the calibration value with all digit blinking [00100.0] (in this example, 100 kg)

12. When calibration weight value is correct, put specified weight on pan.

13. Press (Yes) button to start span calibration.
    ▶ [--C--] will be displayed while calibration weight is stored.

In case of any mistake during the calibration process [CALE] (Calibration Error) is displayed.

14. Remove the weight after finish.
    ▶ The scale is ready for weighing.
1. Press and hold Menu until [M.E.N.U] displayed.

   ![M.E.N.U](image)

   Release the button.

   > The 1st menu item [APPLIC] shows on display.

2. Press the Unit button move to next menu item or Mode button move to previous menu item.

3. Change menu item until [CAL.ADJ] shows on display.

   ![CAL.ADJ](image)

4. Press (Yes) button enter into sub-menu item.

5. Change menu item until [LIN] shows on display.

   ![LIN](image)

6. Press (Yes) button to start zero point calibration.

   > [0 kg] shows on display. [0] is blinking.

7. Empty the weighing pan.

8. Press the (Yes) button to confirm.
The display shows the 1st linearization weight value (50% of scale capacity) with all digit blinking [00075.0] (in this example, 75 kg). This value cannot be modified.

---

9. Put the 1st linearization weight on the pan.

10. Press \[\text{（Yes）} \] button to start linearity adjustment at 50% of scale capacity.

The display shows the the 2nd linearization weight value at 100% of scale capacity with all digit blinking [00150.0] (in this example, 150 kg).

11. Put 2nd linearization weight on the pan.

12. Press \[\text{（Yes）} \] button to start linearity adjustment at 100% of scale capacity.

---

[C-] is displayed while reading is stored.
In case of any mistake during the linearization process [CALE] (Calibration Error) will be displayed.

13. Remove the weight after finish.
   ▶ The scale is ready for weighing.

7.3 [GEO] Geographical Factor Adjustment Procedure

The Geographical Adjustment Factor [GEO] is used to adjust the calibration based on the current location. (Settings from 0 ... 31 are available). Refer to table 7.4 to determine the GEO factor that corresponds to your location.

Enter into Menu Mode:


Release the button.

▶ The 1st menu item [APPLIC] shown on display.
2. Press the button move to next menu item or button move to previous menu item.
3. Change menu item until [CAL.ADJ] show on display.

4. Press (Yes) button enter into sub-menu item.
5. Press the button move to next menu item or button move to previous menu item.
6. Change menu item until [GEO] is displayed.

7. Press (Yes) button to start GEO Factor selection.
   ▶ The default GEO factor [12] is indicated and blinking.

8. If changing the value is needed, selection from 0 … 31, press the button to increase or the button to decrease the GEO factor value.
9. Press (Yes) button to confirm GEO Factor value.
   ▶ The GEO factor has been stored, when [END] is displayed.

10. Press (Yes) button to return to sub-menu selections.
11. Press (No) button to return to the first item in the current menu.
12. Press the button to exit the setup menu and return to the weighing mode.
### 7.4 GEO Code Table

