1 Safety-related information

- Before using this product, carefully read these instructions for use and those of the associated products.
- Strictly follow the instructions for use. The user must fully understand and strictly observe the instructions. Use the product only for the purposes specified in the intended use section (see section 3.4).
- Do not dispose of the instructions for use. Ensure that they are retained and appropriately used by the product user.
- Only trained and competent users are permitted to use this product.
- Comply with all local and national rules and regulations associated with this product.
- Only specialist, trained personnel are permitted to check, repair and maintain the product as described in these instructions for use and the technical manual. Further maintenance work that is not detailed in these instructions for use or in the technical manual must only be carried out by Dräger or personnel qualified by Dräger.
- Dräger recommends a Dräger service contract for all maintenance activities.
- Only genuine Dräger spare parts and accessories when performing maintenance work, or the proper functioning of the product may be impaired.
- Do not use a faulty or incomplete product. Do not modify the product.
- Notify Dräger in the event of any component fault or failure.

2 Conventions in this document

2.1 Meaning of the warning notes

The following warning notes are used in this document to notify users of possible dangers. The meanings of the warning notes are defined as follows:

- **WARNING** Indicates a potentially hazardous situation. If not avoided, it could result in death or serious injury.
- **CAUTION** Indicates a potentially hazardous situation. If not avoided, it could result in physical injury. It may also be used to alert against unsafe practices.
- **NOTICE** Indicates a potentially hazardous situation. If not avoided, it could result in damage to the product or environment.

1. Numbered paragraphs indicate that the information is sequential.
2. Dashed paragraphs indicate that the information is non-sequential.

2.2 Typographical conventions

- A triangle is used in safety statements to indicate possible ways of avoiding the hazard.
- An information symbol is used for notes and additional useful information.

3 Registered trademarks

<table>
<thead>
<tr>
<th>Trademark</th>
<th>Trademark owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bodyguard®</td>
<td>Dräger</td>
</tr>
<tr>
<td>Duracell®</td>
<td>Duracell U.S. Operations, Inc.</td>
</tr>
<tr>
<td>FPS®</td>
<td>Dräger</td>
</tr>
<tr>
<td>Merlin®</td>
<td>Dräger</td>
</tr>
<tr>
<td>PSS®</td>
<td>Dräger</td>
</tr>
</tbody>
</table>

The trademarks listed are only registered in certain countries and not necessarily in the country in which this material is sold.

3.1 Product overview

The Dräger Bodyguard® 7000 (Fig. 1) is an electronic monitoring system with an integral DSU. The system provides visual and audible information about the status of the breathing apparatus. Visible signals are provided by LEDs in the LED panel and on the LCD screen of the user interface (Fig. 2). Audible signals are emitted from an electronic sounder in the user interface. The audible signals are easily recognized with varying patterns to distinguish between different alarm types. The product is configured as a button version (Bodyguard® 7000) or a tally version (Bodyguard® 7000T). The main difference between the version types is the functionality of the distress signal unit. The button version can be used with the motion sensor of the automatic distress alarm deactivated. The tally version can only be used with the motion sensor activated.

3.2 Feature description

3.2.1 Power pack

The power pack connects to the power supply to power the electronic monitoring system. The power pack types available for Bodyguard® 7000 have 5 replaceable 1.5 V batteries or a single 6.5 V rechargeable battery.

Further details about the power pack and how each type is used in the maintenance information (see section 6.5).

3.2.2 User interface

The user interface has an LCD screen which shows the cylinder pressure, the time until the whistle activates, and other operational information. The screen has a backlight which illuminates when a user interface button is pressed, when an alarm activates, and when a status message appears on screen. The LED panel has one green, two blue, and two red LEDs which illuminate or flash to provide operational information.

The left-hand and right-hand press buttons are used to control operating features of the electronic system. The button functions are described where applicable in these instructions for use.

An internal sounder emits audible signals to notify the user about breathing apparatus alarms and status messages. The sound patterns include continuous alarms and single or multiple tones. The sounder uses the tally slots as amplification channels to provide clear and loud alarms.

3.2.3 Cylinder pressure monitoring

The pressure module is connected to the breathing apparatus pneumatic system through the high-pressure hose. The electronic monitoring system displays cylinder pressure and TTW, and provides alarm signals at preset pressure levels.

3.3 Optional features and equipment

3.3.1 Dräger PC Link

Dräger PC Link is an RF communication device and software application which can be used to configure Dräger electronic monitoring systems. The configuration settings and parameters include alarm patterns, warning levels, timings, and the start-up options (see section 4.3). Readable information includes the serial number identification details, the firmware versions, and a data log (see section 3.3.2).

