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 SEV 12.0007X**

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Certificate history:
Issue 2 (2018-01-24)
Issue 1 (2017-03-17)
Issue 0 (2012-12-05)

Status: **Current**

Issue No: 3

Date of Issue: 2023-11-27

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 metallic plug:
Ex ia IIC T6 …T3 Ga
Ex ia IIIC T200 160 °C Da
Ex ia I Ma

Only versions with cable outlet (cable jacket with metal mesh):
Ex ia IIC T6 …T4 Ga
Ex ia IIIC T200 160 °C Da
Ex ia I Ma

For all other versions:
Ex ia IIB T6 …T3 Gb
Ex ia IIIC T200 160 °C Da
Ex ia I Mb

Approved for issue on behalf of the IECEx Certification Body: **Urban Strebel**

Position: **Manager Product Certification**

Signature:
(for printed version)

Date:
(for printed version)

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:

Eurofins Electric & Electronic Product Testing AG
Luppmenstrasse 3
8320 FEHRALTORF .
Switzerland

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Certificate No.: **IECEx SEV 12.0007X** Page 2 of 5

Date of issue: 2023-11-27 Issue No: 3

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

Manufacturing 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 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2006 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:5

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:

CH/SEV/ExTR12.0007/03

Quality Assessment Report:

CH/SEV/QAR12.0008/07

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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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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
The IEC 60079-0:2017 Edition 7.0 is now applied.
There is a new measurement in dust layer 200 mm.
The IEC 60079-26: 2014 Edition 3.0 is no longer required.

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Additional information:
See annexe

Annex:

IECEx SEV 12.0007 X Issue 3 annex.pdf

Applicant Name: **Trafag AG**

Equipment: **Pressure transmitter**

General product information

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

Type 8854.xx: Types with screwed pressure connection.
Type 8859.xx: Types with cable suspended into the medium.

Classification of installation and use:	stationary
Ingress protection:	IP6x
Rated ambient temperature range (°C):	See table below

The temperature class depends on ambient-temperature and medium-temperature on the sensor. These 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

Sensors with plug: The relationship between the max. ambient temperature and surface temperature for dust environment is shown in the following table for zone 20 applications:

Ambient temperature	[°C]	110
Surface temperature	[°C]	160

Sensors with cable outlet: The relationship between the max. ambient temperature and surface temperature for dust environment is shown in the following table for zone 20 applications:

Ambient temperature	[°C]	80
Surface temperature	[°C]	130

The relationship between the max. ambient temperature and surface temperature for dust environment is shown in the following table for zone 21 and 22 applications (without dust layer):

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

See also Operating and Safety Instructions No. 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.

Marking:
Only versions with metallic plug
Ex ia IIC T3 … T6 Ga
Ex ia IIIC T_{200} 160 °C Da
Ex ia I Ma

Only versions with cable outlet (cable jacket with metal mesh) plug.
Ex ia IIC T4 … T6 Ga
Ex ia IIIC T_{200} 160 °C Da
Ex ia I Ma

For all other versions:
Ex ia IIB T3 … T6 Gb
Ex ia IIIC T_{200} 160 °C Da
Ex ia I Mb

See Operating and safety instructions for different configurations and applications.

The pressure transmitter type 8854.xx or type 8859.xx measures 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.

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:

Ui ≤ 28 V
Ii ≤ 93 mA
Pi ≤ 0.65 W

Effective internal capacitance	C_i = 12 nF
plus per meter length of connecting cable	C_{cable} = 0.12 nF
Effective internal inductance	L_i = 1.25 mH
plus per meter length of connecting cable	L_{cable} = 0.001 mH

Type description

Type	**8854.xx**		
Material enclosure	Stainless steel or titanium		
Connection	Cable	Metallic connector***	Non-metallic connector****
Output signal	4-20 mA without or with OVP (Over Voltage Protection)		
Protection cap	No		
Options	Not Ex-protection relevant		
Ex-marking Gas	Ex ia IIC T* Ga		Ex ia IIB T* Gb
Ex-marking Dust	Ex ia IIIC T_{200} 160 °C Da		
Ex-marking mining	Ex ia I Ma		Ex ia I Mb

Type	**8859.xx**		
Material enclosure	Stainless steel or titanium		
Connection	Cable	Metallic connector***	Non-metallic connector****
Output signal	4-20 mA without or with OVP (Over Voltage Protection)		
Protection cap	Yes or no		
Options	Not Ex-protection relevant		
Ex-marking Gas	Ex ia IIC T** Ga		Ex ia IIB T* Gb
Ex-marking Dust	Ex ia IIIC T_{200} 160 °C Da		
Ex-marking mining	Ex ia I Ma		Ex ia I Mb

Legend:

T* =	temperature class for 8854.xx could be T3, T4 or T6. Dependencies see separate table.
T** =	temperature class for 8859.xx could be T4 or T6. Dependencies see separate table.
Metallic connector*** =	e.g. M12 connector, M16 connector or Mil C26482 connector
Non-metallic connector**** =	ISO 4400 connector also named DIN 43650 connector or rectangle connector
Note:	Not relevant for Ex-marking are the following options: pressure range, sort of pressure, pressure connection, accuracy.