



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:

IECEx CES 10.0010X

issue No.:2

Certificate history:

Issue No. 2 (2015-1-29)
Issue No. 1 (2012-9-10)
Issue No. 0 (2010-9-14)

Status:

Current

Date of Issue:

2015-01-29

Page 1 of 4

Applicant:

ATOS S.p.A.
via alla Piana, 57
I - 21018 Sesto Calende (VA)
Italy

Electrical Apparatus:
Optional accessory:

Explosion proof solenoid, series OA-*; OAB-*; OZA-A*; OZAB-A*; MZA-A*; MZAB-A*

Type of Protection:

Flameproof enclosures 'd'; Dust ignition protection 't'

Marking:

Exd IIC T6, T4 or T3 Gb
Ex tb IIIC T85°C or T135°C or T200°C Db
IP66 / IP67

Approved for issue on behalf of the IECEx
Certification Body:

Mirko Balaz

Position:

Head of IECEx CB

Signature:
(for printed version)

Date:

29-1-2015

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

CESI
Centro Elettrotecnico
Sperimentale Italiano S.p.A.
Via Rubattino 54
20134 Milano
Italy

CESI

CESI S.p.A.
Centro Elettrotecnico Sperimentale Italiano S.p.A. Division
Certification and Accreditation
responsabile
Mirko Balaz



IECEx Certificate of Conformity

Certificate No.: IECEx CES 10.0010X

Date of Issue: 2015-01-29

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Page 2 of 4

Manufacturer: ATOS S.p.A.
via alla Piana, 57
I - 21018 Sesto Calende (VA)
Italy

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2007-04 Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition: 2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

IT/CES/ExTR10.0010/00

IT/CES/ExTR10.0010/01

IT/CES/ExTR10.0010/02

Quality Assessment Report:

IT/CES/QAR10.0003/04



IECEx Certificate of Conformity

Certificate No.: IECEx CES 10.0010X

Date of Issue: 2015-01-29

Issue No.: 2

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Explosion proof solenoid series OA-*; OAB-*; OZA-A*; OZAB-A*; MZA-A-*; MZAB-A*.

These On-off and proportional solenoids are used for the command of directional, flow or pressure control valves, operating in hazardous areas with explosive or flammable environment.

Electrical characteristics:

- Rated voltage: 12 / 220 Vdc , 12/ 240 Vac (depending of the models)
- Rated power: 3,5 / 35 W (depending of the models)
- Ambient temperature range: from -60°C / -40°C to + 40°C / +45°C / + 50°C/ +60°C/ + 70°C (depending of the models).

For further information see Annex.

CONDITIONS OF CERTIFICATION: YES as shown below:

- The flamepaths are specified in the manufacturer drawings. For information regarding the dimensions of the flameproof joints the manufacturer shall be contacted
- For the selection of connecting cable with operating temperature suitable for the installation conditions of equipment refer to the manufacturer safety instruction.



IECEx Certificate of Conformity

Certificate No.: IECEx CES 10.0010X

Date of Issue: 2015-01-29

Issue No.: 2

Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Variation no. 01

- Variation 1.1: New application of explosion proof solenoids type OZAI-T-* with the ETHA-4/* transducer with certificate IECEx CES 12.006X. Unchanged the other electrical characteristics of the explosion proof solenoids.
- Variation 1.2: The explosion proof solenoids, originally assessed in compliance with IEC 60079-0: 2004, IEC 60079-1:2007, IEC 61241-0:2004 and IEC 61241-1:2004, have been re-assessed on the basis of the standard:
 - IEC 60079-0: 2011 - Electrical apparatus for explosive atmospheres - Part 0: general requirements
 - IEC 60079-31: 2008 - Electrical apparatus for use in the presence of combustible dust - Part 31: protection by enclosures "t". The marking has been updated including the equipment protection level (EPL) "Gb", or "Db"

Variation no. 02

- Variation 2.1: The explosion proof solenoids, originally assessed in compliance with IEC 60079-0: 2011, IEC 60079-1:2007 and IEC 60079-31:2008 have been re-assessed on the basis of the standard IEC 60079-31:2013 2nd edition.
- Variation 2.2: Name plate modification. Dimensions and contents are being revised to allow the multi-certification of the solenoid. Both IECEx and ATEX certification data are reported and a free space is foreseen for the other marking.
- Variation 2.3: Terminal board modification.
- Variation 2.4: Identification code updating. The identification codes of the equipment have been revised in order to use the same code for IECEx and ATEX certification.
- Variation 2.5: New version for min Tamb -60°C. The external part of the enclosure are realized with cryogenic steel type 26CrMo4-2 or with an assembly of parts realized in AISI316L, AISI 430F and AISI 630.



IECEX Certificate of Conformity

CESI

Prot: B5002634

Annex to certificate: IECEX CES 10.0010X Issue No.2 of 2015-01-29
Applicant: ATOS S.p.A.
via alla Piana, 57; I - 21018 Sesto Calende (VA), Italy
Electrical Apparatus: Explosion proof solenoid series: OA-*; OAB-*; OZA-A*;
OZAB-A*;
MZA-A*;
MZAB-A*

Description of equipment

The explosion proof solenoids in subject are used to drive direction control, flow control and pressure control valves. In the following are summarized the models and the relevant description.

Standard version:

OA-*, OZA-A-*, MZA-A-*,

Standard version, T.Amb. -60°C:

OAB-*, OZAB-A-*, MZAB-A-*

Standard version, horizontal cable entrance:

OA/O-*, OZA-A-*/O, MZA-A-*/O,

Standard version, horizontal cable entrance, T.Amb. -60°C:

OAB/O-*, OZAB-A-*/O, MZAB-A-*/O

Standard version, with protect manual override:

OA/WP-*, OZA-A-*/WP

Standard version, with protect manual override, T.Amb. -60°C:

OAB/WP-*, OZAB-A-*/WP

Standard version, with protect manual override, horizontal cable entrance:

OA/O/WP-*, OZA-A-*/O/WP

Standard version, with protect manual override, horizontal cable entrance, T.Amb. -60°C:

OAB/O/WP-*, OZAB-A-*/O/WP

Stainless steel version:

OAX/WP-*, OAKX/WP-*, OZAX-A-*/WP; MZAX-A-*

Stainless steel version T.Amb. -60°C:

OABX/WP-*, OABKX/WP-*, OZABX-A-*/WP; MZABX-A-*

Stainless steel version with horizontal cable entrance:

OAX/O/WP-*, OAKX/O/WP-*, OZAX-A-*/O/WP; MZAX-A-*/O

Stainless steel version with horizontal cable entrance T.Amb. -60°C:

OABX/O/WP-*, OABKX/O/WP-*, OZABX-A-*/O/WP; MZABX-A-*/O

External stainless steel version with standard internal parts:

OAXS/WP-*, OAKXS/WP-*, OZAXS-A-*/WP, MZAXS-A

External stainless steel version with standard internal parts, T.Amb. -60°C:

OABXS/WP-*, OABKXS/WP-*, OZABXS-A-*/WP, MZABXS-A-*

External stainless steel version with standard internal parts, horizontal cable entrance:

OAXS/O/WP-*, OAKXS/O/WP-*, OZAXS-A-*/O/WP, MZAXS-A-*/O

External stainless steel version with standard internal parts, horizontal cable entrance, T.Amb. -60°C:

OABXS/O/WP-*, OABKXS/O/WP-*, OZABXS-A-*/O/WP, MZABXS-A-*/O

PAD B5002634 (2052470) - USO RISERVATO



IECEX Certificate of Conformity

CESI

Prot: B5002634

Annex to certificate:

IECEX CES 10.0010X Issue No.2 of 2015-01-29

Applicant:

ATOS S.p.A.

via alla Piana, 57; I - 21018 Sesto Calende (VA), Italy

Electrical Apparatus:

Explosion proof solenoid series: OA-*; OAB-*; OZA-A*;
MZAB-A*;
MZA-A*;
MZAB-A*

Description of equipment (*follows*)

Internal stainless steel version, external standard:

OAXW/WP-*, OAKXW/WP-*, OZAXW-A*/WP, MZAXW-A

Internal stainless steel version, external standard, T.Amb. -60°C:

OABXW/WP-*, OABKXW/WP-*, OZABXW-A*/WP, MZABXW-A*

Internal stainless steel version, external standard, horizontal cable entrance:

