



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 SEV 12.0007X

Issue No: 2

Certificate history:

Status: Current

Issue No. 2 (2018-01-24)

Issue No. 1 (2017-03-17)

Issue No. 0 (2012-12-05)

Date of Issue: 2018-01-24

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Applicant: Trafag AG, Sensors and Controls
Industriestrasse 11
8608 Bubikon
Switzerland

Equipment: Pressure Transmitter Type 8854.xx, 8859.xx

Optional accessory:

Type of Protection: Intrinsic safety "i"

Marking:

Only versions with cable outlet (cable jacket with metal mesh) or metallic plug.

Ex ia IIC T3 ...T6 Ga

Ex ia IIIC T145 °C Da

Ex ia I Ma

For all other versions.

Ex ia IIB T3 ...T6 Gb

Ex ia IIIC T145 °C Da

IEEx ia I Mb

Approved for issue on behalf of the IECEx

Certification Body:

Martin Plüss

Position:

Manager Product Certification

Signature:

(for printed version)

Date:

2018-01-24

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:

Eurofins Electrosuisse Product Testing AG
Luppenstrasse 1
CH-8320 FEHRALTORF
Switzerland



Electrosuisse
Product Testing



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Manufacturer: **Trafag AG, Sensors and Controls**
Industriestrasse 11
CH-8608 Bubikon
Switzerland

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 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:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-26 : 2014-10 Edition:3.0	Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga

*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:

CH/SEV/ExTR12.0007/02

Quality Assessment Report:

CH/SEV/QAR12.0008/03



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Schedule

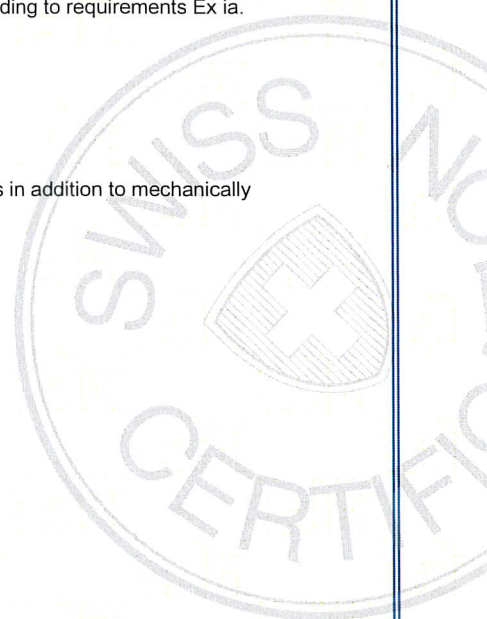
EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The sensor series Trafag 8854.xx and 8859.xx are pressure sensors for gasses or liquids designed according to requirements Ex ia.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Pressure transmitters made with titanium housing must be adequately protected by appropriate measures in addition to mechanically generated impact and friction sparks.





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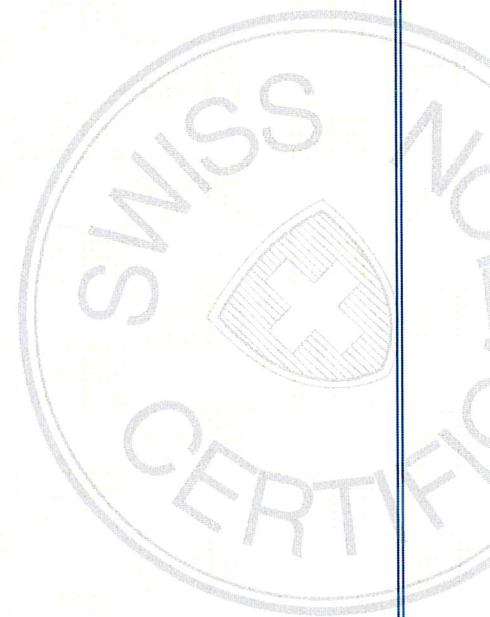
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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

