



- (2) Equipment and protective 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 13ATEX0048**

- (4) Equipment or protective system:

**CONTROLLER TYPE MX43**

- (5) Manufacturer: **OLDHAM SAS**

- (6) Address:  
Rue Orfila  
ZI Est - B.P. 20417  
62027 ARRAS  
France

- (7) This equipment or protective system 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) 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 equipment or protective system fulfils the Essential of Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, described in annex II of the Directive.

The examinations and the tests are consigned in report No 027754/13.


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

- conformity with:

EN 60079-29-1 : 2007  
EN 50271 : 2001

- 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 protective 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 protective system will have to contain:

 II (1) GD

Verneuil-en-Halatte, 2013.10.16



The Chief Executive Officer of INERIS,  
By delegation  
D. CHARPENTIER  
Certification Division  
Manager

(13)

## ANNEX

(14)

EC TYPE EXAMINATION CERTIFICATE N° INERIS 13ATEX0048

(15)

### DESCRIPTION OF THE EQUIPMENT OR THE PROTECTIVE SYSTEM

The Controller type MX43 can measure the level of concentration of various types of gas.

This controller is composed of 16 or 32 inputs of measurement and detection allowing connection in Wheatstone bridge or 4/20 mA or digital. It also has a default relay and 5 to 25 programmable relays.

### PARAMETERS RELATING TO THE SAFETY

None.

### MARKING


Marking has to be readable and indelible; it has to include the following indications:

OLDHAM SAS

62027 ARRAS

MX43

INERIS 13ATEX0048

 II (1) GD

EN 60079-29-1

Tamb. -20°C ÷ +50°C

(Serial number)

(Year of construction)

Marking may be carried out in the language of the country of use.

The protective system or equipment has also to carry the marking normally stipulated by its construction standards.

### ROUTINE EXAMINATIONS AND TESTS

None.

(16) DESCRIPTIVE DOCUMENTS

The descriptive documents quoted hereafter constitute the technical documentation of the equipment, subject of this certificate.

- Descriptive notice (5 pages + 4 drawings + 4 specifications) signed on 2013.02.13
- Instruction notice (63 pages) signed on 2013.02.13

(17) SPECIAL CONDITIONS FOR SAFE USE

None.

(18) ESSENTIAL SAFETY AND HEALTH REQUIREMENTS

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

- Conformity to the standards quoted in clause (9).
- All provisions adopted by the manufacturer and defined in the descriptive documents.

## ADDITION

(3) INERIS 13ATEX0048/01

(4) CONTROLLER TYPE MX43

(5) Made by OLDHAM

(15) **PURPOSE OF THE ADDITION**

Update to the EN 50271: 2010 standard.

The controller type MX43 satisfies the SIL 1 conformity with the following data:

Versions	MTBF (h)	$\lambda_{total}$	SFF	$\lambda_{DD}$	$\lambda_{DU}$	$PFD_{avg\_1}$	$PFD_{avg\_2}$	SIL
4 ch. 24 VDC	174805	$5.72.10^{-6}$	60%	$3.43.10^{-6}$	$2.29.10^{-6}$	$1.03.10^{-2}$	$2.51.10^{-2}$	1
8 ch. 24 VDC	152407	$6.56.10^{-6}$	60%	$3.94.10^{-6}$	$2.62.10^{-6}$	$1.18.10^{-2}$	$2.87.10^{-2}$	1
4 ch. 230 VAC	125647	$7.96.10^{-6}$	60%	$4.78.10^{-6}$	$3.18.10^{-6}$	$1.43.10^{-2}$	$3.49.10^{-2}$	1
8 ch. 230 VAC	113639	$8.80.10^{-6}$	60%	$5.28.10^{-6}$	$3.52.10^{-6}$	$1.58.10^{-2}$	$3.85.10^{-2}$	1

**PARAMETERS RELATING TO THE SAFETY**

None.

**MARKING**

The marking is unchanged.

**ROUTINE EXAMINATIONS AND TESTS**

None.

(16) **DESCRIPTIVE DOCUMENTS**

The descriptive documents quoted hereafter constitute the technical documentation describing the modification of the equipment, subject of this present addition.

- MX 43 Functional Specifications RD0030 rev C 03 November 2009
- MX43 Release Notes 30 December 2013
- MX43 Detailed Design Document rev9 25 July 2013
- MX43 Requirements Specifications rev15 25 July 2013
- Functional test cases rev7 07 November 2013
- Functional test report rev8 07 November 2013
- MTBF calculation of the Controller referenced 1520/ISC/D01 Rév B 05 September 2011
- MX43 User Manual (French) NPM43FR rev H
- History of the Modifications RD0030 rev H 24 November 2014

These documents are dated et signed on 5 June 2015.



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

None.

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

The respect of the Essential Health and Safety Requirements is completed as follows:

- Conformity to the EN 60079-29-1: 2007 and EN 50271: 2010 standards.
- All provisions adopted by the manufacturer and defined in the descriptive documents.

Verneuil-en-Halatte, 2015.08.05



The Chief Executive Officer of INERIS  
By delegation  
D. CHARPENTIER  
Certification Division,  
Manager