PC Link can also read and write information on user ID cards which are available from Dräger for use with Bodyguard® 7000 (see section 4.5.2). See the PC Link instructions for use or contact Dräger for more information.

3.3.2 Datalog

The data log is a record of the event history which is automatically recorded in the system memory. The data logs store approximately 100 hours of the most recent system events (based on typical operational use of the system and the default data recording interval of 30 seconds). The data log can be downloaded and viewed using Dräger PC Link.

3.3.3 Telemetry (Dräger PSS® Merlin®)

Dräger PSS® Merlin® is a telemetry system which can be used with Dräger electronic monitoring systems. When fitted, the telemetry system is used to transmit status and information signals between deployed breathing apparatus wearers and an external entry control board or software system. See the PSS® Merlin® instructions for use or contact Dräger for more information.

3.4 Head-up display

The Dräger FPS® 7000 HUD is a wireless head-up display which can be used with Dräger electronic monitoring systems. The HUD is a battery powered device that fits inside the mask, and has LEDs which display breathing apparatus cylinder pressure and battery status information. See the FPS® 7000 HUD instructions for use or contact Dräger for more information.

3.5 Intended use

Bodyguard® 7000 is intended for use as an electronic monitoring system on compatible Dräger breathing apparatus. The monitoring system provides accurate cylinder pressure and remaining time information, and activates alarm signals at critical pressures. The integrated DSU provides clear, distinct, and easily recognized alarm signals that indicate wearer immobilization or a call for help or attention.

3.6 Use in potentially explosive atmospheres

Bodyguard® 7000 is type tested as suitable for use in potentially explosive atmospheres. Electronic sub-assemblies are ATEX certified. All combinations are suitable for use in hazardous areas up to and including zone 0 and zone 2.

3.6.1 Approval information

The European standards, guidelines, and directives according to which this product is approved are specified in the declaration of conformity (see the declaration of conformity or www.draeger.com/product-certificates).

In addition, the product conforms with the following regulations.

- **DSU approval**: BS 10999:2010 (specification for distress signal units for the fire and rescue service). The product only conforms with this standard when configured as an automatic DSU.
- **RF compliance**: EN 61000-4-3 CE, and 30 V/m to ISO 11452 Part 2.
3.7.2 LCD screen symbols

<table>
<thead>
<tr>
<th>General symbols</th>
<th>Low battery</th>
<th>Battery charging error</th>
<th>Battery charged</th>
<th>Low cylinder pressure</th>
<th>Manual distress alarm</th>
<th>Automatic distress alarm</th>
<th>Pass or complete</th>
<th>Faxed or cancelled</th>
<th>Faxed or double</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Press right-hand button</td>
<td>Wait</td>
<td>Leak test timing</td>
<td>Leak test pass / vent leak test</td>
<td>Leak test fail</td>
<td>User ID</td>
<td>Cylinder type – Single</td>
<td>Cylinder type – Double</td>
<td>Perform leak test</td>
</tr>
</tbody>
</table>

- **Open valve**
  - Quiet alarm
- **Close valve**
  - PC Link mode

<table>
<thead>
<tr>
<th>Telemetry symbols</th>
<th>Active communication</th>
<th>Fault</th>
<th>Lost communication</th>
<th>Evacuate</th>
<th>Volunteer withdrawal</th>
</tr>
</thead>
</table>

- **Retreat alert symbols**
  - TTP
  - Arrival point
  - Retreat

4. Operation

4.1 Preparation for use

**NOTICE**

The LCD screen has an external sacrificial screen which is a removable clear screen. The sacrificial screen might be fitted with a thin flexible protective covering. Remove this thin covering before first use. Do not remove the sacrificial screen.

1. Carry out a visual inspection (see section 6.2).
2. Arrange and prepare the breathing apparatus for use as described in the product instructions for use.
3. Put on the breathing apparatus as described in the product instructions for use.

4.2 During use

4.2.1 User functions

- **Operate the Dräger electronic system**
  - To illuminate the screen backlight, press and quickly release the left-hand or right-hand button.
  - Pressing the right-hand button also scrolls any stored user ID information.
  - Regularly check the LCD screen to confirm the cylinder pressure and TTW.
  - Cylinder pressure and TTW are indicated digitally on the normal operating screen (Fig. 3). Approximate cylinder pressure is also indicated by the radial segments on the screen.

4.2.2 Alarms and status messages

**WARNING**

- Users should be in a safe area before the EOST alarm and mechanical/system functions.
- Evacuate to a safe area immediately if warnings commence during an operation.

- The green LED on the user interface flashes every second to indicate active mode.
- If the motion sensor pre-alarm activates, and is not required, move the user interface to cancel the alarm. Do not use buttons to switch off the pre-alarm.
- If the motion sensor full alarm activates, cancel the alarm as follows:
  - Tall version: fit the tally. With the tally fitted, the system is not in active mode. It is in a non-operational mode and there is no display of time to whistle.
  - Button version: simultaneously press and hold the left-hand and right-hand buttons until the alarm stops.
  - If a low battery or battery error displays, an alarm tone sounds every 9 seconds.
  - When a low battery is first indicated, it is possible to safely use the breathing apparatus for up to 2 hours. However, Dräger strongly recommends replacing the batteries or recharging the power pack at the first opportunity (see section 6.5).
- If a battery error displays, evacuate to a safe area immediately.

4.2.3 Alarm patterns

**Pre-alarm pattern**

A high-frequency volume 3-tone alarm is emitted from the user interface, and the LCD screen backlight flashes.

**Full alarm pattern**

A high-pitched repeating alarm tone is emitted from the user interface, and the red and blue LEDs on the user interface flash.

- **Symbol !** displays during automatic distress alarms.
- **Symbol $** displays during manual distress alarms.

**EOST alarm pattern**

An intermittent high-pitched alarm is emitted from the user interface. The red and blue LEDs on the user interface flash, and a second on the left of the LCD screen flashes red. The mechanical whistle on the breathing apparatus also commences at approximately the same time.

4.2.4 Telemetry and retreat alert

- The symbols used during telemetry (PSS® Merit®) and retreat alert conditions are shown in section 3.7.2.
- See section 4.5.5 for a description of retreat alarm operation and symbols.
- See the PSS® Merit® instructions for use for a description of telemetry operation and symbols.

4.3 After use

**3. WARNINGS**

- **WARNING**
  - Removing the breathing apparatus in a hazardous breathing environment is unsafe.
  - The system is not designed for use in confined spaces.
  - The system has been designed for personal use only. It is not a life-support device.
  - Do not take emergency help or assistance, press the manual alarm button.
  - To illuminate the screen backlight, press and quickly release the left-hand or right-hand button.
  - Pressing the right-hand button also scrolls any stored user ID information.

4.4.5 Switching off the electronic system

**Active mode**

Active mode is the main operating mode of the electronic monitoring system. When the system is in active mode, the electronic monitoring and warning functions are operational. Active mode is indicated by the following:

- The normal operating screen (Fig. 3) displays on the user interface.
- The green LED on the user interface flashes every second.

- **If the tally is still fitted in a tally version, the system is not in active mode.**
  - The system in a non-operational mode. TTW is not displayed on the LCD screen, but cylinder pressure is displayed.

4.5.1 General

The functions in this section are only available if they are pre-configured in the system. More information about configurable settings and features is in section 3.3.1.

4.5.2 User ID (scrolling data)

- Information about the wearer of the unit (user name, badge name, and station number) can be uploaded from a user ID card to the system memory.
- Once information is stored, press the right-hand button during use to scroll the information across the screen. The scroll speed is configurable using the Dräger PC Link (see section 3.3.1).
- Uploading information from a user ID card
  1. Hold the user ID card on to the back of the user interface, directly opposite the screen.
  2. Press the left-hand button to activate the start-up sequence.
  3. When the user ID symbol displays, press the left-hand button before the radial segments extinguish.
  4. The screen briefly illuminates, and the system uploads data from the user ID card to the system memory.
  5. When the data upload is complete, the tick symbol displays.
  6. Press and release the right-hand button to check that the uploaded data is correct.
  7. The user ID scrolls from right to left across the screen.
  8. Repeat the procedure if the information is incomplete or inaccurate.
  9. Switch off the electronic system (section 4.4.5) if necessary.

4.5.3 Cylinder selection

If more than one cylinder type is stored in the system memory, the user can select the required cylinder type during start-up as follows.

1. Press the left-hand button to activate the start-up sequence.
2. When the cylinder type symbol displays, press the left-hand button before the radial segments extinguish.
3. The screen displays the next stored cylinder type and the radial segments extinguish clockwise.
4. The cylinder size and pressure alternate on screen (Fig. 4) shows a 9.0 litres, 350 bar cylinder.

