

Translation

EU-Type Examination Certificate

Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014

EU-Type Examination Certificate Number: **BVS 25 ATEX E 028 X** Issue: **00**

Equipment: **Pressurization system type FS880**

Manufacturer: **Gönnheimer Elektronik GmbH**

Address: **Dr.-Julius-Leber-Str. 2, 67433 Neustadt an der Weinstraße, Germany**

This product and any acceptable variations thereto are specified in the appendix to this certificate and the documents referred to therein.

DEKRA Testing and Certification GmbH, Notified Body number 0158, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential Report No. BVS PP 25.2057 EU.

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

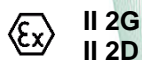
EN IEC 60079-0:2018	General requirements
IEC 60079-11:2023	Intrinsic safety "i"
EN IEC 60079-7:2015+A1:2018	Increased safety "e"
EN 60079-18:2015+A1:2017	Encapsulation "m"
EN 60079-2:2014	Pressurized enclosure "p"
DIN EN ISO 13849-1:2023	Safety of machinery
DIN EN 50495:2010	Safety devices

Where additional criteria beyond those given here have been used, they are listed at item 18 in the Schedule.

If the sign "X" is placed after the certificate number, it indicates that the product is subject to the "Specific Conditions of Use" listed under item 17 of this certificate.

This EU-Type Examination Certificate relates only to the technical design of the specified product in accordance with the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

The marking of the product shall include the following (marking is provided in the Schedule as a part of item 15):



DEKRA Testing and Certification GmbH
Bochum, 2025-05-29

Signed: Oliver Brumm

Managing Director

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Issue 00

15 Product description

15.1 Subject and type

Pressurization system type FS880

consists of:

Control unit type FS880C.*

(instead of * in the complete denomination letters and numerals will be inserted which characterize modifications)

main voltage 110 – 230 V AC .8
main voltage 24 V DC .6
type of protection Ex eb mb ib [pxb] IIC T4 Gb

Sensor block types FS880S.n and FS880T.m

n for different pressure and flow measurements sensors inside

m for different housings

type of protection Ex ib [pxb] IIC T4 Gb

Operator panel type BT871*

instead of * the numeral

0 = panel mounted or

5 = field housing

type of protection Ex ib IIC T4 Gb
Ex ib IIIC T135°C Db

Configuration module type CM883.*

instead of * for different parameter settings

type of protection Ex ib IIC T4 Gb

15.2 Description

List of all components used with reference to older standards

Subject and type	Certificate	Standards
Empty Enclosure	PTB 98 ATEX 3101U	EN 60079-0:2012+A11:2013 ¹ EN 60079-7:2015 ¹
Empty Enclosure	IBExU10ATEX1158U	EN 60079-0:2009 ¹ EN 60079-7:2007 ¹

¹ No applicable technical differences

The pressurization system type FS880 is used for construction of electrical apparatus type of protection pressurized enclosure in acc. with EN/IEC 60079-2. The system consists of the control unit type FS880C and at least one sensor block FS880S for pressure and flow measurement. Optionally, a control panel type BT871 and a configuration module type CM883 as well as other additional devices can be connected.

Up to 8 sensor blocks FS880S can be connected to terminals 1 - 32, the control panel to terminals 33 - 36 and the passive inputs to terminals 37 - 48. The configuration module is part of the internal circuit. The FS880C provides connection terminals for two external SI880 fuses with protection class mb, which can be used to protect the digital valve and the proportional valve.

The FS880C control unit for pressurised enclosure systems fulfils the requirements for use in safety functions up to performance level d. According to Table 4 of DIN EN ISO 13849-1/2023, this corresponds to a safety integrity level (SIL) of 2 (test report FLES PB 25002).

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This certificate may only be reproduced in its entirety and without any change.

15.3 Parameters

Control unit:

Mains circuit (terminals 62, 63 – 64, 65)

type FS880C.6

Nominal voltage

Max. voltage

U_m

DC
AC/DC

24

V

63

V

Typ FS880C.8

Nominal voltage

Max. voltage

U_m

AC

AC

100 - 230

V

253

V

Relay contact-circuits Power 1 (terminals 60 - 61) and Power 2 (terminals 74 - 75) and signal contact (terminals 71 - 72)

switching voltage

Max. voltage

Switching current

U_m

AC

AC

253

V

253

V

5

A

Ethernet circuit (terminals 81 – 84)

Max. voltage

U_m

AC/DC

63

V

Proportional valve output (terminals 78 - 79)

Nominal voltage

DC

24

V

Digital valve output (terminals 71 - 72)

Nominal voltage

Switching current

DC 24V, AC 115V or AC 230V (same as power supply)

5

A

Associated valve fuse type SI880 terminals 69 – 70, 76 - 77

Intrinsically safe input/output circuits level of protection Ex ib

Digital inputs (terminals 37 - 38, 39 - 40, 41 - 42, 43 - 44, 45 - 46, 47 - 48)

Values for each circuit:

Voltage

Current

Power

Max. external inductance

Max. external capacitance

U_o

I_o

P_o

L_o

C_o

DC

5.0

V

0.51

mA

0.64

mW

0.5

mH

100

nF

terminals 33 – 36

Only for connection of operator panel type BT871 with maximum cable length of 20 m (see manufacturer instructions)

terminals 1 – 32

Only for connection of the 1 to 8 sensor blocks type FS880S/T with a maximum cable length of 50 m (see manufacturer instructions)

Ambient temperature range

T_a

-20 °C bis zu +60 °C

Surface temperature

T4

Degree of protection in acc. with IEC 60529 for the control unit

IP65

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17 **Specific Conditions of Use**
The housing of the BT871 control unit must be protected against electrostatic charge.

18 **Essential Health and Safety Requirements**

Met by compliance with the requirements mentioned in item 9.

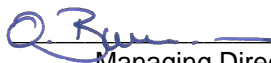
The IEC 60079-11:2023 standard is equivalent to the harmonised standards EN 60079-11:2012 in terms of safety.

19 **Remarks and additional information**

Drawings and documents are listed in the confidential report.

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

DEKRA Testing and Certification GmbH
Bochum, 2025-05-29
BVS-Alh/HWa A 20240788 / 3435259


Managing Director