



(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 10 ATEX 0169 X**

(4) Product: Pressure transmitter
Type Huba 680.xxx and 681.xxx

(5) Manufacturer: Huba Control AG

(6) Address: Industriestrasse 17, 5436 Würenlos, 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-0051.41 + 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 10 ATEX 0169 X

(15) **Description of product**

The sensor series 680... are pressure sensors for gasses or liquids designed according to requirements Ex ia.

Type 680.xxx: Type with screwed pressure connection.

Type 681.xxx: Type with cable suspended into the medium.

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

Type 680.xxx	Temperature class		T6	T4	T3
	Ambient temperature	[°C]	50	85	125
	Medium temperature	[°C]	50	110	150

Type 681.xxx	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:

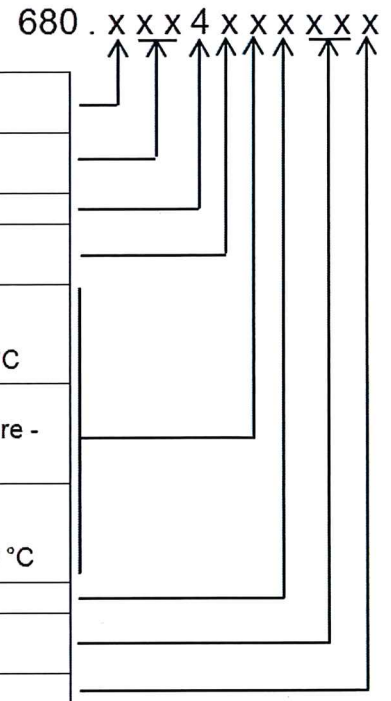
Ambient temperature	[°C]	125
Surface temperature	[°C]	145

See also Operating- and Safety- instructions 10.88.0441.

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.

Article number explanation:

Relative pressure, absolute pressure, overpressure not relevant parameter for Ex		680 . x x x 4 x x x x x x 
Pressure range not relevant parameter for Ex		
Output = 4 = intrinsic safety version		
Characteristics line deviations not relevant parameter for Ex		
Temperature range 4, 5, 6 allowed for Ex	4 = T6 (Ta: -40 to + 50 °C) 0 to +70°C compensated Permissible medium temperature -40 to +50 °C	
	5 = T4 (Ta: -40 to + 85 °C) 0 to +100°C compensated Permissible medium temperature - 40 to +110 °C	
	6 = T3 (Ta: -40 to + 125 °C) 0 to +100°C compensated Permissible medium temperature -40 to +150 °C	
Electrical connection		
Pressure adaptation not relevant parameter for Ex		
not relevant parameter for Ex		

Additional information:

The pressure transmitter Huba Control type 680.xxx, 681.xxx 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. 680.xxx are types featuring a screw-in flange, 681.xxx represent dive probes.

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	CK = 0.12 nF
Effective internal inductance	L _i = 1.25 mH
plus per meter length of connecting cable	LK = 0.001 mH

or alternative:

Verification of intrinsically safe circuit:

With the usage of the Huba Control 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-0051.41 + 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