4.5.4 Quiet alarm

Quiet alarm allows the user to select reduced volume alarms for operating inside a restricted space such as a chemical protective suit or a repair workshop. Select quiet alarm as follows.

1. Press the left-hand button to activate the start-up sequence.
2. When the quiet alarm symbol displays, press the right-hand button before the radial segments extinguish.
3. The alarm volume is reduced for the current operation only. The system automatically resets to full alarm volume when it is switched off.

Fig. 3 Normal operating screen

- To call for emergency help or assistance, press the manual alarm button.
- To illuminate the screen backlight, press and quickly release the left-hand or right-hand button.
- Pressing the right-hand button also scrolls any stored user ID information.

- **WARNING**
  - Users should be in a safe area before the EOST alarm and mechanical/system functions.
  - Evacuate to a safe area immediately if warnings commence during an operation.

- **Quiet alarm** allows the user to select reduced volume alarms for operating inside a restricted space such as a chemical protective suit or a repair workshop. Select quiet alarm as follows.
  1. Press the left-hand button to activate the start-up sequence.
  2. When the quiet alarm symbol displays, press the right-hand button before the radial segments extinguish.
  3. The alarm volume is reduced for the current operation only. The system automatically resets to full alarm volume when it is switched off.
4.5.5 Fault alert and time to retire
Fault alert is an alternative warning protocol that can be used if it is applicable in the country of use. When configured for fault alert, the system calculates a retire pressure and TTR in minutes. The time to retire is displayed on the user interface screen with the TTR symbol [ ]. When the cylinder pressure decreases to the retire pressure, audible and visible signals inform the wearer.

There are 2 retire pressure calculation methods.

1. Initial retire pressure. On opening the cylinder valve, the retire pressure defaults to 2/3 of the start pressure. (The start pressure is the initial pressure measured when the cylinder is opened.)
   - For example: a 300 bar start pressure = 200 bar initial retire pressure.

2. Mission retire pressure. At any time before the cylinder pressure reaches the initial retire pressure, the wearer can set an alarm pressure at the mission arrival point. The system then recalculates the retire pressure as: (the start pressure minus the arrival pressure) multiplied by 2.
   - For example: with a start pressure of 298 bar and an arrival pressure of 230 bar (298 – 230) x 2 = 138 bar mission retire pressure.
   - If the calculated retire pressure is less than 60 bar, the system defaults to a retire pressure of 60 bar.

Using retire alert
1. Open the cylinder valve.
   - The initial retire pressure is calculated, and the TTR [ ] displays on screen.
2. At the mission arrival point, press and hold the left-hand button for more than 3 seconds.
   - The arrival symbol [ ] displays for approximately 1 second as the system calculates the mission retire pressure. The new TTR [ ] displays on screen.
3. When the retire pressure is reached, an intermittent alarm tone sounds and the retire symbol [ ] displays.
4. Acknowledge the alarm by pressing and releasing the right-hand button.
   - The user interface screen changes to show TTW.

Early retire. To cancel the retire alert before the retire pressure is reached, hold the right-hand button until the retire symbol [ ] displays. TTR cancels and the user interface screen changes to show TTW.

5 Troubleshooting
The troubleshooting guide shows fault diagnosis and remedial information applicable to breathing apparatus users. Further troubleshooting information is available in instructions for use supplied with associated equipment. Where the troubleshooting guide shows more than one fault or remedy, carry out repair actions in the order that they appear in the table. Contact service personnel or Dräger if the symptom remains after all remedy actions have been attempted.

Refer also to the instructions for use for the associated breathing equipment. Additional maintenance may be required in the country of use to ensure compliance with national regulations.

Component/system Task After every use Every 6 months

---

6.1 Maintenance table

Service and test the product in accordance with the maintenance table, and record all service and testing details.

---

6.4 Cleaning
Clean the product as detailed in the associated breathing apparatus instructions for use, and observe the following.

- The LCD screen has an external sacrificial screen which is a removable clear screen. Remove and clean the sacrificial screen if necessary.
- Remove the power pack (see section 6.5.2) and clean the power pack, battery terminals, and backplate recesses.
- After cleaning, reassemble the parts and carry out the functional testing (see section 6.5.1). Changing the power pack type applies only to non-telemetry breathing apparatus.