<table>
<thead>
<tr>
<th>Latitude</th>
<th>GEO value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0°00'</td>
<td>5°46'</td>
</tr>
<tr>
<td>5°46'</td>
<td>9°52'</td>
</tr>
<tr>
<td>9°52'</td>
<td>12°44'</td>
</tr>
<tr>
<td>12°44'</td>
<td>15°06'</td>
</tr>
<tr>
<td>15°06'</td>
<td>17°10'</td>
</tr>
<tr>
<td>17°10'</td>
<td>19°02'</td>
</tr>
<tr>
<td>19°02'</td>
<td>20°45'</td>
</tr>
<tr>
<td>20°45'</td>
<td>22°22'</td>
</tr>
<tr>
<td>22°22'</td>
<td>23°54'</td>
</tr>
<tr>
<td>23°54'</td>
<td>25°21'</td>
</tr>
<tr>
<td>25°21'</td>
<td>26°45'</td>
</tr>
<tr>
<td>26°45'</td>
<td>28°06'</td>
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<tr>
<td>28°06'</td>
<td>29°25'</td>
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<td>29°25'</td>
<td>30°41'</td>
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<tr>
<td>30°41'</td>
<td>31°56'</td>
</tr>
<tr>
<td>31°56'</td>
<td>33°09'</td>
</tr>
<tr>
<td>33°09'</td>
<td>34°21'</td>
</tr>
<tr>
<td>34°21'</td>
<td>35°31'</td>
</tr>
<tr>
<td>35°31'</td>
<td>36°41'</td>
</tr>
<tr>
<td>36°41'</td>
<td>37°50'</td>
</tr>
<tr>
<td>37°50'</td>
<td>38°58'</td>
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<tr>
<td>38°58'</td>
<td>40°05'</td>
</tr>
<tr>
<td>40°05'</td>
<td>41°12'</td>
</tr>
<tr>
<td>41°12'</td>
<td>42°19'</td>
</tr>
<tr>
<td>42°19'</td>
<td>43°26'</td>
</tr>
<tr>
<td>43°26'</td>
<td>44°32'</td>
</tr>
<tr>
<td>44°32'</td>
<td>45°38'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elevation in meters</th>
<th>0</th>
<th>325</th>
<th>650</th>
<th>975</th>
<th>1300</th>
<th>1625</th>
<th>1950</th>
<th>2275</th>
<th>2600</th>
<th>2925</th>
<th>3250</th>
</tr>
</thead>
<tbody>
<tr>
<td>325</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>2925</td>
<td>2925</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elevation in feet</th>
<th>0</th>
<th>1016</th>
<th>2130</th>
<th>3200</th>
<th>4260</th>
<th>5330</th>
<th>6400</th>
<th>7460</th>
<th>8530</th>
<th>9600</th>
<th>10660</th>
</tr>
</thead>
<tbody>
<tr>
<td>1060</td>
<td>0</td>
<td>1016</td>
<td>2130</td>
<td>3200</td>
<td>4260</td>
<td>5330</td>
<td>6400</td>
<td>7460</td>
<td>8530</td>
<td>9600</td>
<td>10660</td>
</tr>
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<td>1060</td>
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</tr>
</tbody>
</table>

Compact Scale Puro® - Basic

EN-34

Minebea Intec
### Elevation in meters

<table>
<thead>
<tr>
<th>0</th>
<th>325</th>
<th>650</th>
<th>975</th>
<th>1300</th>
<th>1625</th>
<th>1950</th>
<th>2275</th>
<th>2600</th>
<th>2925</th>
<th>3250</th>
</tr>
</thead>
<tbody>
<tr>
<td>325</td>
<td>650</td>
<td>975</td>
<td>1300</td>
<td>1625</td>
<td>1950</td>
<td>2275</td>
<td>2600</td>
<td>2925</td>
<td>3250</td>
<td>3575</td>
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### Elevation in feet

<table>
<thead>
<tr>
<th>0</th>
<th>1016</th>
<th>2130</th>
<th>3200</th>
<th>4260</th>
<th>5330</th>
<th>6400</th>
<th>7460</th>
<th>8530</th>
<th>9600</th>
<th>10660</th>
</tr>
</thead>
<tbody>
<tr>
<td>1060</td>
<td>2130</td>
<td>3200</td>
<td>4260</td>
<td>5330</td>
<td>6400</td>
<td>7460</td>
<td>8530</td>
<td>9600</td>
<td>10660</td>
<td>11730</td>
</tr>
</tbody>
</table>

### Latitude

<table>
<thead>
<tr>
<th>Latitude</th>
<th>GEO value</th>
</tr>
</thead>
<tbody>
<tr>
<td>45°38'</td>
<td>18 18 17 17 16 16 15 15 14 14 13</td>
</tr>
<tr>
<td>46°45'</td>
<td>18 18 17 17 16 16 15 15 14 14 14</td>
</tr>
<tr>
<td>47°51'</td>
<td>18 18 17 17 16 16 15 15 15 15 14</td>
</tr>
<tr>
<td>48°58'</td>
<td>19 19 19 18 18 17 17 16 16 16 15</td>
</tr>
<tr>
<td>50°16'</td>
<td>20 20 20 19 19 18 18 17 17 16 16 15</td>
</tr>
<tr>
<td>51°13'</td>
<td>21 21 20 19 19 18 18 17 17 16 16 16 15</td>
</tr>
<tr>
<td>52°22'</td>
<td>21 21 20 19 19 18 18 17 17 16 16 16 16 15</td>
</tr>
<tr>
<td>53°31'</td>
<td>22 22 21 20 20 19 19 18 18 17 17 17 17</td>
</tr>
<tr>
<td>54°41'</td>
<td>22 22 21 20 20 19 19 18 18 17 17 17 17 17</td>
</tr>
<tr>
<td>55°52'</td>
<td>23 23 22 21 21 20 20 19 19 18 18 18 18 18</td>
</tr>
<tr>
<td>57°04'</td>
<td>23 23 22 22 21 21 20 20 20 19 19 19 18 18</td>
</tr>
<tr>
<td>58°17'</td>
<td>24 24 23 23 22 22 21 21 20 20 20 20 19 19</td>
</tr>
<tr>
<td>59°32'</td>
<td>24 24 23 23 22 22 21 21 20 20 20 20 19 19</td>
</tr>
<tr>
<td>60°49'</td>
<td>25 24 24 23 23 22 22 21 21 20 20 20 19 19</td>
</tr>
<tr>
<td>62°90'</td>
<td>25 25 24 24 23 23 22 22 21 21 20 20 20 20</td>
</tr>
<tr>
<td>63°30'</td>
<td>26 24 24 24 23 23 22 22 21 21 20 20 20 20</td>
</tr>
<tr>
<td>64°55'</td>
<td>26 26 25 25 24 24 23 23 22 22 21 21 21 21</td>
</tr>
<tr>
<td>66°24'</td>
<td>26 26 25 25 24 24 23 23 22 22 21 21 21 21</td>
</tr>
<tr>
<td>67°57'</td>
<td>26 26 26 26 25 25 24 24 23 23 22 22 21 21</td>
</tr>
<tr>
<td>69°35'</td>
<td>27 27 26 26 25 25 24 24 23 23 22 22 21 21</td>
</tr>
<tr>
<td>71°21'</td>
<td>28 27 26 26 25 25 24 24 23 23 22 22 21 21</td>
</tr>
<tr>
<td>73°16'</td>
<td>28 28 27 27 26 26 25 25 24 24 23 23 22 22</td>
</tr>
<tr>
<td>75°24'</td>
<td>29 28 28 27 27 26 26 25 25 24 24 23 23 22</td>
</tr>
<tr>
<td>77°55'</td>
<td>29 29 28 28 27 27 26 26 25 25 24 24 23 23</td>
</tr>
<tr>
<td>80°56'</td>
<td>30 29 29 28 28 27 27 26 26 25 25 24 24 23</td>
</tr>
<tr>
<td>85°45'</td>
<td>30 30 29 29 28 28 27 27 26 26 25 25 24 24</td>
</tr>
<tr>
<td>90°00'</td>
<td>31 30 30 29 29 28 28 27 27 26 26 25 25 24</td>
</tr>
</tbody>
</table>
8 SBI Interface

You can enter certain commands to control weighing platform functions through the SBI interface. Each command starts with an escape sequence. The command is always closed with an end of command (EOC). The end of command can be any combination of CR and LF. Every data after EOC and before ESC will be ignored by the scale.

**Read displayed value:**

```
ESC P EOC
```

Answer (16 Byte):

```
V W W W W W W W W E E E CR LF
```

<table>
<thead>
<tr>
<th>V</th>
<th>Sign</th>
<th>possible characters: &quot;+&quot;, &quot;+&quot;, &quot;=&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>Weight Value</td>
<td>possible characters: &quot;0&quot; .. &quot;9&quot;, &quot;.&quot;, &quot;=&quot;</td>
</tr>
<tr>
<td>E</td>
<td>Unit</td>
<td>possible characters: &quot;a&quot; .. &quot;z&quot;, &quot;A&quot; .. &quot;Z&quot;, &quot;=&quot;</td>
</tr>
<tr>
<td>CR</td>
<td>Carriage Return</td>
<td>ASCII 0x0D</td>
</tr>
<tr>
<td>LF</td>
<td>Line Feed</td>
<td>ASCII 0x0A</td>
</tr>
</tbody>
</table>

**Zero the weighing platform:**

```
ESC Z EOC
```

Answer: see special Response Commands

**Tare the weighing platform:**

```
ESC T EOC
```

Answer: see special Response Commands

**Special Response commands:**

There are some special response commands. These commands are used as standard responses. For example, error or confirmation. Special Response Commands always have the same size of 5 Bytes!

**OK**

```
1 2 3 4 5
O K ! CR LF
```

The Scale confirmed the command execution without any errors.
The Scale has reported an Error during command execution.

The command can not be executed because the parameter is currently locked.
9 Maintenance/repairs/cleaning

9.1 Repairs

Immediately disconnect a defective device from the power supply.
Defective or damaged cables or screw connections must be replaced as a complete unit.
The seals placed on the device indicate that the device may only be opened and serviced by authorized specialists to ensure trouble-free and safe operation of the device, and to ensure that the warranty remains valid.

⚠️ WARNING

Improper repairs can pose considerable risks to the user.
► Repairs should only be performed by Minebea Intec authorized dealers using original spare parts.

9.2 Cleaning

9.2.1 Cleaning instructions

The device should be cleaned at regular intervals.
Disconnect the device from the supply voltage before cleaning.
Remove all traces of corrosive substances on a regular basis.
If the scale is located in a dry environment, then wipe the weighing platform using a damp cloth.
Do not allow liquid to enter devices with an IP43 degree of protection.
The device may not be cleaned using a high-pressure or steam cleaner. Consider the IP rating.
Condensation may form in the device if it is cleaned with water that is too hot or too cold, due to temperature differences. Condensation may cause the device to malfunction.

9.2.2 Cleaning agents

NOTICE

Some cleaning agents may not be compatible with the device material.
► Do not use cleaning agents for stainless steel parts that contain chlorine, alkalines, acetic acid, hydrochloric acid, sulfuric acid, or citric acid.
► The use of cleaning sponges made of steel wool is prohibited (e.g. S.O.S pads).
► Use a damp cloth or sponge to clean stainless steel parts on the scale (if present). You can use any commercially available household cleaning agent that is suitable for use on stainless steel.
10 Disposal

If the packaging is no longer required, please take it to your local waste disposal facility and/or a reputable disposal company or collection point. The packaging largely consists of environmentally friendly materials which can be used as secondary raw materials. It is not permitted—even for small businesses—to dispose of this product with the regular household waste or at collection points run by local public waste disposal companies. EU legislation requires its Member States to collect electrical and electronic equipment and dispose of it separately from other unsorted municipal waste so that it can then be recycled.

Before disposing of or scrapping the product, any batteries should be removed and taken to a suitable collection point.
Please see our T&Cs for further information.

We reserve the right not to accept products that are contaminated with hazardous substances (ABC contamination) for repair.
# 11 Troubleshooting

The Table lists common problems and possible causes and remedies. If the problem persists, contact Minebea Intec or your authorized dealer.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannot turn on</td>
<td>No power to scale</td>
<td>Verify connections and voltage</td>
</tr>
<tr>
<td>Poor accuracy</td>
<td>Improper adjustment</td>
<td>Perform adjustment</td>
</tr>
<tr>
<td></td>
<td>Unstable environment</td>
<td>Move scale to suitable location</td>
</tr>
<tr>
<td>Cannot access mode</td>
<td>Mode not enabled</td>
<td>Enter menu and enable mode</td>
</tr>
<tr>
<td>Cannot access unit</td>
<td>Unit not enabled</td>
<td>Enter menu and enable unit</td>
</tr>
<tr>
<td>Battery icon flashing</td>
<td>Low Battery error</td>
<td>Connect the scale to AC power and charge</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the battery</td>
</tr>
<tr>
<td>[Err 8.1]</td>
<td>Power On Error</td>
<td>Weight reading exceeds Power On Zero limit</td>
</tr>
<tr>
<td>[Err 8.2]</td>
<td>Power On Error</td>
<td>Weight reading below Power On Zero limit</td>
</tr>
<tr>
<td>[Err 8.3]</td>
<td>Over Range Error</td>
<td>Weight reading exceeds Overload limit</td>
</tr>
<tr>
<td>[Err 8.4]</td>
<td>Under Range Error</td>
<td>Weight reading below Underload limit</td>
</tr>
<tr>
<td>[Err 8.5]</td>
<td>Tare out of range</td>
<td>Adjust tare value to be within range</td>
</tr>
<tr>
<td>[Err 8.6]</td>
<td>Display overflow</td>
<td>Weight exceeds 6 digits</td>
</tr>
<tr>
<td>[Err 9.5]</td>
<td>Calibration data error</td>
<td>Calibration data not present</td>
</tr>
<tr>
<td>Busy</td>
<td></td>
<td>Displayed during tare setting, zero set-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ting, printing</td>
</tr>
<tr>
<td>[--NO--]</td>
<td>Action not allowed</td>
<td>Function not executed</td>
</tr>
<tr>
<td>[CAL E]</td>
<td>Calibration error Unstable env-</td>
<td>Calibration value outside allowed limits</td>
</tr>
<tr>
<td></td>
<td>iron Uncorrect calibration weight</td>
<td>Move the scale to suitable location</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use correct calibration weight</td>
</tr>
<tr>
<td>[REF.ERR]</td>
<td>Unacceptable reference weight</td>
<td>Reference weight too small. Weight on the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pan is too small to define a valid refer-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ence weight. Increase reference weight</td>
</tr>
<tr>
<td>Battery fails to char-</td>
<td>Battery is defective</td>
<td>Have battery replaced by Minebea Intec</td>
</tr>
<tr>
<td>ge fully</td>
<td></td>
<td>authorized service dealer.</td>
</tr>
</tbody>
</table>

## 11.1 Service Information

If the troubleshooting chapter does not resolve or describe your problem, contact your authorized service agent. Please visit our website [http://www.puroscales.com](http://www.puroscales.com) to locate the Electronic Precision Scales/Balances office nearest you.
12 Technical data

12.1 Ambient Conditions
- Indoor use only
- Operating temperature: -10°C to +40°C
- Storage temperature: -10°C to +50°C
- Relative humidity: 20 % to 85 % relative humidity, non-condensing
- Altitude: up to 3575 m

12.2 Specifications

<table>
<thead>
<tr>
<th>Model number</th>
<th>EF - ..</th>
<th>P1</th>
<th>P3</th>
<th>P6</th>
<th>P15</th>
<th>P30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Capacity (g)</td>
<td>1,500</td>
<td>3,000</td>
<td>6,000</td>
<td>15,000</td>
<td>30,000</td>
<td></td>
</tr>
<tr>
<td>Readability d (g)</td>
<td>0.05</td>
<td>0.1</td>
<td>0.2</td>
<td>0.5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Max. resolution</td>
<td>30,000</td>
<td>30,000</td>
<td>30,000</td>
<td>30,000</td>
<td>30,000</td>
<td></td>
</tr>
<tr>
<td>Readability d (g)</td>
<td>0.2</td>
<td>0.5</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Max. resolution</td>
<td>7,500</td>
<td>6,000</td>
<td>6,000</td>
<td>7,500</td>
<td>6,000</td>
<td></td>
</tr>
</tbody>
</table>

Application Package
- Weighing, Automatic tare, Percent Weighing, Parts Counting, Checkweighing, Accumulation, Dynamic Weighing, Display Hold, Automatic Print, Totalizing

Weighing units
- kg, g, lb, oz, lb:oz

Construction/material
- ABS plastic housing, stainless steel 304 weighing platform

Ingress protection rating
- IP43

Display
- Front and back LCD display with white backlight, 1.1 in / 28 mm height digits

Checkweighing indicators
- 3 LED (yellow, green, red) with configurable operation and alert beeper

Keypad
- 5 mechanical keys

Zero range
- 2 % or 10 % of full scale capacity

Tare range
- Full capacity by subtraction

Stabilization time
- 1 second

Auto-zero tracking
- Off, 0.5, 1 or 3 divisions

Safe overload capacity
- 150 % of rated scale capacity

 Levelling components
- Externally visible level indicator and adjustable, non-slip leveling feet

Power
- UDC = 5 V, 2A, AC adapter or portable rechargeable lithium battery

Battery operation
- Up to 210 hours operation time (with standard battery) between recharges with 12 hour recharge time
### Technical data

<table>
<thead>
<tr>
<th>Model number</th>
<th>EF - ..</th>
<th>P1</th>
<th>P3</th>
<th>P6</th>
<th>P15</th>
<th>P30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calibration</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>External, with freely selectable calibration weights</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interface</td>
<td>-LT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-LF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Built-in USB-C, Printer-Port, RS232</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interface</td>
<td>-ST</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-SF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Built-in USB-C, Printer-Port</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature (°C)</td>
<td></td>
<td>-10 ... +40</td>
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<td></td>
<td></td>
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<tr>
<td>Storage temperature (°C)</td>
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<td>-10 ... +50</td>
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<td></td>
</tr>
<tr>
<td>Product dimension mm (w x d x h)</td>
<td>- LT</td>
<td>310 x 302 x 115 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Platform size (w × l)</td>
<td></td>
<td>280 x 180</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shipment dimension mm (w x d x h)</td>
<td></td>
<td>365 x 365 x 210</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Net weight (kg)</td>
<td></td>
<td>2.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shipping weight (kg)</td>
<td></td>
<td>4.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product dimension mm (w x d x h)</td>
<td>- LF</td>
<td>310 x 302 x 85</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Platform size (w × l)</td>
<td></td>
<td>280 x 180</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shipment dimension mm (w x d x h)</td>
<td></td>
<td>365 x 365 x 210</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net weight (kg)</td>
<td></td>
<td>2.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shipping weight (kg)</td>
<td></td>
<td>4.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product dimension mm (w x d x h)</td>
<td>- ST</td>
<td>246 x 302 x 129</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Platform size (w × l)</td>
<td></td>
<td>218 x 180</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shipment dimension mm (w x d x h)</td>
<td></td>
<td>365 x 365 x 210</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net weight (kg)</td>
<td></td>
<td>2.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shipping weight (kg)</td>
<td></td>
<td>3.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product dimension mm (w x d x h)</td>
<td>- SF</td>
<td>246 x 302 x 90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Platform size (w × l)</td>
<td></td>
<td>218 x 180</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shipment dimension mm (w x d x h)</td>
<td></td>
<td>365 x 365 x 210</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net weight (kg)</td>
<td></td>
<td>2.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shipping weight (kg)</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessories</td>
<td></td>
<td>Data printer, USB-C cable (not usable for PC communication), Printer port cable, weighing hook, lithium battery pack</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12.3 Accessories

