



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx SEV 17.0006X

Issue No: 0

Certificate history:

Issue No. 0 (2017-05-31)

Status: Current

Page 1 of 3

Date of Issue: 2017-05-31

Applicant: Mettler-Toledo GmbH
Process Analytics
Im Hackacker 15
8902 Urdorf
Switzerland
Switzerland

Equipment: Optical oxygen sensor Type InPro 6860I

Optional accessory:

Type of Protection: Intrinsic safety "ia", "ib"

Marking:

Ex ia/ib IIC T6 Ga/Gb resp. Ex ia/ib IIC T108°C Ga/Gb

Ex ia/ib III C T83 °C Da/Db resp. Ex ia/ib III C T108 °C Da/Db

Approved for issue on behalf of the IECEx

Jürg Rellstab

Certification Body:


Position:

Manager Product Certification

Signature:

(for printed version)

Date:


2017-05-31

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 the Official IECEx Website.

Certificate issued by:

Electrosuisse div. Testing and Certification
Luppenstrasse 1
CH-8320 FEHRALTORF
Switzerland





IECEX Certificate of Conformity

Certificate No: IECEX SEV 17.0006X

Issue No. 0

Date of Issue: 2017-05-31

Page 2 of 3

Manufacturer: Mettler-Toledo GmbH
Process Analytics
Im Hackacker 15
CH-8902 Urdorf
Switzerland
Switzerland

Additional Manufacturing location(s):

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 electrical apparatus 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 : 2011 Edition:6.0	Explosive atmospheres - Part 0: 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 electrical 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/ExTR14.0008/04

Quality Assessment Report

CH/SEV/QAR12.0004/05



IECEX Certificate of Conformity

Certificate No: IECEx SEV 17.0006X

Issue No: 0

Date of Issue: 2017-05-31

Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

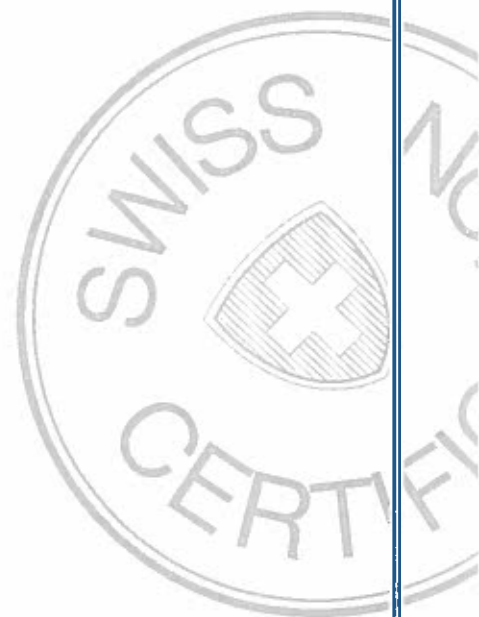
Optical oxygen sensor Type InPro 6860i

SPECIFIC CONDITIONS OF USE: YES as shown below:

See Annexe

Annex:

IECEX SEV 17.0006X Annexe Issue 0.pdf



Annexe to: IECEx SEV 17.0006X

Issue No.: 1
page 1 of 2

Applicant Name: Mettler-Toledo GmbH, Process Analytics

Electrical Apparatus: Optical oxygen sensor

Description of the equipment

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 from an intrinsically safe power supply with a rectangular curve, level "ib". The sensor's output signal is either a μA or mA signal, respectively between 0 - 5 μA , or a standard current signal 4-20 mA.

Rated ambient temperature: -10 °C to +60 °C for T6 resp T83 °C
-10 °C to +85 °C. for T103 °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:		
	U_i	=	25 V
	I_i	=	60 mA
	P_i	=	1.5 W
	C_i	=	0, $L_i = 0$

RS 485 interface (terminals G,H)	U_i	=	15 V	U_o	=	4.6 V
	I_i	=	100 mA	I_o	=	91 mA
	P_i	=	1 W	P_o	=	0.3 W
	C_i	=	2 μF , $L_i = 0$	C_o	=	100 pF, $L_i = 0$

mA HART output mA Port (terminals A,B)	U_o	=	13.93 V
	I_o	=	25 mA
	P_o	=	0.3 W
	C_o	=	100 nF, $L_i = 0$

nA HART output nA Port (terminals A,B)	U_o	=	7.5 V
	I_o	=	1.46 mA
	C_o	=	0, $L_o = 0$

NTC Simulator output (terminals E,F)	U_o	=	6.7 V
	I_o	=	60 mA
	C_o	=	1 μF , $L_o = 0$

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. environment resp. media temperature
T6	60 °C
T108 °C	85 °C

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

Surface temperature	max. environment resp. media temperature
T83 °C	60 °C
T108 °C	85 °C

3. The capacitance and inductance of the connecting cable must be taken into account in the design.
4. 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.
6. 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.