



(2) **Equipment and protection systems intended for use in potentially explosive atmospheres  
Directive 94/9/EC**

(1) **EC-TYPE EXAMINATION CERTIFICATE**

(3) Number of the EC type examination certificate: **INERIS 02ATEX0066 X**

(4) Protection system or equipment :

**ENCLOSURE FOR CAMERA TYPE DTR 100Z ADF**

(5) Manufacturer: **HYTEC**

(6) Address: **501, rue de la Croix de Lavit  
Parc Euromédecine  
F - 34197 MONTPELLIER**

(7) This protection system or equipment and any other acceptable alternative of this one are described in the annex of this certificate and the descriptive documents quoted in this annex.

(8) The INERIS, notified body and identified under number 0080, in accordance with article 9 of Council Directive 94/9/EC of the 23<sup>rd</sup> March 1994, certifies that this protection system or equipment fulfils the Essential of Health and Safety Requirements relating to the design and construction of equipment and protection systems intended for use in potentially explosive atmospheres, described in appendix II of the Directive.

The examinations and the tests are consigned in official report N°P41124/02.

(9) The respect of the Essential Health and Safety Requirements is ensured by:


- conformity with:

EN 50 014	of June	1997 + A1 and A2
EN 50 018	of November	2000
EN 50281-1-1	of September	1998 + A1

- specific solutions adopted by the manufacturer to meet the Essential Health and Safety Requirements described in the descriptive documents.

(10) Sign X, when it is placed following the Number of the EC type examination certificate, indicates that this equipment and protection system is subjected to the special conditions for safe use, mentioned in the annex of this certificate.

- (11) This EC type examination certificate relates only to the design, examination and tests 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 supply of this equipment or protective system, these are not covered by this certificate.
- (12) The marking of the equipment or the protection system will have to contain:

 II 2 GD

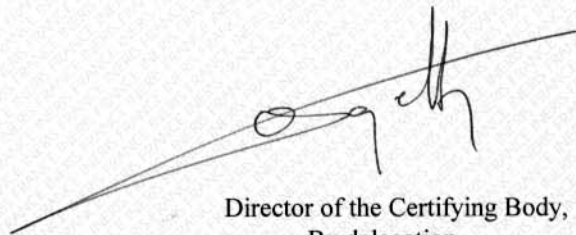
EEx d IIC T6 IP68 T85°C

Verneuil-en-Halatte, 2002 12 03



X. LEFEBVRE

Engineer at the Laboratory of Certification of Materials  
ATEX



Director of the Certifying Body,  
By delegation  
B. PIQUETTE  
Deputy manager of Certification



(13)

## ANNEX

(14)

EC TYPE EXAMINATION CERTIFICATE N° INERIS 02ATEX0066 X

(15)

### DESCRIPTION OF THE EQUIPMENT OR THE PROTECTION SYSTEM

The case camera consists on a body closed at an extremity by a flange and a support of cable gland and at the other extremity by a hole made in polycarbonate. The metal parts are made of stainless steel.

This case is intended to receive various types of cameras and two gearmotors step by step.

This case presents the degrees of protection IP66/IP68 according to European standard EN 60 529.

The verification of the degree of protection IPX8 corresponds to an immersion under 10 meters of water during 1 Hour.

### PARAMETERS RELATING TO THE SAFETY

Maximum supply voltage : 12 V  
Maximum power of the camera : 2,4 W  
Maximum power of the motors : 2 x 1,5 W


### MARKING

Marking must be readable and indelible; it must comprise the following indications:

#### **HYTEC**

501, rue de la Croix de Lavit  
Parc Euromédecine  
F - 34197 MONTPELLIER

DTR 100Z ADF  
INERIS 02ATEX0066 X  
(Serial number)  
(year of construction)

 **II 2 GD**  
EEx d IIC T6  
IP68 T85°C

CAUTION ELECTROSTATIC CHARGES  
DO NOT OPEN WHEN ENERGIZED

CLEAN ONLY BY DAMP CLOTH  
AFTER DE-ENERGIZED WAIT 10 MINUTES BEFORE OPENING

The whole marking can be carried out in the language of the country of use.

The protection apparatus or system must also carry the marking normally envisaged by the standards of construction which relate to it.

### **ROUTINE EXAMINATIONS AND TESTS**

According to 16.1 of standard EN 50 018, each example of the material defined above must have successfully passed before delivery an overpressure test, of a period comprised between 10 and 60 secondes under 13,7 bar.

### **(16) DESCRIPTIVE DOCUMENTS**

The technical report is composed of the document quoted hereafter, constituting the descriptive file of the apparatus, object of this certificate.

