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 EXA 15.0007X	Issue No: 0	Certificate history: Issue No. 0 (2015-10-06)
Status:	**Current**	Page 1 of 3	
Date of Issue:	**2015-10-06**		
Applicant:	**Eisenbau Srl** Via T.A.Edison,16 – 20090 Cusago (MI) **Italy**		
Electrical Apparatus:	**Guardbox - GI series**		
Optional accessory:			
Type of Protection:	**Ex ia**		
Marking:	**Ex ia IIB/IIC T6...T1 Ga** **Ex ia IIB/IIC T6...T1 Gb** **Ex ia IIIC T135°C Da**		

Approved for issue on behalf of the IECEx Certification Body: Stipo Đerek

Position: Director General

Signature:
(for printed version)

Date:

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:

Agencija za prostore ugrožene eksplozivnom atmosferom (Ex-Agencija)
Industrijska 25
HR-10431 Sveta Nedelja
Croatia

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Manufacturer:	**Eisenbau Srl** Via T.A.Edison,16 – 20090 Cusago (MI) **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 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

*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:

HR/EXA/ExTR15.0016/00

Quality Assessment Report:

HR/EXA/QAR15.0001/00

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Guardbox Limit switch boxes are electromechanical devices for monitoring the operation of industrial valves in plants. The Guardbox devices are used to control the position of the valve and provide electrical feedback signal of valve status to plant control systems. They are equipped with visible position indicator that true indication of valve position.

For details see Annex of this certificate.

CONDITIONS OF CERTIFICATION: YES as shown below:

Appropriate method of installation, maintenance and operation, should prevent accumulation of static charge on the device.

Annex:

IECEx_EXA_15_0007X_ISSUE_No_0_Eisenbau_ANNEX_01.pdf

Product description:

Guardbox Limit switch boxes are electromechanical devices for monitoring the operation of industrial valves in plants. The Guardbox devices are used to control the position of the valve and provide electrical feedback signal of valve status to plant control systems. They are equipped with visible position indicator that represents a true indication of valve position.

Marking of Ex Equipment: Gas group, temperature class, maximum and minimum ambient temperature depend on device configuration type i.e. on type of installed components.

Ambient temperature range is: T_{amb} = -60°C to 105°C and it is reduced according to ambient temperature range of installed components.
Connection for limit switch box shall be provided with cable of thermal stability not less than maximum ambient temperature of particular configuration + 9K.

Intrinsically safe circuits:

Maximum of 5 independent intrinsically safe circuits:
Four terminals: pins 1-2, 3-4, 5-6, 7-8 for 2-wire sensors or 1-2-3, 4-5-6, 7-8-9, 10-11-12 for 3-wire sensors) + terminal for single certified programmable encoder or temperature transmitter.

Extra terminal block (pins "+,-,+,-") for connection of a single intrinsically safe circuit (e.g. an external solenoid) with following parameters Ui = 30V, Ii = 250mA.

List of installed certified components:

Switch series	Manufacturer	IECEx certificate
Cylindrical inductive proximity sensors of types NC..and NJ...	Pepperl&Fuchs	IECEx PTB 11.0037X
SN-type proximity sensors series NJ..and SJ...	Pepperl&Fuchs	IECEx PTB 11.0092X
Slot-type proximity sensors series SJ..and SC...	Pepperl&Fuchs	IECEx PTB 11.0091X
Cuboidal inductive proximity sensors series FJ..and NB...	Pepperl&Fuchs	IECEx PTB 11.0021X
Cuboidal inductive proximity sensors series NC..and NJ...	Pepperl&Fuchs	IECEx PTB 11.0021X
Valve position sensors type NCN.., N4..., PL.F25.-.N4..,NC..F31.-N5..	Pepperl&Fuchs	IECEx TUN 04.0014X
Inductive proximity switch series N*50*A	IFM electronics GmbH	IECEx BVS 06.0003X

Transmitter/encoder type	Manufacturer	Description	IECEx certificate
5333D	PR electronics	2-wire programmable transmitter	IECEx DEK 13.0036X
5335D, 5337D	PR electronics	2-wire transmitter with Hart protocol	IECEx KEM 10.0083X
5350 B	PR electronics A/S	Profibus PA/Foundation Fieldbus Transmitter	IECEx BVS 12.0035X

List of simple apparatus:

Potentiometer series	Manufacturer	Intrinsically safe input parameters
Potentiometer 640 Series	Honeywell	Connected to sensor circuit of 2-wire transmitter PR Electronics
Potentiometer WAL305 Series	Contelec	

Switch Type	Switch series & Contact type		Max nominal switching voltage/ current	Manufacturer	EPL	Intrinsically safe input parameters for dry contact simple apparatus
	Micromechanical switch SPDT/DPDT gold plated	Reed switch SPDT or DPDT				
SPDT*	D41 series		0,1A-250Vac	Cherry	Gb	Ui : 16V Ii: 76mA Pi: 242mW
	DC3 series (sealed)					
	V3D series		0,1A-250Vac 0,1A-30Vdc	Crouzet		
	V3 series					
	V15W series (sealed IP67)		0,1A-250Vac 0,1A-30Vdc	Honeywell		
	SM series					
DPDT**	DB3 series		0,1A-250Vac	Cherry		
SPDT		MS series	0,1A-250Vac 1A-24Vdc	As applicable or Eisenbau	Ga or Gb	
DPDT		MD series				

* SPDT is single-pole double-throw switch type.
* DPDT is double-pole double-throw switch type.

List of possible device configurations:

Configuration	Switch type and max quantity	Encoder/Transmitter type and max quantity
1	Max n°2 - Electromechanical SPDT	0
2	Max n°4 - Electromechanical SPDT or Max n°3 Electromechanical DPDT	0
3	Max n°4 - Reed switches SPDT or Max n°3 Reed switches DPDT	0
4	Max n°4 - Cuboidal inductive proximity	0
5	Max n°4 - Cylindrical inductive proximity	0
6	Max n°4 - Slot-type inductive proximity	0
7	0	Max n°1 - 2 wire transmitter PR electronics 5333D or 5335D or 5337D or 5350 B + Max n°1 - Honeywell 640 series or Contelec WAL305 series
8	Max n°2 - Slot-type or cylindrical inductive proximity	Max n°1 - 2 wire transmitter PR electronics 5333D or 5335D or 5337D or 5350 B + Max n°1 - Honeywell 640 series or Contelec WAL305 series
9	Max n°4 - Cuboidal inductive proximity	Max n°1 - 2 wire transmitter PR electronics 5333D or 5335D or 5337D or 5350 B + Max n°1 - Honeywell 640 series or Contelec WAL305 series
10	Max n°4 - Electromechanical SPDT or Max n°2 Electromechanical DPDT	Max n°1 - 2 wire transmitter PR electronics 5333D or 5335D or 5337D or 5350 B + Max n°1 - Honeywell 640 series or Contelec WAL305 series
11	Max n°3 - Reed switches SPDT or Max n°3 Reed switches DPDT	Max n°1 - 2 wire transmitter PR electronics 5333D or 5335D or 5337D or 5350 B + Max n°1 - Honeywell 640 series or Contelec WAL305 series

Marking: