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 BVS 08.0005X**	Page 1 of 5	Certificate history:
Status:	**Current**	Issue No: 3	Issue 2 (2014-02-04) Issue 1 (2010-08-24) Issue 0 (2008-02-13)
Date of Issue:	2022-12-20		

Applicant: **Endress+Hauser Flowtec AG**
Kägenstr. 7
4153 Reinach
Switzerland

Equipment: **Measuring system Prosonic Flow 92 * * * - * * * * * * * * * * * ***

Optional accessory:

Type of Protection: **Flameproof Enclosures "d", Intrinsic Safety "i", Equipment with Separation Elements or combined Levels of Protection**

Marking: See Annex

Approved for issue on behalf of the IECEx Certification Body: **Deniz Pezzutto**

Position: **Certification Manager**

Signature: (for printed version)

Date: (for printed version) 2022-12-20

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:

DEKRA Testing and Certification GmbH
Certification Body
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
On the safe side.

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Manufacturer: **Endress+Hauser Flowtec AG**
Kägenstr. 7
4153 Reinach
Switzerland

Manufacturing locations:

Endress+Hauser Flowtec AG
Kägenstr. 7
4153 Reinach
Switzerland

Endress+Hauser Flowtec AG
35, Rue de l'Europe
68700 Cernay
France

Endress+Hauser Flowtec (India) Pvt. Ltd.
M 171-176, Waluj MIDC, Industrial Area
Aurangabad - , Maharashtra State
431136
India

See following pages for more 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 Edition:7.0	Explosive atmospheres - Part 0: Equipment - 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 60079-26:2021-02 Edition:4.0	Explosive atmospheres - Part 26: Equipment with Separation Elements or combined Levels of Protection

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 Report:

DE/BVS/ExTR08.0005/03

Quality Assessment Report:

DE/TUN/QAR06.0004/10

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

Subject and Type

See Annex

Description

The measuring systems consists of a transmitter and a sensor which are mounted together (compact version) or separate (remote version). The connecting cable has a max. length of 100 m. The electronic of the transmitter (type Prosonic Flow 9**) is mounted inside an enclosure certified under IECEx BVS 07.0026U.

Listing of components used

Subject and type	Certificate	Standards
Transmitter Enclosure type G06 and G08 with blind plugs	IECEx BVS 07.0026U issue: 4	IEC 60079-0:2017, Ed. 7.0 IEC 60079-1:2014, Ed. 7.0 IEC 60079-7:2017 Ed. 5.1 IEC 60079-15:2010, Ed. 4.0 IEC 60079-31:2013, Ed. 2.0

Parameters

See Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. For Ex d certified devices (Prosonic Flow 92***-*****(C,U,3)******):
   Only suitable, separately certified cable glands shall be used.
2. The intrinsically safe sensor circuits are connected to earth. Along the intrinsically safe sensor circuits, potential equalization must exist.
3. For enclosure featuring covers which are not secured by clamps:
   The covers have to be closed by a torque of at least 40 Nm.
4. For transmitter enclosures with terminal compartment in "db":
   Some of the dimensions of the flameproof joints exceed the permissible minimum values which are given by IEC 60079-1:2014. For information concerning these dimensions contact the manufacturer.
   If certified conduit entries are used, the associated stopping boxes shall be installed immediately at the enclosure.
   Only cable entries and conduit entries according to the thread type and thread size which is marked on the enclosure can be used.
5. Flameproof equipment with G threaded entry holes is not intended for new installations but only for replacement of equipment in existing installation. Application of this equipment shall comply with the local installation requirements.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Examination according to the current standards
- Group III is omitted with this supplement
- Update of the marking
- Update of the documentation
- X-Marking

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Additional manufacturing locations:

Endress+Hauser Flowtec AG Div. U.S.A.
2330 Endress Place
Greenwood
Indiana 46143
United States of America

Endress+Hauser Flowtec (China) Co. Ltd.
China-Singapore Industrial Park (SIP), Su-Hong-Zhong-Lu No. 465
Suzhou Industrial Park (SIP), Jiang-Tian-Li-Lu No. 31, 215021 Suzhou
Suzhou 215021
China

Endress+Hauser (Brasil) Fluxômetros Ltda.
Estrada Municipal Antonio Sesti, 600-A - Recreio Costa Verde
Itatiba, SP – 13254-085
Brazil

Annex:

BVS_08_0005X_Endress_Hauser_Flowtec_Annex_issue3.pdf

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Annex

Marking

Compact version:

Model Code	Marking
92F**-*****(C,U)(A,K)****(A,W)	Ex db [ia] IIC T6...T1 Gb
92F**-*****(C,U)(A,K)****(H,K)	Ex db [ia] IIC T4...T1 Gb
92F**-*****(D)(A,K)****(A,W)	Ex ia [ia Ga] IIC T6...T1 Gb
92F**-*****(D)(A,K)****(H,K)	Ex ia [ia Ga] IIC T4...T1 Gb
92F**-*****(3)(A,K)****(A,W)	Ex db [ia] IIC T6...T1 Ga/Gb
92F**-*****(3)(A,K)****(H,K)	Ex db [ia] IIC T4...T1 Ga/Gb
92F**-*****(2)(A,K)****(A,W)	Ex ia [ia Ga] IIC T6...T1 Ga/Gb
92F**-*****(2)(A,K)****(H,K)	Ex ia [ia Ga] IIC T4...T1 Ga/Gb

