IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

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

Certificate No.:	**IECEx EXA 15.0007X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 1	Issue 0 (2015-10-06)
Date of Issue:	2023-06-23		
Applicant:	**Eisenbau Srl** Viale Europa 39 Cusago (MI) 20047 **Italy**		
Equipment:	**Limit switch box - GI series**		
Optional accessory:			
Type of Protection:	**Intrinsic safety '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: **Marino Kelava**

Position: **Certification Signatory**

Signature:
(for printed version)

Date:
(for printed version)

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 www.iecex.com or use of this QR Code.

Certificate issued by:

Fiditas Ltd
Slavka Tomerlina 44
HR-10361 Zagreb-Sesvete
Croatia

Fiditas
explosion safety solutions

IECEx Certificate of Conformity

Certificate No.: **IECEx EXA 15.0007X**

Date of issue: 2023-06-23

Issue No: 1

Manufacturer: **Eisenbau Srl**
Viale Europa 39
Cusago (MI) 20047
Italy

Manufacturing locations:

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 equipment 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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with 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 Reports:

HR/EXA/ExTR15.0016/00 HR/FIDI/ExTR22.0010/00

Quality Assessment Report:

DE/TUR/QAR19.0006/03

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Limit switch boxes are electromechanical devices for monitoring the operation of industrial valves in plants. Limit switch boxes 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 1 of this certificate.

SPECIFIC CONDITIONS OF USE: YES as shown below:
Appropriate method of installation, maintenance and operation, should prevent accumulation of static charge on the device.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- New address of manufacturer
- Update of standard IEC 60079-0 Ed.6.0 to IEC 60079-0 Ed.7.
- Update of list of certified Ex equipment and their configurations (Switches, transmitters and surge protection device added). New equipment are marked with (*) in tables given in the Annex.
- New types of potentiometers added. New equipment are marked with (*) in tables given in the Annex
- PCB changed (Rearrangement of tracks layout and fixing holes position).
- EORL system (resistor) added. See table in the Annex
- Junction box based on GI series housing IP66-67 in combination with or without surge protection device (drawing EC-0120021-00) added.

Annex:

IECExEXA15.0007X ISSUE 1 EISENBAU Annex 1.pdf

1. **Product description** (Continued from main certificate)

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: Tamb = -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 + 13K.

Intrinsically safe circuits:

Maximum of 6 independent intrinsically safe circuits inside + extra poles for externally installed intrinsically safe equipment:
Total number of poles on PCB is 24 + 6.
Possible versions of terminal configurations are: 2 pole terminals, 3 pole terminals, double level 2+2 pole terminals and double level 3+3 pole terminals.

Extra terminal blocks (up to 6 poles total) for connection of externally installed intrinsically safe equipment (e.g., an external solenoids) with following parameters Ui = 30V, Ii = 250mA.

List of installed certified components:

Switch series	Manufacturer	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..., NB..., NC..., NJ...	Pepperl&Fuchs	IECEx PTB 11.0021X
Valve position sensors type NCN.-….-.N…. and PL.-F25.-N4...	Pepperl&Fuchs	IECEx TUN 17.0021X
Inductive proximity switch series N*50**	IFM electronics GmbH	IECEx BVS 06.0003X
(*) Inductive proximity switch series N7S21A (I7S23,5-N/1G/1D) I7S2002-N; I7S23,5N; I7R2010-N***; I7R2010-NL***; I7R2015-NL***	IFM electronics GmbH	IECEx BVS 09.0016

(*) New added equipment

Transmitter/encoder type	Manufacturer	Description	Certificate
ST-0907-V2-A ST-1509-V1-A ST-1910-V1-A	ZETTLEX	Programmable encoder	IECEx FTZU 15.0003X
(*) 5333D, 5343B	PR electronics	2-wire programmable transmitter	IECEx DEK 20.0062X
5335D, 5337D	PR electronics	2-wire transmitter with Hart protocol	IECEx DEK 20.0063X
5350B	PR electronics	Profibus PA/Foundation Fieldbus Transmitter	IECEx BVS 12.0035X
(*) 5437D	PR electronics	2-wire transmitter with Hart protocol	IECEx DEK 16.0029X
(*) TTH200, TTH300	ABB	Measuring transducer	IECEx PTB 20.0035X
(*) T15.H-AI	WIKA	Temperature transmitter	IECEx BVS 19.0022X
(*) T32.1*.0IS	WIKA	Temperature transmitter	IECEx BVS 08.0018X
(*) 3W2	Camille Bauer	Transmitter for angular position	IECEx ZLM 12.0008X