OAXW/OWP-*, OAKXW/OWP-*, OZAXW-A*/O/WP, MZAXW-A*/O

Internal stainless steel version, external standard, horizontal cable entrance, T.Amb. -60°C:

OABXW/OWP-*, OABKXW/OWP-*, OZABXW-A*/O/WP, MZABXW-A*/O

Low power version 3,5W:

OA/3-*, OA/3/O-*, OA/3/WP-*, OA/3/O/WP-*, OAX/3/WP-X, OAX/3/O/WP-X, OAXS/3/WP-*, OAXS/3/O/WP-*, OAXW/3/WP, OAXW/3/O/WP-*

Low power version 3,5W, T.Amb. -60°C:

OAB/3-*, OAB/3/O-*, OAB/3/WP-*, OAB/3/O/WP-*, OABX/3/WP-X, OABX/3/O/WP-X, OABXS/3/WP-*, OABXS/3/O/WP-*, OABXW/3/WP, OABXW/3/O/WP-*

Electrical characteristics

Rated voltage: 12 ÷ 220 Vdc , 12÷ 240 Vac (depending of the models)

Rated power: 3,5 ÷ 35 W (depending of the models)

Ambient Temperature Range (depending of the model)

-40 °C ÷ +40°C

-40 °C ÷ +45°C

-40 °C ÷ +50°C

-40 °C ÷ +55°C

-40 °C ÷ +60°C

-40 °C ÷ +70°C

-60 °C ÷ +40°C

-60 °C ÷ +45°C

-60 °C ÷ +50°C

-60 °C ÷ +55°C

-60 °C ÷ +60°C

-60 °C ÷ +70°C

Warning label

"Warning – do not open when energized"

"For the correct selection of connecting cable temperatures see safety instructions"

Cable entries

The cable entry devices used on the enclosure shall be suitably certified according to the applicable standards.

For the equipment with dust protection 't' the accessories used for cable entries and for unused holes shall guarantee the degree of protection IP67 according to IEC 60529 standard.

Prot: B5002634

Annex to certificate:

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Applicant:

ATOS S.p.A.

via alla Piana, 57; I - 21018 Sesto Calende (VA), Italy

Electrical Apparatus:

Explosion proof solenoid series: OA-*; OAB-*; OZA-A*; OZAB-A*;
MZA-A-*; MZAB-A-*

Tab. A: max ambient temperature, connecting cable, temperature class, surface temperature

Solenoid type (for Min T.Amb -40°C)		T amb. Max ambient temperature (°C)	Connecting cable temperature (°C)	Temperature class / surface temperature
OA, OA/3, OA/O, OA/3/O, OA/WP, OA/3/WP, OA/O/WP, OA/3/O/WP	OAX/WP, OAX/3/WP OAX/O/WP, OAX/3/O/WP OAXS/WP, OAXS/3/WP OAXS/O/WP, OAXS/3/O/WP OAXW/WP, OAXW/3/WP OAXW/O/WP, OAXW/3/O/WP	70	90	T4
		45	-	T6
-	OAKX/WP OAKX/O/WP OAKXS/WP OAKXS/O/WP OAKXW/WP OAKXW/O/WP	70	130	T3
		60	120	
		50	110	
		45	100	T4
OZA-A OZA-A/O OZA-A/WP OZA-A/O/WP	OZAX-A/WP OZAX-A/O/WP OZAXS-A/WP OZAXS-A/O/WP OZAXW-A/WP OZAXW-A/O/WP	70	120	T3
		55	110	T4
		45	95	
		40	90	
MZA-A MZA-A/O	MZAX-A, MZAX-A/O, MZAXS-A, MZAXS-A/O, MZAXW-A, MZAXW-A/O	70	120	T3
		45	90	T4
		55	110	T3
Solenoid type (for Min T.Amb -60°C)		T amb. Max ambient temperature (°C)	Connecting cable temperature (°C)	Temperature class / surface temperature
OAB, OAB/3, OAB/O, OAB/3/O, OAB/WP, OAB/3/WP, OAB/O/WP, OAB/3/O/WP	OABX/WP, OABX/3/WP OABX/O/WP, OABX/3/O/WP OABXS/WP, OABXS/3/WP OABXS/O/WP, OABXS/3/O/WP OABXW/WP, OABXW/3/WP OABXW/O/WP, OABXW/3/O/WP	70	90	T4
		45	-	T6
-	OABKX/WP OABKX/O/WP OABKXS/WP OABKXS/O/WP OABKXW/WP OABKXW/O/WP	70	130	T3
		60	120	
		50	110	
		45	100	T4
OZAB-A OZAB-A/O OZAB-A/WP OZAB-A/O/WP	OZABX-A/WP OZABX-A/O/WP OZABXS-A/WP OZABXS-A/O/WP OZABXW-A/WP OZABXW-A/O/WP	70	120	T3
		55	110	T4
		45	95	
		40	90	
MZAB-A MZAB-A/O	MZABX-A, MZABX-A/O, MZABXS-A, MZABXS-A/O, MZABXW-A, MZABXW-A/O	70	120	T3
		45	90	T4
		55	110	T3

