



Safety instructions

**m 515 - Ex**



## Contents

1. Application	13
2. Safety instructions	13
3. Malfunctioning and inadmissible operation	13
4. Safety regulations	14
5. Ex-Data	15
6. Technical Data	15
7. Operating instructions	16
8. Commissioning	16
9. Charging procedure	16
10. Additional modules	16
11. Changing the battery	16
12. Repairs	17
13. Cleaning and maintenance	17
14. Guarantee and liability	17
15. Declaration of EC-Conformity	19
16. EC-Type approval	21

## 1. Application

The m515-Ex is a portable, intrinsically-safe, PalmOS based PDA for industrial use in explosion-endangered areas of zones 1 and 2 according to IEC / CENELEC

## 2. Safety instructions

This operating manual contains information and safety recommendations which must be complied with in order to guarantee safe functioning of the unit under the conditions described

Please read these operating instructions very carefully before using the unit !

In case of doubt (for example due to mistakes in the translation) the German operating instructions are assumed to be valid.

## 3. Malfunctioning and inadmissible operation

As soon as one suspects that the safety of the equipment is endangered, it must be taken out of service and immediately removed from the Ex-area. Precautions must be taken to prevent its unintentional reuse. We recommend that the unit be returned to the manufacturer for checking.

For example, the safety of the unit could be endangered when:

- damage to the housing is visible.

- the unit was subjected to improper strain.
- the unit was incorrectly stored.
- the unit was damaged in transit.
- the lettering on the unit is unreadable.
- malfunctioning occurs.
- the permissible limiting values were exceeded.

#### 4. Safety regulations

In order to exclude incorrect operation of the unit, its use assumes that the user is aware of and complies with the usual safety regulations.

- the unit may not be opened in the Ex-area.
- the accumulator may only be charged with the LG M5\*\* outside the Ex-area.
- It must be ensured that the unit is not taken into Zone 0.
- avoid the use in aggressive acids and alkalis.
- the explosion-protected PDA m515-Ex may only be used in Ex-areas when it is enclosed in the leather case supplied with it.
- It is absolutely essential to ensure that during use, the leather case is completely closed and undamaged.

#### 5. Ex-Data



EC-Type-approval

test certificate-no.: ZELM 02 ATEX 0086

Ex-Designation:  II 2 G EEx ia IIC T4

Approved for Zone 1, equipment group II, gas group C explosions-endangered gases, vapours or fog, temperature class T4.

#### 6. Technical Data

Ambient

temperature Ta: 0 ... +45°C

Storage

temperature: -20 ... +60°C

Charging unit:

LG M5\*\*

Operating life:

approx. 20 hours  
continuous use  
(without display lighting)

Dimensions:

114 x 79 x 18 mm

Weight:

approx. 280g

CE-Designation:

 0102

## **7. Operating instructions**

Before using the equipment for first time, please read the safety and operating instructions very thoroughly.

## **8. Commissioning**

Please refer to the enclosed original operating instructions.

## **9. Charging procedure**

The m515-Ex can be charged at any time in the docking-station outside the Ex-area using the LG M5\*\* power supply. After removing the leather case, the m515-Ex is then inserted into the docking-station. The charging procedure starts immediately the LG M5\*\* power supply is connected. After completion of the charging procedure and before reuse in the Ex-area, the m515-Ex must be replaced in its leather case.

## **10. Additional modules**

No additional plugged-on modules may be used within the Ex-area.

## **11. Changing the battery**

The accumulator must be replaced by the manufacturer.

## **12. Repairs**

Should repairs be necessary, then the conditions of ELEX V must be complied with. We recommend that repairs be carried out in the manufacturer's factory as it is necessary for the unit to be checked for technical and safety reasons.

## **13. Cleaning and maintenance**

The unit should only be cleaned with a cloth suitable for the purpose. Please refer to the original operating instructions. Detergents or abrasive materials should not be used.

We recommend that the function and accuracy of the unit be checked every two years by the manufacturer.

## **14. Guarantee & liability**

For this product, ecom Instruments GmbH guarantees the function and material for a period of two years under normal operating and maintenance conditions.

The guarantee does not apply to products which are improperly used, modified, neglected, damaged in accidents or exposed to abnormal operating conditions.

Claims under the guarantee can be made by returning the defective equipment to the factory.

We reserve the right to repair, renew the settings or exchange the device.

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The above-mentioned guarantee conditions are the sole and only right of the purchaser to compensation, are exclusively valid and replace all other contract or legal warranty obligations. ecom Instruments GmbH accepts no responsibility for special, direct, indirect, accompanying or consequential damage as well as losses including the loss of data which may arise through the use or acquisition of the equipment independent of whether it was caused by violation of the warranty obligation, lawful or unlawful action, action in good faith or any other action.

If in certain countries the limitation of a legal guarantee as well as the exclusion or limitation of accompanying or consequential damage is not permissible, it may be that the above-mentioned limitations and exclusions are not valid for every purchaser. Should any such clauses of these guarantee terms be declared null and void or not realisable by a competent court, then the effectiveness or enforceability of any of the other conditions of these guarantee terms will be unaffected by the court decision.

## 15. Declaration of EC-Conformity

We **ecom Instruments GmbH**,  
**Industriestraße 2, D-97959 Assamstadt**

declare under our sole responsibility that the product

**m515-Ex**

to which this declaration relates is in accordance with the provision of the following directives

<b>94/9/EC</b>	Equipment and protective in explosionendangered areas
<b>89/336/EEC</b>	Electromagnetic compatibility

and is in conformity with the following standards or other normative documents

<b>EN 50014:1997</b>	Electrical apparatus for potentially explosive atmospheres General requirements
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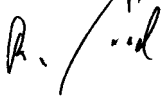
EN 50020:1994 Electrical apparatus for potentially explosive atmospheres  
Intrinsic safety „i“

All standards mentioned in the attached original operating instructions were complied with.

ecom instruments GmbH

Assamstadt, 28.05.02

Rolf Nied  
Managing Director



## 16. EC type approval



Prüf- und Zertifizierungsstelle

ZELM Ex



### 16 EC-TYPE-EXAMINATION CERTIFICATE (Translation)

- (21) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - (Directive 94/9/EC)
- (22) EC-TYPE-EXAMINATION CERTIFICATE Number:  
**ZELM 02 ATEX 0066**
- (23) Equipment: **Pressure PE type mP-2s**
- (24) Manufacturer: **ecom Instrumente GmbH**
- (25) Address: **64789 Assamstadt**
- (27) The equipment and any applicable variation points are specified in the annex to the certificate and the documents thereto referred to.
- (28) The Prüf- und Zertifizierungsstelle ZELM Ex, notified body No. 0022 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex I to the Directive.
- The examination and test results are recorded in the confidential report ZELM Ex 010221219.
- (29) Compliance with the Essential Health and Safety Requirements has been issued by compliance with:  
**EN 60 216, EN 61 141 A2 EN 61 028, 1994**
- (30) If the sign "E" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the annex to this certificate.
- (31) This CE Approval Certificate relates only to the design, construction and type of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and quality of the equipment or protective system. These are not covering the Certificate.
- (32) The marking of the equipment shall include the following:



II G EEx Ia B0 T4

Zertifizierungsstelle ZELM Ex

  
Stap.-Nro. 000001/0001



Büchsnang, July 6, 2002

Sheet 1/2

This EC-type-examination Certificate expires upon expiry of the validity of the certificate. The certificate may only be corrected without additional conditions or observations are made in agreement with the Prüf- und Zertifizierungsstelle (applicant).

Stand: 01.01.2002, Prüf- und Zertifizierungsstelle ZELM Ex, Postfach 60 - 70 260 0, Bismarckstraße



Prüf- und Zertifizierungsstelle

ZELM Ex



## SCHEDULE

113

114 EC TYPE EXAMINATION CERTIFICATE ZELM 02 ATEX 0046

115 Description of equipment

The PalmSecure PC type 02\*\* Ex is used for industry-type PDA (Personal Digital Assistant) for mobile GSM management in the hazardous area. Alternatively an additional GPRS or GPRS card may be integrated.

An included IRDA interface enables communication to other equipment by infrared signals in ATEX 0046.

The equipment must be charged with the appropriate charging set outside of the hazardous area only.

Inside of the hazardous area it must be worked with the appropriate battery case which also covers the J-Flexwell Patch Terminal.

### Essential data

Supply source: type of protection inherent Safety EEx ia II C from the built-in battery

maximum ambient temperature: The internal circuits are intrinsically safe, 0 °C to +40 °C

### References

The instruction manual has to be considered.

The equipment must be charged with the appropriate charging set type 02\*\* outside of the hazardous area only.

Within the hazardous area the equipment must be worked with the appropriate battery case.

116 Marking

ZELM 02 ATEX 0046

117 Special conditions for safe use

not applicable

118 Essential health and safety requirements

not applicable

Zertifizierungsstelle ZELM Ex

  
Dipl.-Ing. Harald Jahn



Issue/revizija, May 8, 2002

Sheet 2/2

EC type examination certificate without separate test marks are not valid. The certificate has only to be changed when alterations, changes or additions are subject to approval by the ZELM and the Zertifizierungsstelle ZELM Ex using cases or sheets for changes and sheet joined.

http://www.zertifizierungsstelle.zelm.de Ex - Kategorie III + II III 04 Braunschweig



**ecom instruments GmbH**

Industriestr. 2

D-97959 Assamstadt

Tel.: + 49 (0) 62 94 / 42 24 0

Fax: + 49 (0) 62 94 / 42 24 90

E-Mail: [sales@ecom-ex.com](mailto:sales@ecom-ex.com)

Internet: [www.ecom-ex.com](http://www.ecom-ex.com)