(*) New added equipment

Surge protection device	Manufacturer	Description	ATEX certificate
(*) SURGETRAB S-PT-EX..., S-PT-2XEX... and S-PT-4-EX...	Phoenix Contact	Surge protection device	IECEx KEM 09.0014X

(*) New added equipment

List of simple apparatus:

Potentiometer	Manufacturer	Characteristic	Description
Potentiometer 640 Series	Honeywell	Model with Power Rating ≤ 2W (70°C)	Works with transmitters listed in this certificate or without transmitter with these input parameters: Ui = 32 V Ii = 30 mA Pi = 100 mW Ci = 0 Li = 0
Potentiometer WAL 305 Series	Contelec	Model with Power Rating ≤ 2W (70°C)	
(*) Potentiometer NP32HS	Uni-Automation	Model with Power Rating ≤ 2W (70°C)	
(*) Potentiometer 157 - Series	Vishay Spectrol	Model with Power Rating ≤ 1W (40°C)	
(*) Potentiometer NP24HS	Uni-Automation	Model with Power Rating ≤ 0.5W (70°C)	

(*) New added equipment

Switch Type	Switch series & Contact type		Max nominal switching voltage/ current	Manufacturer	Equipment Category	Intrinsically safe input parameters for dry contact simple apparatus
	Electromechanical/ Micromechanical switch SPDT/DPDT gold plated or Reed switch	Configuration series				
SPDT*	D41 series	ES series	0,1A-250Vac	Cherry	2G	Ui: 16V Ii: 76mA Pi: 242mW
	DC3 series (sealed)	ES series				
	V3D series	ES series	0,1A-250Vac 0,1A-30Vdc	Crouzet		
	V3 series	ES series				
	V15W series (sealed IP67)	ES series	0,1A-250Vac 0,1A-30Vdc	Honeywell		
	SM series	ES series				
DPDT**	DB3 series	ED series	0,1A-250Vac	Cherry		
SPDT	Reed switch sealed glass contact	MS series	0,1A-250Vac 1A-24Vdc	As applicable or Eisenbau	1G or 2G	
DPDT	Reed switch sealed glass contact	MD series				
* SPDT is single-pole double-throw switch type. * DPDT is double-pole double-throw switch type.						

EORL Resistor	Manufacturer	Ci [nF]	Li [µH]	Intrinsically safe input parameters	Min Ambient temperature [°C]	Max Ambient temperature for temperature class [°C]		
						T6	T5	T4
MRS25	Vishay Components	0	0	Ui : 16V Ii: 76mA Pi: 242mW	-40	70	110	120

List of possible device configurations:

There are many configurations possible but there is total 6 independent intrinsically safe circuits possible (total of 6 components) if 3 poles per circuit used or total 4 independent safe circuits possible if 4 poles per circuit used.
Any combination between 2 poles, 3 poles and 4 poles circuits are possible.
Total number of poles on PCB is 24 and in some configurations some poles are not used.
Extra terminal blocks (up to 6 poles total) for connection of externally installed intrinsically safe equipment (e.g., an external solenoids) is possible.

Maximum number of installed components of the same kind is:

n° -> means “quantity of”

- n°6 - Electromechanical SPDT
- n°4 - Electromechanical DPDT
- n°6 - Magnetic reed switch SPDT
- n°4 - Magnetic reed switch DPDT
- n°4 - EORL resistors circuits (loop terminations)
- n°6 - inductive proximity sensors of any kind
- n°1 - potentiometers without installed transmitter
- n°2 - potentiometers with transmitters
- n°2 - encoders
- n°1 - surge protector

Marking: