



EC-Type Examination Certificate

- (2) Equipment or protective system intended for use in potentially explosive atmospheres Directive 94/9/EC
- (3) Examination certificate number: SEV 14 ATEX 0127 X
- (4) Equipment: Optical Oxygen Sensor (O2 sensor) Type InPro6860i
- (5) Manufacturer: Mettler-Toledo GmbH, Process Analytics
- (6) Address: Im Hackacker 15, 8902 Urdorf, SWITZERLAND
- (7) The equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- (8) Electrosuisse SEV, notified body No. 1258 in accordance with article 9 of the Council Directive of the European Communities of 23 March 1994 (94/9/EC), certifies that this equipment has been found to comply with the essential health and safety requirements relating to the design and construction of equipment or protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The results of the examination are recorded in confidential report no. 13-Ex-0093.04

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

EN 60079-0:12 + A11:13 EN 60079-11:12

- (10) If the sign «X» is placed after the certificate number, it indicates that the equipment or protective system is subjected to special conditions for safe use specified in the schedule to this certificate.
- (11) This examination certificate relates only to design and construction of the specified equipment in accordance with the directive 94/9/EC. Further requirements of this directive apply to the manufacturing process and the placing on the market of the equipment.
- (12) The marking of the equipment shall include the following:

(Ex)

ll 1/2G Ex ia/ib IIC T6 Ga/Gb ll 1/2D Ex ia/ib IIIC T83 °C Da/Db

Electrosuisse Notified Body ATEX

(1)

Martin Plüss Product Certification



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EN 60079-26:15



Appendix

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(15) Description of the equipment

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(14)

The optical oxygen sensor InPro 6860i with integrated temperature probe is used for measurement of dissolved oxygen. The measurement principle is based on the optical detection method called fluorescence quenching. The optical oxygen sensor InPro 6860i consists of two parts, the sensor head with connector and the sensor shaft (diameter 12 mm) which is in contact with the process media. Electronic circuits are fully encapsulated in a stainless steel housing. The optical part is not encapsulated. The sensor must be supplied form an intrinsically safe power supply with a rectangular curve, level "ib". The senor's output signal is either a μ A or mA signal, respectively between 0 - 5 μ A, or a standard current signal 4-20 mA.

Rated ambient temperature: -10 °C to +60 °C.

Electrical ratings:

Supply, and output circuit (terminals +,- or connector)	in type of protection intrinsic safety Ex ib IIC, only for connection to a certified intrinsically safe circuit with the following maximum				
	values:				
	Ui	Π	25 V		
	li	Ξ	60 mA		
	Pi	=	1.5 W		
	Ci	=	0 , Li = 0		

RS 485 interface	Ui	=	15 V	Uo	=	4.6 V
(terminals G,H)	li	=	100 mA	lo	=	91 mA
	Pi	=	1 W	Po	=	0.3 W
	Ci	=	2 µF , Li = 0	Co	=	100 pF , Li = 0

mA HART output	Uo	=	13.93 V
mA Port (terminals A,B)	lo	=	25 mA
	Po	=	0.3 W
	Co	=	100 nF , Li = 0

nA HART output	Uo	=	7.5 V
nA Port (terminals A,B)	lo	=	1.46 mA
	Со		0, Lo = 0

NTC Simulator output	Uo	=	6.7 V
(terminals E,F)	lo	=	60 mA
	Co		$1 \mu\text{F}, \text{Lo} = 0$





(16) Test Report

13-Ex-0093.04

(17) Special conditions for safe use

1. The maximum permissible environment resp. medium temperature for the zone 0 (combustible gases or combustible liquids) is :

Temperature class	max. enviroment resp. media temperature
T6	60 °C

2. The maximum surface temperature for the zone 20 (combustible dusts) is :

Surface temperature	max. enviroment resp. media temperature
T83 °C	60 °C

- 3. The capacitance and inductance of the connecting cable must be taken into account in the design.
- The oxygen sensor (O2 sensor) can be used in/with the housing InFit76*-*** resp. InTrac7**-*** or in/with other suitable housing in hazardous areas.
- 5. The metal body of the O2 sensor resp. the safety weld-in-socket resp. the independent housing are, if necessary, to be included into the periodic pressure test of the unit.

The metal body of the O2 sensor resp. the safety weld-in-socket resp. the independent housing must be electrically connected to the potential equalizing system of the installation.

(18) <u>Fundamental essential health and safety requirements</u> Fulfilled by the standards applied.