Remote version:

Transmitter:

Model Code	Marking
92(F,X)**-*****(C,U,3)(E,F,H,I)****(A,W)	Ex db [ia] IIC T6...T1 Gb
92(F,X)**-*****(C,U,3)(E,F,H,I)****(H,K)	Ex db [ia] IIC T4...T1 Gb
92(F,X)**-*****(D,2)(E,F,H,I)****(A,W)	Ex ia [ia Ga] IIC T6...T1 Gb
92(F,X)**-*****(D,2)(E,F,H,I)****(H,K)	Ex ia [ia Ga] IIC T4...T1 Gb

Sensor:

Model Code	changed Marking
92F**-*****(C,U,D)(E,F,H,I)****(A,W)	Ex ia IIC T6...T1 Gb
92F**-*****(C,U,D)(E,F,H,I)****(H,K)	Ex ia IIC T4...T1 Gb
92F**-*****(3,2)(E,F,H,I)****(A,W)	Ex ia IIC T6...T1 Ga/Gb
92F**-*****(3,2)(E,F,H,I)****(H,K)	Ex ia IIC T4...T1 Ga/Gb

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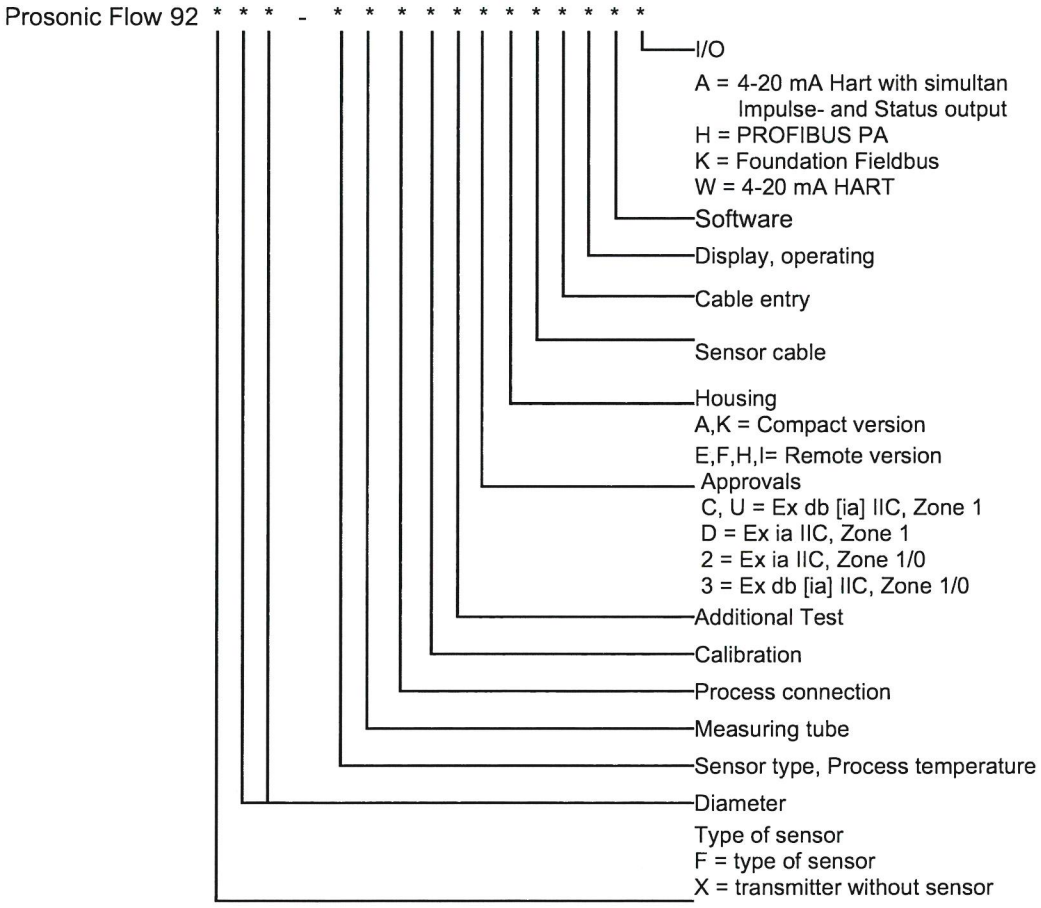
Subject and Type

Measuring system Prosonic Flow type 92 * * * - * * * * * * * * * * * *

Instead of the *** in the complete denomination letters and numerals will be inserted which characterize the different modifications:



