



EU-Type Examination Certificate

- (1)
- (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 8854.xx, 8859xx
- (5) Manufacturer: Trafag AG
- (6) Address: Industriestrasse 11, 8606 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, 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 19CH-00093.X64
- (9) Compliance with the essential health and safety requirements has been assured by compliance with:
EN IEC 60079-0:2018
EN 60079-11:2012
EN 50303:2000
- 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. The sign "U" is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.
- (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 Appendix
siehe Anhang

Eurofins Electric & Electronic Product Testing AG
Notified Body ATEX

Urban Strebel
Product Certification



(13)

Appendix

(14)

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

(15) **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:

Ingress protection:

Rated ambient temperature range (°C):

stationary

IP6x

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.

Code (e.g. Ex II T) :

Only versions with metallic plug

Ex II 1G	Ex ia IIC T3 ... T6 Ga
Ex II 1D	Ex ia IIIC T ₂₀₀ 160 °C Da
Ex I M1	Ex ia I Ma

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

Ex II 1G	Ex ia IIC T4 ... T6 Ga
Ex II 1D	Ex ia IIIC T ₂₀₀ 160 °C Da
Ex I M1	Ex ia I Ma

For all other versions:

Ex II 2G	Ex ia IIB T3 ... T6 Gb
Ex II 1D	Ex ia IIIC T ₂₀₀ 160 °C Da
Ex I M2	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:

U _i	≤ 28 V
I _i	≤ 93 mA
P _i	≤ 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	 II 1 G Ex ia IIC T* Ga		 II 2 G Ex ia IIB T* Gb
Ex-marking Dust	 II 1D Ex ia IIIC T ₂₀₀ 160 °C Da		
Ex-marking mining	 I M1 Ex ia I Ma		 I M2 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	 II 1 G Ex ia IIC T** Ga		 II 2 G Ex ia IIB T* Gb
Ex-marking Dust	 II 1D Ex ia IIIC T ₂₀₀ 160 °C Da		
Ex-marking mining	 I M1 Ex ia I Ma		 I M2 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.

(16) **Report number** 19CH-00093.X64

(17) **“Special conditions for safe use” / “Schedule of limitations”**

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”