The Company

ATOS s.p.a.
21018 Sesto Calende / Italia
via alla Piana 57

fac simile

Hereby declares the conformity to IECEx scheme, of the Products

Product	Type		
SOLENOIDI ANTIDEFLAGRANTI EXPLOSION-PROOF SOLENOIDS	<p>OA-*, OA/O-*, OA/WP-*, OA/O/WP-*, OA/3-*, OA/3/O-*, OA/3/WP-*, OA/3/O/WP-*, OZA-A-*, MZA-A-*, OZA-A-*/O, MZA-A-*/O, OZA-A-*/WP, OZA-A-*/O/WP OAX/WP-*, OAKX/WP-*, OAX/O/WP-*, OAKX/O/WP-*, OAX/3/WP-*, OAX/3/O/WP-*, OZAX-A-*/WP, MZAX-A-*, OZAX-A-*/O/WP, MZAX-A-*/O OAXS/WP-*, OAKXS/WP-*, OAXS/O/WP-*, OAKXS/O/WP-*, OAXS/3/WP-*, OAXS/3/O/WP-*, OZAXS-A-*/WP, MZAXS-A-*, OZAXS-A-*/O/WP, MZAXS-A-*/O OAXW/WP-*, OAKXW/WP-*, OAXW/O/WP-*, OAKXW/O/WP-*, OAXW/3/WP-*, OAXW/3/O/WP-*, OZAXW-A-*/WP, MZAXW-A-*, OZAXW-A-*/O/WP, MZAXW-A-*/O</p>	<p>OAB-*, OAB/O-*, OAB/WP-*, OAB/O/WP-*, OAB/3-*, OAB/3/O-*, OAB/3/WP-*, OAB/3/O/WP-*, OZAB-A-*, MZAB-A-*, OZAB-A-*/O, MZAB-A-*/O, OZAB-A-*/WP, OZAB-A-*/O/WP OABX/WP-*, OABKX/WP-*, OABX/O/WP-*, OABKX/O/WP-*, OABX/3/WP-*, OABX/3/O/WP-*, OZABX-A-*/WP, MZABX-A-*, OZABX-A-*/O/WP, MZABX-A-*/O OABXS/WP-*, OABKXS/WP-*, OABXS/O/WP-*, OABKXS/O/WP-*, OABXS/3/WP-*, OABXS/3/O/WP-*, OZABXS-A-*/WP, MZABXS-A-*, OZABXS-A-*/O/WP, MZABXS-A-*/O OABXW/WP-*, OABKXW/WP-*, OABXW/O/WP-*, OABKXW/O/WP-*, OABXW/3/WP-*, OABXW/3/O/WP-*, OZABXW-A-*/WP, MZABXW-A-*, OZABXW-A-*/O/WP, MZABXW-A-*/O</p>	

* Nominal supply voltage

Protection mode

CESI

protocollo

Ex d IIC T6, T4, T3 Gb
Ex tb IIIC T85°C, T135°C, T200°C Db
IP66/67

B5000273

allegato al rapporto

B5000271

Tamb = -40°C ÷ +45°C or Tamb = -40°C ÷ +70°C or Tamb = -60°C ÷ +45°C Tamb = -60°C ÷ +70°C

IECEx certificate n°.

IECEx CES 10.0010X

In accordance with the following IEC standards

IEC 60079-0 / 2011 (6th ed.) IEC 60079-31 / 2013 (2nd ed.) IEC 60079-1 / 2007 (6th ed.)

Date: 03/12/2014

Signature:

Pag. 1/1