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Parameters

1 Power supply and I/O's for type of protection "db [ia]"

1.1 Version with Hart- and Impulse, type 92***-*****(C,U,3)*****(W,A)

1.1.1 Terminals 1 (L+) and 2 (L-)

Nominal input voltage	U_N	DC	35	V
Maximum voltage	U_m	AC	253	V

1.1.2 Terminals 3 (P+) and 4 (P-)

Nominal input voltage	U_N	DC	35	V
Maximum voltage	U_m	AC	253	V

1.2 Profibus- and Fieldbus version, type 92***-*****(C,U,3)*****(H,K)
Terminals 1 (L+) and 2 (L-)

Nominal input voltage	U_N	DC	35	V
Maximum voltage	U_m	AC	253	V

1.3 Sensor Circuits
For the connection of the remote sensor a data sensor cable with the following parameters can be used:
$C_{Cable} \leq 1$ µF/km and $L_{Cable} \leq 1$ mH/km
Maximum length 100 m

1.4 Service plug
Only for connection of an E+H Service Interface with $U_{max} = 7.0$ V

2 Power supply and I/O's for the connection of the "ia" circuit:

2.1 Version with Hart- and Impulse, type 92***-*****(D,2)*****(W,A)

2.1.1 Terminals 1 (L+) and 2 (L-)

Maximum input voltage	U_i	DC	30	V
Maximum input current	I_i		300	mA
Maximum input power	P_i		1	W
Effective internal capacitance	C_i		5.28	nF
Effective internal inductance	L_i		negligible	

2.1.2 Terminals 3 (P+) and 4 (P-)

Maximum input voltage	U_i	DC	30	V
Maximum input current	I_i		300	mA
Maximum input power	P_i		1	W
Effective internal capacitance	C_i		negligible	
Effective internal inductance	L_i		negligible	

2.2 FISCO, type 92***-*****(D,2)*****(H,K)
Terminals 1 (L+) und 2 (L-)

Maximum input voltage	U_i	DC	17.5	V
Maximum input current	I_i		600	mA
Maximum input power	P_i		8.5	W

2.3 Entity Concept, type 92***-*****(D,2)*****(H,K)
Terminals 1 (L+) und 2 (L-)

Maximum input voltage	U_i	DC	24	V
Maximum input current	I_i		250	mA
Maximum input power	P_i		1.2	W
Effective internal capacitance			5	nF
Effective internal inductance			10	µH

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2.4 Sensor Circuits
For the connection of the remote sensor a data sensor cable with the following parameters can be used:

Cable capacitance	1	µF/km
Cable inductance	1	mH/km
Maximum cable length	100	m

2.5 Service plug
Only for connection of an E+H Service Interface with U_{max} = 7.0 V

3 Medium and ambient temperatures for type of protection "db [ia]"
3.1 Compact version, type 92***-*****(C,U,3)(A,K)*****

Max. process temperature range -40 °C ... °C	80	95	130	195	200
Max. ambient temperature range -40 °C ... °C	40	55	60	60	60
Temperature class	T6[1)]	T5[1)]	T4	T3	T2 – T1

[1)] temperature class T6 and T5 are not available for Profibus and Fieldbus version

3.2 Remote version type 92***-*****(C,U,3)(E,F,H,I)*****
3.2.1 Transmitter

Max. ambient temperature range -40 °C ... °C	40	55	60	60	60	60
Temperature class	T6[1)]	T5[1)]	T4	T3	T2	T1

[1)] temperature class T6 and T5 are not available for Profibus and Fieldbus version

3.2.2 Sensor

Max. process temperature range-40 °C ... °C	80	95	130	195	200
Max. ambient temperature range -40 °C ... °C	60	80	80	80	80
Temperature class	T6[1)]	T5[1)]	T4	T3	T2 – T1

[1)] temperature class T6 and T5 are not available for Profibus and Fieldbus version

4 Medium and ambient temperatures for type of protection "ia"
4.1 Compact version, type 92***-*****(D,2)(A,K)*****

Max. process temperature range -40 °C...°C	80	95	130	195	200
Max. ambient temperature range -40 °C ... °C	40	55	60	60	60
Temperature class	T6[1)]	T5[1)]	T4	T3	T2 – T1

[1)] temperature class T6 and T5 are not available for Profibus and Fieldbus version

4.2. Remote version type 92***-*****(D,2)(E,F,H,I)*****
4.2.1 Transmitter

Max. ambient temperature range -40 °C ... °C	40	55	80	80	80	80
Temperature class	T6[1)]	T5[1)]	T4	T3	T2	T1

[1)] temperature class T6 and T5 are not available for Profibus and Fieldbus version

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4.2.2 Sensor

Max. process temperature range -40 °C... °C	80	95	130	195	200
Max. ambient temperature range -40 °C... °C	60	80	80	80	80
Temperature class	T6[1)]	T5[1)]	T4	T3	T2 – T1

[1)] temperature class T6 and T5 are not available for Profibus and Fieldbus version