

Ex- User Guide with safety notes

ATEX zone 2/22 Explosion Proof Camera Armadex OZC-3



Equipment : ATEX/IECEx Explosion Proof Camera Armadex OZC-3
Manufacturer : Armadex Explosion Protection B.V.
: Tinststraat 33, 2984 AN Ridderkerk, The Netherlands
: www.armadex.com, info@armadex.com
: Tel. +31 (0) 85 0713041

OEM Manufacturer : OM Digital Solutions Corporation
: 49-3 Takakura-machi, Hachioji-shi, Tokyo 192-0033, Japan

Date / Rev. : 02-08-2025 / Rev. 1.7

READ THIS DOCUMENT AND ALL DOCUMENTS THAT ARE REFERRED TO BEFORE OPERATION, START-UP, OR TESTING OF THE CAMERA. THE DOCUMENTS CONTAIN IMPORTANT SAFETY INSTRUCTIONS.

SAVE THESE INSTRUCTIONS SO THEY CAN BE REVIEWED LATER ON.

1 INTRODUCTION

1.1 Introducing The Armadex OZC-3

We thank you for purchasing our Armadex OZC-3, short for: Explosion Proof Armadex Optical Zoom Camera. The Armadex OZC-3 is a modified camera, based on the OM System TG-7 of OEM OM Digital Solutions Corporation. The camera is modified to ATEX Category 3G and 3D, to make it suitable for safe usage in ATEX Zone 2 and 22.

One of the modifications - amongst others - to make the camera explosion safe is that the xenon tube flash function has been removed. All hardware and components in relation with the xenon tube flash function have been disassembled and removed from the circuitry.

The product manufacturer is Armadex Explosion Protection B.V., having modified the camera to be explosion safe. Armadex Explosion Protection B.V. stands by to support you post-purchase. Should you require assistance or have any inquiries, our dedicated team is just a contact away.

1.2 Notes on the Ex-User Guide

The subject of this Ex-User Guide is the Armadex OZC-3. This Ex User Guide is additional to the documentation prepared by the OEM; OM Digital Solutions Corporation. This guide contains additional safety notes, safety requirements, and measures for safe use of Armadex OZC-3 in ATEX zone 2/22.

1.3 Referred Documents

- 1.3.1 [OM System TG-7 Instruction Manual](#)
- 1.3.2 Declaration of Armadex Explosion Protection B.V
- 1.3.3 IECEx Certificate of Conformity by OBAC.
- 1.3.4 ATEX Certificate of Conformity by OBAC.
- 1.3.5 UK Declaration of conformity Armadex Explosion Protection B.V.
- 1.3.6 EU Declaration of conformity Armadex Explosion Protection B.V.



Refer to OM Digital Solutions Corporation's documentation for standard camera operation. If discrepancies arise between section 1.3.1 and this manual, follow this document. An (X) in ATEX/IECEx Certificate of Conformity number indicates special conditions, which are detailed herein and marked with an (X).

1.4 Symbols And Labels Used In This Manual



This label indicates the following warning: Ignoring instructions may lead to explosion risks. Review this document and all referenced materials thoroughly before operating, initializing, or testing the system. They include crucial safety guidelines.

2 FOR YOUR SAFETY

2.1 General

Before using the Armadex OZC-3, all users must have read and understood this manual. Comprehension of this manual is essential for preventing explosion risks, avoiding improper use, and ensuring safe operation. Observe all symbols, signs, and labels on the camera, maintaining their visibility.

2.2 Qualification of Personnel

The camera may only be used by competent persons, with adequate knowledge of explosion safety and hazardous area classification of the plant / factory. The minimum level of know-how is basic knowledge, as described in IECEx 005-001 or comparable.

2.3 Intended Use

Use the camera to photograph or record video in ATEX zone 2/22 hazardous areas, whether indoors or outdoors at the plant/factory.



Only use the camera in an ATEX zone 2/22 hazardous area.

2.4 Preventing unsafe operation



(X) The battery compartment and the connector compartment of the camera may only be opened or closed inside a non-hazardous area. The user must verify the area is non-hazardous before use.



(X) The battery and/or memory card may only be removed or installed inside a non-hazardous area. The user must verify the area is non-hazardous before use.



(X) The battery may only be charged in a non-hazardous area. The user must verify the area is non-hazardous before use.



(X) The battery may only be replaced with battery type OM SYSTEM LI-92B.