- The reference to the operating and safety instruction manual was wrong and was corrected with this certificate.
- This certificate replaces issue 1





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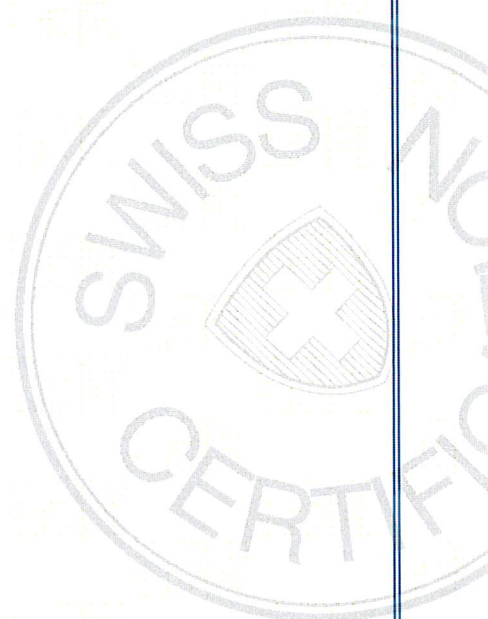
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Additional information:

See annexe

Annex:

IECEx SEV 12.0007X Annexe Issue 2.pdf



Annexe to: IECEx SEV 12.0007X
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Applicant Name: Trafag AG, Sensors and Controls
Electrical Apparatus: Pressure transmitter

The sensor series Trafag 8854.xx and 8859.xx are pressure sensors for gasses or liquids designed according to requirements Ex ia.

The temperature class depends on ambient-temperature and medium-temperature on the sensor. This relations are shown in the following tables:

Type 8854.xx	Temperature class	T6	T4	T3
	Ambient temperature [°C]	50	85	125
	Medium temperature [°C]	50	110	150
Type 8859.xx	Temperature class	T6	T4	
	Ambient temperature [°C]	50	80	
	Medium temperature [°C]	50	80	

The relationship between the max. ambient temperature and surface temperature for dust environment is shown in the following table:

Ambient temperature [°C]	125
Surface temperature [°C]	145

See also operating and safety instruction manual 10.88.0440

Sensors with plug connection are delivered without the cable and the connector's counterpart. The end-user must install correct connector type and cable for the appliance and must check that no additional ignition risks occur with these parts.

The manual contains information about the risks of materials of the connector.

Eurofins Electrosuisse Product Testing AG
Swiss Certification Body

SCE 0035

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Additional information:

The pressure transmitter Trafag type 8854.xx, 8859.xx measure the signal of a piezo-resistive pressure measurement bridge and converts it into a standard signal. Input and signal transmission take place via an intrinsically safe three-wire 4-20 mA current loop circuit.
8854.xx are types featuring a screw-in flange, 8859.xx represent dive probes.

Type Description

Placeholders "xx" stand for the accuracy level the sensor exhibits. They do not have any impact on explosion protection and general security.

Assessment data

Measurement and power supply circuit of the ignition protection type intrinsic security Ex ia IIC, Ex ia IIIC and Ex ia I is only for connection to a certified and intrinsically safe electric circuit.

Maximum ratings:

$U_i = 28 \text{ V}$

$I_i = 93 \text{ mA}$

$P_i = 0.65 \text{ W}$

Effective internal capacitance

$C_i = 12 \text{ nF}$

plus per meter length of connecting cable

$C_K = 0.12 \text{ nF}$

Effective internal inductance

$L_i = 1.25 \text{ mH}$

plus per meter length of connecting cable

$L_K = 0.001 \text{ mH}$

or alternative:

Verification of intrinsically safe circuit:

With the usage of the STS sensor cable types "cable relative PUR" and "cable relative FEP" a maximum cable length up to 300 m is allowed even the abovementioned values of maximum permissible capacitance and inductance are greater than mentioned for Gas Group IIC. This type of installation with cables up to 300 m was assessed as complete intrinsically safe system itself.