



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 BVS 10.0095 Issue No: 2 Certificate history:
Status: **Current** Issue No. 2 (2018-07-12)
Date of Issue: **2018-07-12** Page 1 of 5 Issue No. 1 (2015-10-19)
Applicant: **Gönnheimer Elektronik GmbH** Issue No. 0 (2010-11-22)
Dr.-Julius-Leber-Str. 2
67433 Neustadt an der Weinstraße
Germany
Equipment: **Pressurization system type F870S**
Optional accessory:
Type of Protection: **Equipment protection by flameproof enclosures "d", Equipment protection by intrinsic safety "i", Equipment protection by encapsulation "m", Equipment protection by pressurized enclosure "p", Equipment dust ignition protection by enclosure "t", Equipment protection by increased safety "e"**
Marking:
Control unit type F870S * * * * *
Ex eb db mb ib [pxb] IIC T4 Gb
Ex tb IIIC T100°C [ib] [pxb] Db
Operator panel type BT871*
Ex ib IIC T4 Gb
Ex ib IIIC T135°C Db
Sensor type ES872
Ex ib IIC T4 Gb
Ex ib IIIC T135°C Db
Configuration module type CM873
Ex ib IIC T4 Gb
Ex ib IIIC T135°C Db

Approved for issue on behalf of the IECEx
Certification Body:

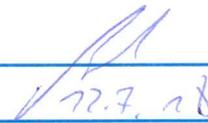
Jörg Koch

Position:

Head of Certification Body

Signature:
(for printed version)

Date:


22.7.18

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](http://www.iecex.com).

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

 **DEKRA**
On the safe side.



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Manufacturer: **Gönnheimer Elektronik GmbH**
Dr.-Julius-Leber-Str. 2
67433 Neustadt an der Weinstraße
Germany

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 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 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-18 : 2014 Edition:4.0	Explosive atmospheres – Part 18: Equipment protection by encapsulation "m"
IEC 60079-2 : 2014-07 Edition:6	Explosive atmospheres - Part 2: Equipment protection by pressurized enclosure "p"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

*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:

[DE/BVS/ExTR10.0125/02](#)

Quality Assessment Report:

[DE/TUN/QAR10.0006/08](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

General product information:

The pressurization system type F870S is used for construction of electrical apparatus type of protection pressurized enclosure in acc. with IEC 60079-2.

The system consists of:

the Control unit type F870S * * * * *
(instead of *** in the complete denomination letters and numerals will be inserted which characterize modifications) with pressure and flow measurement sensors inside

Type of protection
Ex eb db mb ib [pxb] IIC T4 Gb
Ex tb IIIC T100°C [ib] [pxb] Db

Operator panel type BT871*
(instead of * the numeral 0 = panel mounted or 5 = field frame will be included)

Ex ib IIC T4 Gb
Ex ib IIIC T135°C Db

Sensor type ES872

Ex ib IIC T4 Gb
Ex ib IIIC T135°C Db

Configuration module type CM873

Ex ib IIC T4 Gb
Ex ib III C T135°C Db

and other additional equipment.

The sensor or the configuration module can be connected to the terminals 11 - 14 and the operator panel can be connected to the terminals 15 - 18.

SPECIFIC CONDITIONS OF USE: NO



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EQUIPMENT (continued):

Listing of all components used referring to older standards

See Annex

Parameters

See Annex



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

- Updating of the applicable standards
- New encapsulating materials
- Assembly and layout changes

Annex:

[BVS_10_0095_Goennheimer_Annex_issue2.pdf](#)

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Annex
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Listing of all components used referring to older standards

Subject and type	Certificate	Standards
Empty Enclosure Type 25. *****	IECEX PTB 08.0005U	IEC 60079-0:2011, Ed.6 IEC 60079-7:2006 Ed. 4 ¹ IEC 60079-31:2008 Ed. 1 ¹

¹ No applicable technical differences

² Technical differences evaluated and found satisfactory

Parameters

1	Control unit				
1.1	Mains circuit (terminals 21,22 – 19,20) Type FS870S.6.*****				
	Nominal voltage		DC	24	V
	Max. voltage	U _m	AC/DC	63	V
	Type FS870S.0.*****				
	Nominal voltage		AC	100 - 230	V
	Max. voltage	U _m	AC	253	V
1.2	Relay contact-circuit Power 1 (terminals 28 - 29) and 2 (terminals 30 - 31) and signal contact (terminals 32,33)				
	Switching voltage		AC	250	V
	Max. voltage	U _m	AC	253	V
	Switching current			5	A
1.3	Ethernet circuit (terminals 39 – 44)				
	Max. voltage	U _m	AC/DC	63	V
1.4	Solenoid output (terminals 36,37)				
	Nominal voltage		DC	24	V
	Current limited by fuse at the terminals 34 - 35				
1.5	Intrinsically safe input/output circuits level of protection Ex ib				
1.5.1	Digital inputs (terminals 1-2, 3-4 and 5-6) Values for each circuit				
	Voltage	U _o	DC	5.4	V
	Current	I _o		6.2	mA
	Power	P _o		8.3	mW
	Max. external inductance	L _o		0.5	mH
	Max. external capacitance	C _o		100	nF
1.5.2	LED outputs (terminals 7-8 and 9-10) Values for each circuit				
	Voltage	U _o	DC	5.4	V
	Current	I _o		9.7	mA
	Power	P _o		13	mW
	Max. external inductance	L _o		0.5	mH
	Max. external capacitance	C _o		100	nF
2	Ambient temperature range	T _a		-20 °C up to +60 °C	
3	Surface temperature for the control unit for the operator panel and the sensor	T		100 °C 135 °C	
4	Degree of protection in acc. with IEC 60529 for the control unit			IP6X	