<table>
<thead>
<tr>
<th>Option</th>
<th>Order-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Printer</td>
<td>YP-DP1</td>
</tr>
<tr>
<td>Paper for Data Printer</td>
<td>YP-P1</td>
</tr>
<tr>
<td>USB-C cable (not usable for PC communication)</td>
<td>YP-CAC1</td>
</tr>
<tr>
<td>Printer cable</td>
<td>YP-CAS1</td>
</tr>
<tr>
<td>USB Charger</td>
<td>YP-PS1</td>
</tr>
<tr>
<td>Weighing hook</td>
<td>YP-H1</td>
</tr>
</tbody>
</table>

12.4 Dimensions

LargeTall (LT)
all dimensions in mm / inch
all dimensions in mm / inch
all dimensions in mm / inch
all dimensions in mm / inch

SmallTall (ST)
all dimensions in mm / inch
Compact Scale Puro® - Basic

12 Technical data

all dimensions in mm / inch

EN-50
Minebea Intec
SmallFlatt (SF)

all dimensions in mm / inch
all dimensions in mm / inch

all dimensions in mm / inch
12 Technical data

Compact Scale Puro® - Basic

all dimensions in mm / inch

Minebea Intec

EN-53
## 13 Appendix

### 13.1 Printouts

The following sample printouts are generated by the button, "P" Command or alternate print command. The content of the printout is defined in the Print Content menu item.

#### Weigh Mode Printout

<table>
<thead>
<tr>
<th>Description</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result line</td>
<td>If Printx → Content → Result is ON</td>
</tr>
<tr>
<td>Tare value line</td>
<td>If Printx → Content → Tare is ON</td>
</tr>
<tr>
<td>Net value line</td>
<td>If Printx → Content → Net is ON</td>
</tr>
<tr>
<td>Gross value line</td>
<td>If Printx → Content → Gross is ON</td>
</tr>
<tr>
<td>Mode line</td>
<td>If Printx → Content → Application Mode is ON</td>
</tr>
<tr>
<td>Information line</td>
<td>If Printx → Content → Info is ON</td>
</tr>
</tbody>
</table>

#### Weigh Mode with Totalization Printout

<table>
<thead>
<tr>
<th>Description</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result line</td>
<td>If Printx → Content → Result is ON</td>
</tr>
<tr>
<td>Tare value line</td>
<td>If Printx → Content → Tare is ON</td>
</tr>
<tr>
<td>Net value line</td>
<td>If Printx → Content → Net is ON</td>
</tr>
<tr>
<td>Gross value line</td>
<td>If Printx → Content → Gross is ON</td>
</tr>
<tr>
<td>Mode line</td>
<td>If Printx → Content → Application Mode is ON</td>
</tr>
<tr>
<td>Accumulation line</td>
<td>If Printx → Content → Total is All</td>
</tr>
<tr>
<td>Accumulation line</td>
<td>If Printx → Content → Total is All or Result</td>
</tr>
<tr>
<td>Accumulation line</td>
<td>If Printx → Content → Total is All</td>
</tr>
<tr>
<td>Accumulation line</td>
<td>If Printx → Content → Total is All</td>
</tr>
<tr>
<td>Accumulation line</td>
<td>If Printx → Content → Total is All</td>
</tr>
</tbody>
</table>

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EN-54

Minebea Intec
13.2 FCC Note

Note:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.