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 19.0024X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 1	Issue 0 (2019-09-19)
Date of Issue:	2020-09-23		
Applicant:	**STS Sensor Technik Sirnach AG** Rütihofstrasse 8 8370 Sirnach **Switzerland**		
Equipment:	**Pressure Transmitter Type Typ PTM/Ex, PTM/N/Ex**		
Optional accessory:			
Type of Protection:	**ia**		
Marking:	See Annexe		

Approved for issue on behalf of the IECEx Certification Body: **Martin Plüss**

Position: **Manager Product Certification**

Signature: (for printed version)

Date: 2020-09-23

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
CH-8320 FEHRALTORF
Switzerland

eurofins | E&E

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Certificate No.: **IECEx SEV 19.0024X**

Date of issue: 2020-09-23 Issue No: 1

Manufacturer: **STS Sensor Technik Sirnach AG**
Rütihofstrasse 8
8370 Sirnach
Switzerland

Additional 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 Edition:7.0	Explosive atmospheres - Part 0: Equipment - 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 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/ExTR19.0025/01

Quality Assessment Report:

CH/SEV/QAR10.0001/04

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

Pressure Transmitter

Type: PTM/Ex, PTM/N/Ex

The pressure transmitter type PTM/.../Ex amplifies the signal of a piezo resistive pressure measuring bridge to a standard 4-20 mA signal. Supply and signal transmission takes place by an intrinsically safe two-wire current loop. The superposition of digital signals enables the communication of further parameters.

For more information see Annexe

SPECIFIC CONDITIONS OF USE: YES as shown below:
Protect pressure transmitters with titanium housing against impact and friction.

The metallic enclosure of the pressure transmitter must be earthed and connected to the equipotential of the plant.

Application for zone 0: Only with direct cable outlet and the cable sheath has to be protected against electrostatic charge by means of a metal braid, metal hose or metal pipe which is conductively connected to the pressure transmitter and the equipotential bonding system of the plant or metallic connectors.

It must be used only cables with isolation at least > 500 VAC. The cable of the pressure transmitter must be separated to any other power cables. The distance between the cables must be preferably far. The common length between cables must be preferably short. Note: The breakdown voltage of the devices is not fulfilled (500VAC). The pressure transmitter have transzorbs (limiters) between metallic enclosure (earthed) and lines.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
The addendums and extensions from the files 08-IK-0222, 18-Ex-0113 and 19-Ex-0111 have been brought together under the new internal reference number 20CH-00502.X02.

Annex:

IECEx SEV 19.0024X Annexe Issue 1.pdf

Annexe to: **IECEx SEV 19.0024X** **Issue No.: 1**

Applicant Name: **STS Sensor Technik Sirnach AG**

Electrical Apparatus: **Pressure Transmitter**

Ambient temperature range:

For Gas application:

PTM/Ex			
Temperature class	T6	T4	T3
Ambient temperature	-25 ... +55 °C	-25 ... +85 °C	-25 ... +85 °C
Medium temperature	-25 ... +55 °C	-25 ... +100 °C	-25 ... +150 °C

PTM/N/Ex		
Temperature class	T6	T4
Ambient temperature	-5 ... +50 °C	-5 ... +80 °C
Medium temperature	-5 ... +50 °C	-5 ... +80 °C

For dust application:

PTM/Ex and PTM/N/Ex	
	Temperature
Ambient temperature	+85 °C
Maximum surface temperature	+125 °C

Ratings:

Parameter for all types:
Ui = 30 V
Ii = 140 mA
Pi = 0.9 W
Ci = 14 nF
Cc = 0.12 nF/m
Effective capacitance = internal capacitance + cable length * Cc

Li = 1.3 mH
Lc = 0.001 mH/m
Effective inductance = internal inductance + cable length * Lc

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Part number code:

Type	PTM-Ex		
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 II 1 G Ex ia IIC T* Ga		Ex II 1 G Ex ia IIB T* Gb
Ex-marking Dust	Ex II 1D Ex ia IIIC T200 125°C Da		

Type	PTM/N/Ex		
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 II 1 G Ex ia IIC T** Ga		Ex II 1 G Ex ia IIB T* Gb
Ex-marking Dust	Ex II 1D Ex ia IIIC T200 125°C Da		

Explanation:

T* =	temperature class for PTM/Ex could be T3, T4 or T6. Dependencies see separate table.
T** =	temperature class for PTM/N/Ex 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 following options: pressure range, sort of pressure, pressure connection, accuracy.

Marking:

PTM/Ex and PTM/N/Ex (Standard version)
(variants with ISO 4400 connector):
Ex ia IIB T6...T3 Gb
Ex ia IIIC T200125 °C Da

PTM/Ex and PTM/N/Ex for use in Group IIC and IIIC:
Only with direct cable output or metallic plug:
Ex ia IIC T6...T3 Gb
Ex ia IIIC T200125 °C Da

PTM/Ex and PTM/N/Ex for use in zone 0 and 20:
Only with direct cable outlet and the cable sheath is to be protected against electrostatic charge by means of a metal braid, metal hose or metal pipe which is conductively connected to the pressure transmitter and the equipotential bonding system of the system or with metallic connectors:
Ex ia IIC T6...T3 Ga
Ex ia IIIC T200125 °C Da

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