- Descriptive note HY 781500D of November 2002 (6 pages) signed on 2002.11.26
- Instruction and maintenance manual MUE00274GBC-1 ind.C of 2002.11.19 (6 pages + annexes) signed on 2002.11.19
- Drawing n° HY02.091.00 E of 2002.10.29 signed on 2002.11.26
- Drawing n° HY02.091.01 D of 2002.09.15 signed on 2002.11.26
- Drawing n° HY02.091.50 C of 2002.10.27 signed on 2002.11.26

### **(17) SPECIAL CONDITIONS FOR SAFE USE**

- The camera is intended to be used in an ambient temperatures range of - 10°C to 50°C.
- In the event of replacement of the fastening screws of the support of cable gland the user will have to choose stainless steel screws of quality  $\geq$  A2 class 70.
- During the installation, the user will take in consideration that the hole of the case camera underwent only one shock corresponding to an energy of weak shock.
- The free extremity of the enclosure supply cable must be connected either in a certified box or out of the hazardous aera.

For use in potentially explosive atmospheres due to combustibile dust:

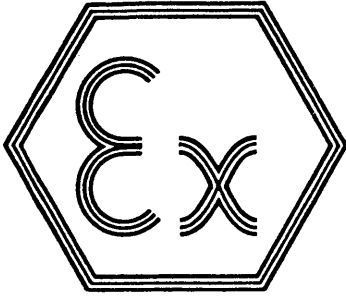
- The surface of the differents gaps shall be covered with grease, for example silicone and cable entries shall be of a degree of protection at least IP6X.
- User shall perform a regular cleaning of material, with clamp cloth to limit dust layers on the material sides.

The special conditions are defined in the instructions.

**(18) ESSENTIAL REQUIREMENTS OF SAFETY AND HEALTH**

The respect of the Essential Health and Safety Requirements is ensured by:

- conformity to the European standards EN 50 014, 50 018 and EN 50 281-1-1.
- the whole of the provisions adopted by the manufacturer and described in the descriptive documents.



# **INERIS**

INSTITUT NATIONAL DE L'ENVIRONNEMENT  
INDUSTRIEL ET DES RISQUES

Parc Technologique ALATA  
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Tél. : (33) 44 55 66 77 - Fax (33) 44 55 67 04  
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**ELECTRICAL EQUIPMENT FOR GASEOUS EXPLOSIVE ATMOSPHERES**

## **ATTESTATION OF CONFORMITY**

**INERIS 03IEC0007 X**

Issued to: **HYTEC**  
501, rue de la Croix de Lavit  
Parc Euromédecine  
F - 34197 MONTPELLIER

The tests and verifications carried out by the Institut National de l'Environnement Industriel et des Risques (INERIS), Industrial and Commercial Public Establishment, founded by ordinance No. 90-1089 of 7 December 1990, indicate that the electrical equipment :

Designation : **CAMERA HOUSING**  
Type : **DTR 100Z ADF**  
Manufacturer : **HYTEC**

has been found to comply with the international standards :

IEC 60079-0 (edition 3.1) june 2000  
IEC 60079-1 (fourth edition) february 2001

and has successfully met the type verifications and tests required by these standards.

The code of the electrical apparatus is:

**Ex d IIC T6**

(A1)

**CAMERA HOUSING TYPE DTR 100Z ADF**

(A2) - DESCRIPTION

The case camera consists on a body closed at an extremity by a flange and a support of cable gland and at the other extremity by a window made in polycarbonate. The metal parts are made of stainless steel.

This case is intended to receive various types of cameras and two gearmotors step by step.

This case presents the degrees of protection IP66/IP68 according to standard IEC 60 529.

The verification of the degree of protection IPX8 corresponds to an immersion under 10 meters of water during 1 hour.

(A3) - DESCRIPTIVE DOCUMENTS

The documents referred to below, submitted and signed by the applicant, constitute the file describing the electrical apparatus and forming the subject of the present certification.

- Descriptive note HY 781500E (French version) of February 2003 (6 pages) signed on 2003.02.21
- Descriptive note HY 781500GBE (English version) of February 2003 (6 pages) signed on 2003.02.21
- Drawing n° HY02.091.00 E of 2002.10.29 signed on 2003.02.21
- Drawing n° HY02.091.01 D of 2002.09.15 signed on 2003.02.21
- Drawing n° HY02.091.52 A of 2003.02.18 signed on 2003.02.21

(A4) - SPECIFIC PARAMETERS OF THE TYPES OF PROTECTION CONCERNED

Maximum supply voltage : 12 V

Maximum power of the camera: 2,4 W

Mamimum power of the motors: 2 x 1,5 W

**(A5) - MARKING**

The marking must be visible, legible and durable and must contain the following items :

HYTEC  
DTR 100Z ADF  
INERIS 03IEC0007 X  
(Serial number)  
Ex d IIC T6  
CAUTION ELECTROSTATIC CHARGES  
CLEAN ONLY BY DAMP CLOTH  
DO NOT OPEN WHEN ENERGIZED  
AFTER DE-ENERGIZED WAIT 10 MINUTES BEFORE OPENING

The marking as a whole may be in the language of the country of use.

The apparatus must also bear the marking normally required by the standards for the construction of the electric apparatus.

**(A6) - ROUTINE TEST**

According to 16.1 of standard IEC 60079-1, each example of the material defined above must have successfully passed before delivery an overpressure test, of a period comprised between 10 and 60 secondes under 13,7 bar.

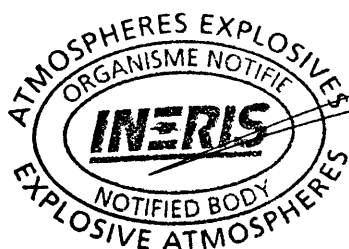
**(A7) - SPECIAL CONDITIONS FOR SAFE USE**

- The camera is intended to be used in an ambient temperatures range of - 10°C to 50°C.
- In the event of replacement of the fastening screws of the support of cable gland the user will have to choose stainless steel screws of quality  $\geq$  A2 class 70.
- During the installation, the user will take in consideration that the hole of the case camera underwent only one shock corresponding to an energy of weak shock.
- The free extremity of the enclosure supply cable must be connected either in a certified box or out of the hazardous area.

- The surface of the different gaps shall be covered with grease, for example silicone and cable entries shall be of a degree of protection at least IP66/IP68.

Verneuil-en-Halatte, 2003 02 19

Director of the Certifying Body,  
By delegation  
B. PIQUETTE  
Deputy manager of Certification



## ADDITION

- (3) **INERIS 02ATEX0066X/02**
- (4) **ENCLOSURE FOR CAMERA TYPE DTR 100Z ADF**
- (5) **Made by HYTEC**

(15) - **PURPOSE OF THE ADDITION**

- Possibility to use the enclosure for camera in the following ambient temperature range :
  - . from - 20°C to 55°C, for T6 version with cable gland,
  - . from - 20°C to 60°C, for T5 version with cable gland.
- Installation of the new connector GISMA covered by the EC type examination certificate PTB 03ATEX1124 code EEx d IIB T5.
- Possibility to use cable gland with Pg11, ISO M16 or ISO M20 diameter.
- Modification of the name of the manufacturer.

**PARAMETERS RELATING TO THE SAFETY**

The parameters relating to the safety stipulated by the basic certificate and the addition n°01 are unchanged.

**MARKING**

The marking defined in the basic certificate and the addition n°01 is completed by the ambient temperature range indication and for the cable gland version by the temperature class :

- . from - 20°C to + 55°C, for T6 version with cable gland,
- . from - 20°C to + 60°C, for T5 version with cable gland,
- . from - 10°C to + 40°C, for T5 version with GISMA connector.

**ROUTINE EXAMINATIONS AND TESTS**

The routine test stipulated by the basic certificate are applicable to the stainless steel enclosure.

(16) - DESCRIPTIVE DOCUMENTS

The documents referred to below, constitute the file describing the modifications of the apparatus and forming the subject of the present addition.

- Descriptive note ref. HY 78 15 00 H of 2005.12.08 (2 pages) signed on 2005.12.08
- Instruction and maintenance manual MUE00274FRC-1 (7 pages + annexes) dated and signed on 2005.12.08
- Instruction and maintenance manual MUE00274GBK-1 (7 pages + annexes) dated and signed on 2005.11.24
- Drawing n°HY02-091-00 F of 2005.11.23
- Drawing n°HY02-091-01 E of 2005.11.23
- Drawing n°HY02-091-50 I of 2005.11.21
- Drawing n°HY02-091-53 A of 2005.11.21

(17) - SPECIAL CONDITIONS FOR SAFE USE

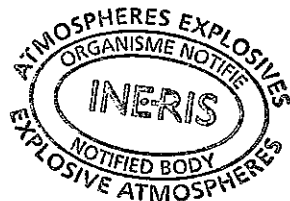
The special condition relating to the limitation of use for the apparatus, in a range of ambient temperatures from -10°C to +50°C, imposed in the basic certificate is not applicable.

The other special conditions imposed in the basic certificate and the addition n°01 are unchanged.

(18) ESSENTIAL REQUIREMENTS OF SAFETY AND HEALTH

The respect of the Essential Health and Safety Requirements defined in the basic certificate is unchanged.

Verneuil-en-Halatte, 2005 12 12



C. PETITFRERE

Engineer at the Laboratory of Certification of  
ATEX Equipment

Director of the Certifying Body,  
By delegation  
B. PIQUETTE  
Deputy manager of Certification