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6.5 Power pack

6.5.1 Power pack types

- Power pack with 5 replaceable 1.5 V batteries
- Used with non-telemetry versions only.
- The estimated battery life is approximately 12 months based on 1 hour use per day [ ].
- The power pack is supplied with the batteries fitted.

- Power pack with a single 6.5 V rechargeable battery
- There are 2 versions of the rechargeable power pack.
  - The telemetry version (Fig. 5, Item 1) has a slotted securing screw. This version is only fitted to telemetry (PSM/MPM) breathing apparatus. The estimated battery life is approximately 8 hours between recharges [ ].
  - The non-telemetry version (Fig. 5, Item 2) has a hexagonal seat head which is fitted with an anti-tamper plug. This version is only fitted to non-telemetry breathing apparatus. The estimated battery life is approximately 50 hours between recharges [ ].
- The power pack is not fully charged when supplied. Charge the power pack before use (see section 6.5.5).
- Dräger recommends a battery health check every 6 months. A Dräger 4-Way Charger is required for this task (contact Dräger for details).

6.5.2 Removing the power pack

**CAUTION**

- The screw in the telemetry version (Fig. 5, Item 1) is captive. Attempting to remove the screw from the power pack casing might damage the power pack.
- Do not attempt to remove the anti-tamper plug or loosen the screw.

**CAUTION**

The screws in the non-telemetry version (Fig. 5, Item 2) is fitted with an anti-tamper plug to prevent removal of the screw.
- Do not attempt to remove the anti-tamper plug or loosen the screw.

- A removal key (Dräger part number 3358667) is supplied with the breathing apparatus.

1. Release the screw counterclockwise using a suitable coin on the telemetry version (Fig. 5, Item 1).  
2. Insert and press down the removal key (Fig. 6).  
3. Remove the power pack.

---

6.3.2 Whistle test

- The system fails to operate as described or any fault indication appears, stop testing and see the troubleshooting information (section 5) for remedial information.

1. Press the left-hand button.
   - The self-test and start-up sequences run and the system adopts the active mode.
2. Press and release the left-hand and right-hand button.
   - The backlight illuminates for approximately 3 seconds.
3. Press the manual alarm button [ ].
   - The full alarm activates (see section 4.2.3) with the manual alarm symbol [ ] on screen.
4. Cancel the alarm.
   - Tally version: remove and refl t the tally.
   - Button version: simultaneously press and hold the left-hand and right-hand buttons until the alarm stops.
5. Remove the tally.
   - Tally version: Immerse the user interface.
   - After 21 to 25 seconds, the pre-alarm activates (see section 4.2.3).
6. Move the user interface to cancel the alarm.
   - Tally version: Immerse the user interface again and ignore pre-alarm.
7. After approximately 8 seconds of pre-alarm the full alarm activates (see section 4.2.3) with the automatic alarm symbol on screen.
8. Cancel the alarm and continue to the high-pressure leak test.
   - Tally version: refl t the tally.
   - Button version: simultaneously press and hold the left-hand and right-hand buttons until the alarm stops.

6.3.1 High-pressure leak test

1. Ensure that the tally is fitted to prevent the automatic distress alarm from activating.
2. Press the left-hand button to activate the start-up sequence.
3. When the leak test symbol [ ] displays, press the left-hand button.
   - The open valve symbol [ ] displays and the radial segments extinguish.
4. Immediately open the cylinder valve. Open the cylinder valve before the last radial segment extinguish or the start-up sequence restarts.
   - A tone sounds, pressure stabilizing starts, the wait symbol [ ] displays, and fully vent the pneumatic system.
5. When stabilizing is complete, a tone sounds and the leak test timing symbol [ ] displays. The radial segments extinguish clockwise during leak test timing.
6. When timing is complete a tone sounds and the test result displays.
   - Leak test pass [ ]: Observe the following note and continue to the whistle test.
   - Leak test fail [ ]: Close the cylinder valve, fully vent the system, and investigate and repair the leak (see section 5).

6.3.2 Whistle test

1. Slowly release the pressure as follows:
   - Positive-pressure system: cover the outlet port of the lung demand valve with the palm of the hand and press the front button carefully. Lift the palm of the hand to release pressure slowly.
   - Normal demand system: press the front button to release pressure slowly.
2. Observe the whistle activation pressure.
   - The EOST alarm (see section 4.2.3) and breathing apparatus mechanical whistle must commence in the range 60 bar to 90 bar.
   - The EOST alarm and mechanical whistle might not commence at the same time due to system tolerances.
3. Continue to release the pressure slowly.

