

THR880i Ex



Safety Instructions



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Table of Contents

1	Application	3
2	Safety information	3
3	Safety regulations	3
4	Battery cover protection	5
4.1	To unscrew the battery cover	5
4.2	To install the safety plug	6
5	Faults and damage	6
6	Ex-data	7
7	Specifications	7
8	Cleaning, maintenance and storage	8
9	EC-Type Examination Certificate	9



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Note:

The current safety precautions, operating instructions,
EC Declaration of Conformity and the Certificate of Conformity can
be downloaded from the relevant product page at
www.ecom-ex.com
or requested directly from the manufacturer.

1 APPLICATION

The THR880i Ex is a digital radio unit based on the TETRA standard for industrial application in areas with an increased risk of explosion in zones 1 and 2, in accordance with directive 1999/92/EC (ATEX 137).

2 SAFETY INFORMATION

These safety instructions contain information and safety regulations which are to be observed without fail for safe operation in the described conditions. Non-observance of this information and these instructions can have serious consequences, endanger the lives and health of people, damage property or may violate regulations.

Please read these operating instructions carefully before starting to use the unit!

In case of any doubt, please contact ecom instruments GmbH.

3 SAFETY REGULATIONS

Use of this unit assumes that the user observes conventional safety regulations and has read the certificate in order to eliminate faulty operation of the unit.

The following safety regulations must also be complied with:

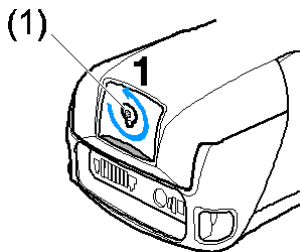
- **The unit itself and the battery must not be opened.**
- **The battery of the THR880i Ex must be safely installed and connected in the handset inside the ex-hazardous areas. Depending on the product reference, this regulation is guaranteed when one of the following requirements is fulfilled :**

- a) Opening of the battery cover is prevented with a locking screw (for the specific instructions, see chapter 4 Battery cover protection, figures 1 and 2)
 - b) Opening of the battery cover is prevented with a specific ATEX Safety bag THR-LT1
 - c) Opening of the battery cover is prevented with an ATEX Safety plug (for the specific instructions, see chapter 4 Battery cover protection, figures 3 and 4)
 - d) Opening of the battery cover is prevented with a safe connection of an ATEX accessory.
-
- The battery may only be exchanged or charged outside the Ex-area.
 - Additional batteries must not be carried in the Ex-area.
 - Only BLN-Ex batteries specified by the manufacturer may be used.
 - The use of other batteries is strictly prohibited and will result in the nullification of Ex-protection.
 - The battery may only be charged outside the Ex-areas using an appropriate charger.
 - Before using the unit in Ex-areas, the combined charging and accessory interface must be inspected for contamination and, if required, cleaned with a brush or by blowing off with compressed air.
 - Only ATEX-approved accessories may be used inside the Ex-area. For a list of approved ATEX accessories, please see <http://www.ecom-ex.com/>
 - It must be ensured that the unit is not taken into zones 0, 20, 21 or 22.

4 BATTERY COVER PROTECTION

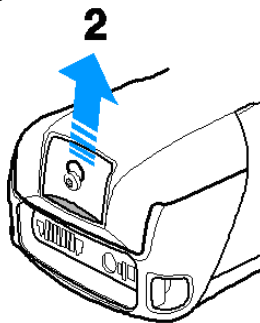
4.1 To unscrew the battery cover

Figure 1



- 1) Unscrew the screw (1) at the bottom of the terminal by using the tool in the sales package.

Figure 2

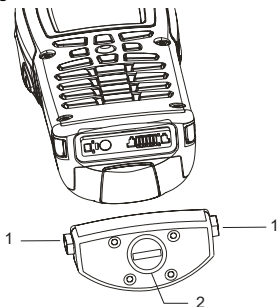


- 2) When the head of the screw is completely out of its seating, push the battery door to open it.

To lock the battery door, close it normally and screw on the screw (1) until its head fits completely inside its seating.

4.2 To install the safety plug

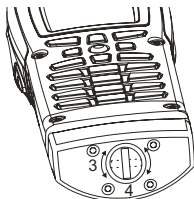
Figure 3



1) Make sure that the hatches (1) on both sides of the safety plug are out and the slot is in the horizontal position (2).

2) Insert the safety plug

Figure 4



3) Lock the safety plug in place by turning the slot (e.g. with a coin) to the vertical position (4). The safety plug is properly installed when the slot is in the vertical position and the hatches are closed (inside the safety plug).

To remove the safety plug, open it by turning the slot to the horizontal position (3). This opens the hatches on both sides of the safety plug. You can now remove the plug.

5 FAULTS AND DAMAGE

If there is any reason to suspect that the safety of the unit has been impaired, it must be withdrawn from use and removed immediately from the Ex-area.

