



(1) **EU-Type Examination Certificate**

(2) Equipment or protective system intended for use in potentially explosive atmospheres - **Directive 2014/34/EU**

(3) Certificate number: **SEV 12 ATEX 0164 X**

(4) Product: Pressure transmitter
Type: 8854.xx, 8859.xx

(5) Manufacturer: Trafag AG, Sensors and Controls

(6) Address: Industriestrasse 11, 8608 Bubikon, SWITZERLAND

(7) The equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) Eurofins Electrosuisse Product Testing AG, notified body No. 1258, 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 confidential report no 09-IK-0051.42 +E1 +E2

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN 50303:00

EN 60079-0:12 + A11:13

EN 60079-11:12

EN 60079-26:15

Except in respect of those requirements listed at item 18 of the schedule.

(10) If the sign «X» is placed after the certificate number, it indicates that the product is subjected to special conditions for safe use specified in the schedule to this certificate.

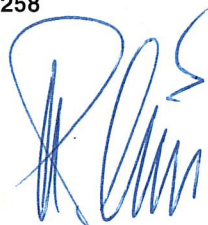
(11) This EU type examination certificate relates only to design and construction of the specified product. Further requirements of this directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

See page 4 (20) Marking

Eurofins Electrosuisse Product Testing AG
ATEX Notified Body 1258

Martin Plüss
Product Certification



(13)

Appendix

(14)

EU-Type Examination Certificate no. SEV 12 ATEX 0164 X

(15) **Description of product**

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- instructions 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.

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
plus per meter length of connecting cable
Effective internal inductance
plus per meter length of connecting cable

$C_i = 12 \text{ nF}$
 $C_K = 0.12 \text{ nF}$
 $L_i = 1.25 \text{ mH}$
 $L_K = 0.001 \text{ mH}$

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.

(16) **Report number** 09-IK-0051.42 + E1 + E2

(17) **Specific conditions of use**

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

(18) **Essential health and safety requirements**

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
None	

(19) **Drawings and Documents**




See test report "Manufacturer's Documents"

(20) **Marking**

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

	II 1G	Ex ia IIC T3 ...T6 Ga
	II 1D	Ex ia IIIC T145 °C Da
	I M1	Ex ia I Ma

For all other versions.

	II 2G	Ex ia IIB T3 ...T6 Gb
	II 1D	Ex ia IIIC T145 °C Da
	I M2	Ex ia I Mb