



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

Certificate No.:  issue No.:

Status:

Date of Issue: **2010-11-15** Page 1 of 4

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

Electrical Apparatus: **Pressurization system type F870S**  
Optional accessory:

Type of Protection: **Equipment protection by flameproof enclosures "d", Equipment protection by intrinsic safety "i", Construction, test and marking of type of protection encapsulation 'm' electrical apparatus, Equipment protection by pressurized enclosure "p", Equipment protection by increased safety "e", Protection by enclosures "tD", Protection by intrinsic safety 'iD', Type of protection 'pD'**

Marking: **Control unit**  
**Ex e d mb ib [px] IIC T4**  
**Ex tD [ibD] [pD] A21 IP65 T 100°C**  
**Operator panel type BT871 and sensor type ES872**  
**Ex ib IIC T4**  
**Ex ibD21 T 135°C**

Approved for issue on behalf of the IECEx  
Certification Body:

Dr. F. Eickhoff

Position:

Deputy Head of Certification Body

Signature:  
(for printed version)

Date:

2010-11-22

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:

**DEKRA EXAM GmbH**  
Dinnendahlstrasse 9  
44809 Bochum  
Germany

**DEKRA**  
DEKRA EXAM GmbH



# IECEX Certificate of Conformity

Certificate No.: IECEx BVS 10.0095

Date of Issue: 2010-11-15

Issue No.: 0

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

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:

<b>IEC 60079-0 : 2004</b> Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2007-04</b> Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-11 : 2006</b> Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
<b>IEC 60079-18 : 2004</b> Edition: 2.0	Electrical apparatus for explosive gas atmospheres - Part 18: Construction, test and marking of type of protection encapsulation 'm' electrical apparatus
<b>IEC 60079-2 : 2007-02</b> Edition: 5	Explosive Atmospheres - Part 2 Equipment protection by pressurized enclosure "p"
<b>IEC 60079-7 : 2006-07</b> Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
<b>IEC 61241-0 : 2004</b> Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
<b>IEC 61241-1 : 2004</b> Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"
<b>IEC 61241-11 : 2005</b> Edition: 1	Electrical apparatus for use in the presence of combustible dusts - Part 11: Protection by intrinsic safety 'iD'
<b>IEC 61241-4 : 2001</b> Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 4: Type of protection 'pD'

*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/ExTR10.0125/00](#)

Quality Assessment Report:

[DE/TUN/QAR10.0006/00](#)



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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 resp. IEC 61241-4.

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

Operator panel type BT871\*

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

Sensor type ES872

Configuration module type CM873

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.

type of protection  
Ex e d mb ib [px] IIC T4  
Ex tD [ibD] [pD] A21 IP65 T 100°C

Ex ib IIC T4  
Ex ibD21 T 135°C

Ex ib IIC T4  
Ex ibD21 T 135°C

Ex ib IIC T4  
Ex ibD21 T 135°C

### CONDITIONS OF CERTIFICATION: NO





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## EQUIPMENT(continued):

### Parameters

1	Control unit				
1.1	Mains circuit (terminals 21,22 - 19,20)				
	Type FS870S.6.*.*.*.*				
	Nominal voltage		DC	24	V
	Max. voltage	Um	AC/DC	63	V
	Type FS870S.0.*.*.*.*				
	Nominal voltage		AC	100 - 230	V
	Max. voltage	Um	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	Um	AC	253	V
	Switching current			5	A
1.3	Ethernet circuit (terminals 39 - 44)				
	Max. voltage	Um	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	Uo	DC	5.4	V
	Current	Io		6.2	mA
	Power	Po		8.3	mW
	Max. external inductance	Lo		0.5	mH
	Max. external capacitance	Co		100	nF
1.5.2	LED outputs (terminals 7-8 and 9-10)				
	Values for each circuit				
	Voltage	Uo	DC	5.4	V
	Current	Io		9.7	mA
	Power	Po		13	mW
	Max. external inductance	Lo		0.5	mH
	Max. external capacitance	Co		100	nF
2	Ambient temperature range	Ta		-20 °C up to +60 °C	
3	Surface temperature	T			
	for the control unit			100	°C
	for the operator panel and the sensor			135	°C
4	Degree of protection in acc. with IEC 60529 for the control unit				IP6X