(X) The battery type OM SYSTEM LI-92B may only be used in the Armadex OZC-3 camera. Using it in other equipment might lead to a dangerous situation.



(X) Temperature : During operation: $-10^{\circ}\text{C} \leq T_{\text{amb}} \leq +40^{\circ}\text{C}$
: During Storage: $-20^{\circ}\text{C} \leq T_{\text{amb}} \leq +60^{\circ}\text{C}$



(X) The camera must be protected against a high risk of mechanical damage

All persons working with the camera must report any alterations to the camera that may affect safety to the owner without delay.

2.5 Possible misuse



Under NO circumstances may the camera be used in a zone 0/20. For example, the inside of a tank or tank wagon. Zone 0/20 situations are not limited to this example.

Under NO circumstances the camera may be used in a zone 1/21. For example, the direct vicinity of a pump or hose connection. Zone 1/21 situations are not limited to this example.



(X) When the camera is not in use, the device should be protected from UV radiation by storing it in a case



Under NO circumstances may the protective lenses be removed from the camera



After visible damage due to falling from a height above 2m or any other type of impact, the camera is no longer to be considered as explosion safe. Do not use camera afterwards.



Only use the AC adapter provided by Armadex to charge the camera. In case of a lost or otherwise non-usable adapter, contact Armadex to provide a new unit

2.6 Prohibited Modifications of The Camera

Repair, maintenance and/or overhaul of the camera shall only be conducted by Armadex or by a repairer qualified or authorized by Armadex.



The camera, as well as all equipment supplied by Armadex may not be modified. Any modification will make the ATEX Declaration of Conformity invalid. The unit does not contain any serviceable parts and must be replaced completely at the end of its technical life.

3 IMPORTANT NOTES BEFORE PUT INTO SERVICE

3.1 Inspection of The Delivery

Upon unpacking, inspect the camera for damage. Do not use if damaged and immediately contact the shipping company and seller.

3.2 Special conditions ATEX/IECEx

The following special conditions apply:

- (X) The following may only be done outside hazardous area:
 - opening or closing the battery compartment of the camera,
 - removing or installing the battery and memory card,
 - charging the battery and connecting the HDMI cable,
 - battery replacement, only with battery type OM SYSTEM LI-92B.
- (X) The camera must be protected against high risk of mechanical damage.
- (X) When not in use, the device should be protected from UV radiation by storing it in a case.
- (X) Ambient temperature range – see rated data.

4 PRODUCT OVERVIEW

The camera in its modified and evaluated configuration is designed to be suitable for use in ATEX zone 2/22 classified hazardous locations, provided the special instructions for safe use, described in this document are carefully adhered to. These special conditions marked on the Declaration of Conformity (X) and described in this document.

4.1 Product designation

The product designation and key features of the camera:

- Supply: rated voltage 3.6 VDC, rated current max. 2A
- Battery: OM Systems LI-92B, UL Listed MH29583, 3.6 VDC, 4.9Wh, 1350 mAh, $U_{\text{charge Max}}: 4,25\text{V}$, $I_{\text{charge max.}}: 1800\text{ mA}$
- USB C: Charge 5VDC 1500 mA (only use outside hazardous area)
- GPS, WiFi and Bluetooth: (power below explosion safe RF frequency thresholds EN 6007910-0 6.6.1.)
- Weight: 249 grams
- Maximum drop height for impact: 2,1 m
- Ingress Protection: IP54
- Operating Temperature: $-10^{\circ}\text{C} < T_a < +40^{\circ}\text{C}$
- Storage Temperature: $-20^{\circ}\text{C} < T_a < 60^{\circ}\text{C}$

4.2 Method of Operation

The camera is to be used as described in the OEM manual – except from instructions overruled by this User Guide - see the QR code on the back of this manual. The xenon flash tube has been disabled for safety purposes. The LED flash replaces its function.

4.3 Product description

The camera with optical zoom consists of the following parts:

- 4.3.1 Camera PCB
- 4.3.2 Optical zoom motor
- 4.3.3 Lens actuator
- 4.3.4 LED flash
- 4.3.5 LI-92B Li-ion battery
- 4.3.6 Wi-Fi, Bluetooth module
- 4.3.7 GPS, Field Sensor System
- 4.3.8 Protection lenses
- 4.3.9 Conversion lens adapter

4.1 Label

The Camera is CE marked as well as an Ex-Marking as shown below:



5 TECHNICAL SPECIFICATIONS

The camera is modified to explosion safe by applying various explosion protection methods, these can be found in the IECEx Certificate of Conformity. IEC- and harmonised standards of the ATEX EU directive 2014/34/EU are applied to realise these explosion protection methods. The applied IEC standards can be found in the Certificate of Conformity. The applied harmonised standards can be found on the EU Declaration of Conformity in chapter 7.

6 INSPECTION



The equipment, must be included in the inspection requirements according to EN 60079-17 to stay in compliance with the ATEX regulations during its technical life.

7 EU DECLARATION OF CONFORMITY**EU Declaration of Conformity**

In accordance with EN ISO/IEC 17050-1:2010


1. Product model / product:

Product Explosion Proof Camera with Optical Zoom
 Model/type Armadox OZC-3

2. Manufacturer:

Name Armadox Explosion Protection B.V.
 Address Tinststraat 33, 2984 AN, Ridderkerk, The Netherlands
 Telephone / Web +31 (0) 85 0713041/ www.armadox.com

3. This declaration of conformity is issued under the sole responsibility of the manufacturer.**4. Object of the declaration:**

Product Explosion Proof Camera with 4 x Optical Zoom
 Specification Battery Supply: Rechargeable battery 3.6VDC, rated current max. 2A
 ATEX Marking  II 3G Ex ic IIC T4 Gc / II 3D Ex ic IIIB T135°C Dc

5. The object of the declaration described above is in conformity with the relevant EU harmonization legislation:

ATEX DIRECTIVE 2014/34/EU "Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres"

6. References to the relevant harmonized standards used or references to the other technical specifications in relation to which conformity is declared:


Reference & Date	Title
EN IEC 60079-0: 2018	Explosive atmospheres – Part 0: Equipment – General requirements
EN 60079-11: 2012	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "I"

7. Additional information:

Voluntary, a type examination Procedure was carried out by OSRODEK BADAN, ATESTACJI I CERTYFIKACJI OBAC SP. Z.O.O, NoBo 1461, resulting in Type Examination Certificate: OBAC 25 ATEX 0089X.

(X) Specific conditions of use are specified in the accompanying user manual of the equipment

THIS DECLARATION IS NOT A WARRANTY OF ATTRIBUTES WITHIN THE MEANING OF THE LAW CONCERNING PRODUCT LIABILITY. THE SAFETY INSTRUCTIONS GIVEN IN THE INSTALLATION MANUAL MUST BE OBSERVED. THE APPARATUS SHALL ONLY BE OPERATED UNDER THE CONDITIONS AS DESCRIBED IN THE USER MANUAL

Signed for and on behalf of: Armadox Explosion Protection B.V.
 Place of issue: Ridderkerk, The Netherlands
 Date of issue: 02-08-2025
 Name: G. A. van Tienhoven, MSc. of Engineering
 Function: Director
 Signature: 

8 UKEX DECLARATION OF CONFORMITYDeclaration of Conformity

In accordance with BS EN ISO/IEC 17050-1:2010

1. *Product model / product:*

Product Explosion Proof Camera with Optical Zoom
 Model/type Armadex OZC-3

2. *Manufacturer:*

Name Armadex Explosion Protection Ltd.
 Address 7 Albert Street, Aberdeen AB25 1XX, Scotland, UK.
 Telephone / Web +44 1224 679258 / www.armadex.com

3. *This declaration is issued under the sole responsibility of the manufacturer.*4. *Object of the declaration:*

Product Explosion Proof Camera with 4 x Optical Zoom
 Specification Battery Supply: Rechargeable battery 3.6VDC, rated current max. 2A

UKEX Marking



II 3G Ex ic IIC T4 Gc / II 3D Ex ic IIIB T135°C Dc

5. *The object of the declaration described above is in conformity with the relevant UK Statutory Instruments:*

2016 No. 1107 Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations

6. *References to the relevant designated standards used or references to the other technical specifications in relation to which conformity is declared:*

Reference & Date	Title
EN IEC 60079-0: 2018	Explosive atmospheres – Part 0: Equipment – General requirements
EN 60079-11: 2012	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

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Signed for and on behalf of: Armadex Explosion Protection Ltd.
 Place of issue: Aberdeen, UK
 Date of issue: 02-08-2025
 Name: G. A. van Tienhoven, MSc. of Engineering
 Function: Director, IECEx Certified Person
 Signature: