eurofins

(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 20 ATEX 0377 X**

(4) Product: Pressure Transmitter
Type SATM/Ex, SATM/N/Ex

(5) Manufacturer: SAT Anlagentechnik GmbH

(6) Address: 25578 Daegeling, Germany

(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-00100.X83

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

EN 60079-0:2012+A11:2013
EN 60079-11:2012
EN 60079-26:2015
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 page 3

Eurofins Electric & Electronic Product Testing AG
Notified Body ATEX

Martin Plüss
Product Certification

i.A. P. Plüss

(13) # Appendix

(14) **EU-Type Examination Certificate no. SEV 20 ATEX 0377 X**

(15) **Description of product**

The sensor series SATM/Ex and SATM/N/Ex with metallic enclosure and cable connection or metallic enclosure with metallic connector are pressure sensors for gasses or liquids designed according to requirements EPL "Ga" or EPL "Da".

The aforementioned types with non-metallic connector are pressure sensors for gasses or liquids designed according to requirements EPL "Gb" or EPL "Da".

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

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

Type	Temperature class	T6	T4	T3
SATM/Ex	Ambient temperature [°C]	55	85	85
	Medium temperature [°C]	55	100	150

Type	Temperature class	T6	T4
SATM/N/Ex	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:

Type	Surface temperature [°C]	125
SATM/Ex SATM/N/Ex	Ambient temperature [°C]	85

See also operating- and safety- instructions 10.88.0509 from SAT Anlagentechnik GmbH 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.

Type description

Type	SATM/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 2 G Ex ia IIB T* Gb
Ex-markingDust	Ex II 1 D Ex ia IIIC T125°C Da		
Ex-marking mining	Ex I M1 Ex ia I Ma		Ex I M2 Ex ia I Mb

Type	SATM/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 2 G Ex ia IIB T* Gb
Ex-marking Dust	Ex II 1D Ex ia IIIC T125°C Da		
Ex-marking mining	Ex I M1 Ex ia I Ma		Ex I M2 Ex ia I Mb

Legend:

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

Cross list

The type designation between the designations of "SAT Anlagentechnik GmbH" and "STS Sensor Technik Sirnach AG" can be found in the document "Cross list"

Additional information:

The pressure transmitter type SATM/Ex, SATM/N/Ex measures the signal of a piezo-resistive pressure measurement bridge and converts it into a standard signal. Input and signal transmission takes place via an intrinsically safe three-wire 4-20 mA current loop circuit.
SATM/Ex are types featuring a screw-in flange, SATM/N/Ex represent dive probes.

Type Description
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:

$U_i \leq 30$ V
$I_i \leq 100$ mA
$P_i \leq 1$ W

Effective internal capacitance	$C_i = 10$ nF
plus per meter length of connecting cable	$C_K = 0.12$ nF
Effective internal inductance	$L_i = 0.1$ mH
plus per meter length of connecting cable	$L_K = 0.001$ mH

(16) **Specific conditions of use**

- Protect pressure transmitters with titanium housing against impact and friction.
- The metallic enclosure must be earthed.
- The devices must be protected against UV-light (for example daylight or light from luminaires). This applies to all types with a non-metallic connector enclosure.
- Types with metal housing and cable connection or metal housing with metal plug do not need this protection against UV light.

(17) **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	

(18) **Drawings and Documents**

See test report "Manufacturer's Documents"