It is necessary to make sure that the radio is not restarted, not even accidentally.

We recommend that the unit is returned to ecom instruments GmbH for inspection.

The safety of the unit may be compromised, if, for example:

- there is visible damage to the housing
- the unit has been subjected to excessive loads
- the unit has been improperly stored
- the unit has been damaged in transit
- unit markings or inscriptions are illegible
- malfunctions occur
- permitted limit values have been exceeded.

6 EX-DATA


EC-Type Examination Certificate No.: ZELM 07 ATEX 0347 X

Ex-Designation: Ex II 2 G Ex ib IIC T4

Approved for:

Zone 1 and 2, device group II, explosion group IIC explosive gases, vapours or mist, temperature class T4

7 SPECIFICATIONS

Frequency range:	380-400 MHz (RC-12) 410-430 MHz (RC-13) 806-825, 851-870 MHz (RC-21)
Operating voltage:	3.7 V
Protection rating:	IP54
Dimensions (LxWxD):	157 x 57 x 35 mm
Weight:	approx. 300g
Battery / power supply:	BLN-Ex, 1400 mAh Li-Poly
Operating time (standby/RX/TX)	8-17 hours (90/5/5)
Ambient temperature T.	-20°C ... +50°C
Storage temperature:	-20°C ... +50°C
CE-Designation:	CE ₀₁₀₂ 

8 CLEANING, MAINTENANCE AND STORAGE

- Only use a damp and suitable cloth or sponge to clean the radio unit or the CRR-1 active holder. Do not use any solvents or abrasive cleaning agents when cleaning.
- It is recommended that you have the functionality and accuracy of the unit inspected by ecom instruments GmbH every two years.
- The battery should be removed from the unit during prolonged periods of storage.
- Do not allow storage temperatures to exceed or fall below the permitted range of -20°C to +50°C.



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9 EC-TYPE EXAMINATION CERTIFICATE

Here is the original Ex certificate in German language. It is granted to ecom instruments GmbH by Prüf- und Zertifizierungsstelle ZELM Ex in Braunschweig in Germany on 23.8.2007.



Prüf- und Zertifizierungsstelle

ZELM Ex



(1) EG-Baumusterprüfbescheinigung

(2) Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen – Richtlinie 94/9/EG

(3) EG-Baumusterprüfbescheinigungsnummer

ZELM 07 ATEX 0347 X

(4) Gerät: **Digitales Bündelfunkgerät Typ EADS THR80i Ex**

(5) Hersteller: **ecom instruments GmbH**

(6) Anschrift: **D-97959 Assamstadt**

(7) Die Bauart dieses Gerätes sowie die verschiedenen zulässigen Ausführungen sind in der Anlage zu dieser Baumusterprüfbescheinigung festgelegt.

(8) Die Prüf- und Zertifizierungsstelle ZELM Ex bescheinigt als benannte Stelle Nr. 0820 nach Artikel 9 der Richtlinie des Rates der Europäischen Gemeinschaften vom 23. März 1994 (94/9/EG) die Erfüllung der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie.

Die Ergebnisse der Prüfung sind in dem vertraulichen Prüfbericht Nr. ZELM Ex 0370724554 festgelegt.

(9) Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit

EN 60079-0:2006

EN 60079-11 :2007

(10) Falls das Zeichen „X“ hinter der Bescheinigungsnummer steht, wird auf besondere Bedingungen für die sichere Anwendung des Gerätes in der Anlage zu dieser Bescheinigung hingewiesen.

(11) Diese EG-Baumusterprüfbescheinigung bezieht sich nur auf Konstruktion, Überprüfung und Tests des spezifizierten Gerätes oder Schutzsystems in Übereinstimmung mit Richtlinie 94/9/EG. Weitere Anforderungen dieser Richtlinie können für das Herstellungsverfahren und der Lieferung dieses Gerätes oder Schutzsystems gelten. Diese sind von vorliegender Bescheinigung nicht abgedeckt.

(12) Die Kennzeichnung des Gerätes muß die folgenden Angaben enthalten:



II 2 G Ex ib IIC T4

Zertifizierungsstelle ZELM Ex



Braunschweig, 23.08.2007

H. J. Zelm
Dipl.-Ing. Harald Zelm

Seite 1/2

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Prüf- und Zertifizierungsstelle

ZELM Ex



(13)

Anlage

(14) **EG-Baumusterprüfbescheinigung ZELM 07 ATEX 0347 X**

(15) Beschreibung des Gerätes

Das explosionsgeschützte digitale Handfunkgerät EADS THR880i Ex dient der Kommunikation in explosionsgefährdeten Bereichen. Das Gerät wird in verschiedenen Varianten gefertigt, die im Wesentlichen unterschiedliche Frequenzbereiche betreffen.

Es darf nur das vom Hersteller freigegebene Zubehör unter den angegebenen Bedingungen verwendet werden.

Das Gerät muss mit dem zugehörigen Ladegerät außerhalb des Ex-Bereiches geladen werden.

Elektrische Daten

Versorgungsstromkreis

aus einem eingebauten zugehörigen Akku Pack
Typ BLN-Ex

Sendeleistung

bis zu 2 W

Schnittstellenstromkreis

in Zündschutzart Eigensicherheit Ex ib IIC
Nur zum Anschluss an freigegebenes Zubehör

zulässiger Umgebungstemperaturbereich -20 °C bis +50 °C

(16) Prüfbericht Nr.

ZELM Ex 0370724554

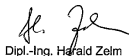
(17) Besondere Bedingungen

1. Die Bedienungsanleitung ist zu beachten, insbesondere hinsichtlich des freigegebenen zugehörigen Zubehörs. Es darf ausschließlich dieses Zubehör verwendet werden.
2. Das Gerät darf nur über die zugehörigen Ladegeräte bzw. das zugehörige Ladezubehör und nur außerhalb des explosionsgefährdeten Bereiches geladen werden.
3. Es darf nur das Akku Pack BLN-Ex verwendet werden!
4. Alle Anschlussbuchsen außer der externen Antennenbuchse müssen im Ex-Bereich geschlossen gehalten werden.

(18) Grundlegende Sicherheits- und Gesundheitsanforderungen

durch Normen erfüllt

Zertifizierungsstelle ZELM Ex


Dipl.-Ing. Harald Zelm



Braunschweig, 23.08.2007

Seite 2/2

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Prüf- und Zertifizierungsstelle

(Test and Certification Body) ZELM Ex

(1) EC-Type Examination Certificate

- (2) Devices and shielding systems intended for regulated use in explosive areas - **Directive 94/9/EC**
- (3) EC-Type Examination Certificate number

ZELM 07 ATEX 0347 X

- (4) Device: **Digital trunked radio type THR880i Ex**
- (5) Manufacturer: **ecom Instruments GmbH**
- (6) Address: **D-97959 Assamstadt**
- (7) The construction of this device and the various permissible details are specified in the appendix to this Type Examination Certificate.
- (8) As notified body No. 0820, according to article 9 of the Council Directive of the European Communities dated 23 March 1994 (94/9/EC), Prüf- und Zertifizierungsstelle (Test and Certification Body) ZELM Ex certifies the fulfilment of the fundamental health and safety requirements for the conception and construction of devices and protective systems for intended use within explosive areas in accordance with appendix II of the directive.
- The results of the examination are specified in the confidential inspection report No. ZELM Ex 0370724554.
- (9) The fundamental health and safety requirements are fulfilled through compliance with
EN 60079-0:2006 EN 60079-11 :2007
- (10) If the character "X" appends the certificate number, it refers to special conditions in the appendix to this certificate for the safe application of the device.
- (11) This EC-Type Examination Certificate only refers to the construction, examination and testing of the specified device or protective system in agreement with directive 94/9/EC. Further requirements of this directive may apply for the manufacturing process and the supply of this device or protective system. These are not covered by the present certificate.
- (12) The designation of the device must contain the following details:



II 2 G Ex ib IIC T4

Certification body **ZELM Ex**

Brunswick, 23.08.2007

Page 1/2

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This EC-type examination certificate may only be circulated without alteration.
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(Test and Certification Body) ZELM Ex

Appendix

(13)

(14) EC-Type Examination Certificate ZELM 07 ATEX 0347 X

(15) Description of the device

The explosion-shielded digital hand-held radio THR880i Ex serves the purpose of providing communication in explosive areas. The device is available in various models, which fundamentally deal with different frequency ranges.

Only those accessories that are approved by the manufacturer may be used under the specified conditions.

The device must be charged outside the Ex-area using the corresponding battery charger.

Electrical data

Supply current circuit	from an integrated rechargeable battery pack Type BLN-Ex
Transmitting power	up to 2 W
Interface electric circuit	in ignition protection class Intrinsic Safety Ex ib IIC Only for connection to approved accessories
permissible ambient temperature range	-20 °C to + 50 °C

(16) Test report No.

ZELM Ex 0370724554

(17) Special conditions

1. The instruction manual is to be observed, particularly with regard to the approved corresponding accessories. Only these accessories may be used.
2. The device may only be charged outside the explosive area using the corresponding charger or the appropriate charging accessories.
3. Only the BLN-Ex battery pack may be used!
4. All connection sockets, with the exception of the external antenna socket, must be kept sealed in the Ex-area.

(18) Fundamental health and safety requirements

fulfilled by standards

Certification body **ZELM Ex**

Brunswick, 23.08.2007

Page 2/2

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