---

1) When a low battery is first indicated, it is possible to safely use the breathing apparatus for up to 2 hours.

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Bodyguard® 7000
Electronic monitoring system

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Instructions for use

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6.5.3 Fitting the power pack

**WARNING**
Exposed battery terminals might cause a risk of explosion or fire through sparking.

► Only fit a telemetry version (Fig. 5, Item 1) to a breathing apparatus that is fitted with a PSS® Merlin® Modem.
► Only fit a non-telemetry version if the terminal cover (Fig. 5, Item 3) is secure and undamaged.

1. Inspect the power pack and pressure module, and ensure that the battery terminals and sealing rim are clean and undamaged. Contact service personnel or Dräger if there is any damage.
2. Insert the power pack into the backplate recess (Fig. 7).
3. Position thumbs on top of the 2 screws and push down firmly to lock the power pack (Fig. 8).
4. While pushing down, confirm that the 2 sliding latches move to their locked position viewed through the 2 keyholes as shown (Fig. 9).
   – When the power pack connects, a tone sounds and the start-up sequence commences (see section 4.4.3).
5. Telemetry version (Fig. 5, Item 1) only: tighten (nip up) the screw using a suitable coin until it bottoms in the recess and a noticeable increase in turning force is felt. Do not over tighten or damage will occur.

6.5.4 Replacing 1.5 V batteries

**WARNING**
Explosion, fire, or chemical hazard.

► Do not remove or install the batteries in an explosive or flammable atmosphere.
► Do not expose the batteries to heat sources, do not attempt to recharge any non-rechargeable battery, and do not short out the battery terminals.
► Use only the recommended battery type, replace batteries as a matching set, and do not mix new and used batteries.

**NOTICE**
Environmental hazard. Dispose of used batteries in accordance with national or local regulations. More information can be obtained from local waste disposal organizations.

Use only the following approved battery types.
– Duracell® LR6 (1.5 V)
– Duracell® Plus LR6 (1.5 V)

1. Remove the power pack (see section 6.5.2).
2. Remove the 8 screws (Fig. 10) using a 2.5 mm hexagon key.
3. Remove the battery cover.
4. Remove the batteries.
5. Install a new set of batteries observing the polarity marked inside the pack.
6. Inspect the sealing ring inside the battery cover. Contact Dräger or service personnel if sealing ring replacement is necessary.
7. Refit the battery cover and tighten the screws. Do not over tighten (Dräger recommend tightening to 0.4 Nm (0.3 lbf ft)).

6.5.5 Charging 6.5 V rechargeable power packs

Rechargeable power packs can be charged using the Dräger 4-Way Charger for both versions, or the Dräger In-Cab Charger for the telemetry version only. For charging procedures, see the 4-Way Charger or PSS® Merlin® instructions for use.

7 Storage

– Store the product in accordance with the associated breathing apparatus instructions for use.
– If the system will not be used for a long period:
   – Remove the power pack (see section 6.5.2)
   – If the power pack has replaceable 1.5 V batteries, remove the batteries from the power pack (see section 6.5.4).

8 Disposal

8.1 General
Dispose of the product in accordance with applicable rules and regulations in the country of use.

8.2 Waste electrical and electronic equipment (WEEE) directive

This product must not be disposed of as household waste. This is indicated by the adjacent symbol.
You can return this product to Dräger free of charge. For information please contact the national marketing organizations or Dräger.

9 Technical data

<table>
<thead>
<tr>
<th>EOSI alarm</th>
<th>60 bar to 50 bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>Replaceable battery type 5 x 1.5 V battery</td>
</tr>
<tr>
<td></td>
<td>Rechargeable type 6.5 V NiMH</td>
</tr>
<tr>
<td>Pre-alarm activation</td>
<td>21 to 25 seconds</td>
</tr>
<tr>
<td>Full alarm activation</td>
<td>Approximately 8 seconds</td>
</tr>
<tr>
<td>Nominal frequency and power level</td>
<td></td>
</tr>
<tr>
<td>125 kHz</td>
<td>66 dBμA/m at 10 m</td>
</tr>
<tr>
<td>40 kHz</td>
<td>42 dBμA/m at 10 m</td>
</tr>
</tbody>
</table>

10 Manufacturer and document information

**Manufacturer**
Dräger Safety UK Limited
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Fax: +44 1670 356 266
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Subject to alteration

This product must not be disposed of as household waste. This is indicated by the adjacent symbol.
You can return this product to Dräger free of charge. For information please contact the national marketing organizations or Dräger.