


		<h2 style="margin: 0;">IECEX Certificate of Conformity</h2>	
<p><b>INTERNATIONAL ELECTROTECHNICAL COMMISSION</b>  <b>IEC Certification Scheme for Explosive Atmospheres</b>  <small>for rules and details of the IECEx Scheme visit <a href="http://www.iecex.com">www.iecex.com</a></small></p>			
Certificate No.:	IECEX PTB 11.0005X	Issue No.:	0
Status:	Current	Certificate history: <input type="text"/>	
Date of Issue:	2011-01-17	Page 1 of 3	
Applicant:	<b>Draeger Safety AG &amp; Co. KGaA</b> Revalstrasse 1 23560 Luebeck Germany		
Electrical Apparatus:	<b>Gas detection transmitters, Series ETR/ITR/XTR 0***</b>		
Optional accessory:			
Type of Protection:	<b>Flameproof enclosure "d", Increased safety "e", Protection by enclosure "t"</b>		
Marking:	Ex d IIC T6/T4 Gb or Ex d e IIC T6/T4 Gb or Ex tb IIC T80°C/T130°C Db IP6X		
Approved for issue on behalf of the IECEx Certification Body:	Dr. Inge Klausmeyer Head of Section "Flameproof enclosures"		
Signature: (for printed version)	 10.1.11 MAR. 2011		
Date:			
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: Physikalisch-Technische Bundesanstalt (PTB) Bundesallee 100 38116 Braunschweig Germany			
			
		<h2 style="margin: 0;">IECEX Certificate of Conformity</h2>	
Certificate No.:	IECEX PTB 11.0005X	Issue No.:	0
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Manufacturer:	<b>Draeger Safety AG &amp; Co. KGaA</b> Revalstrasse 1 23560 Luebeck Germany		
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.			
<b>STANDARDS:</b> 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 : 2007-10	Explosive atmospheres - Part 0: Equipment - General requirements		
Edition: 5			
IEC 60079-1 : 2007-04	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"		
Edition: 6			
IEC 60079-31 : 2008	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"		
Edition: 1			
IEC 60079-7 : 2006-07	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"		
Edition: 4			
This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.			
<b>TEST &amp; ASSESSMENT REPORTS:</b> A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in			
<u>Test Report:</u> DE/PTB/ExTR11.0010/00			

Quality Assessment Report:

DE/BVS/QAR06.0001/05  
DE/BVS/QAR09.0003/01

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<b>Schedule</b>			
<b>EQUIPMENT:</b> <i>Equipment and systems covered by this certificate are as follows:</i>			
See attachment.			
<b>CONDITIONS OF CERTIFICATION: YES as shown below:</b>			
See attachment.			

Annexe: Attachment IECEX PTB 11.0005X.pdf



Applicant: Draeger Safety AG & Co. KGaA  
Electrical Apparatus: Gas detection transmitters, ETR/ITR/XTR 0\*\*\*

### Description of equipment

The Gas detection transmitters ETR/ITR/XTR 0\*\*\* consist of three different types of sensing systems. ETR 0\*\*\* uses the electrochemical sensing principle, ITR 0\*\*\* uses the infrared sensing principle and XTR 0\*\*\* uses the catalytic sensing principle. The different sensing principles are realized by the use of various sensors, as described in the nomenclature below. Connection of the devices is realized either per direct entry to a flameproof enclosure (E,I,X)TR 02\*(0..1) / (E,I,X)TR 03\*(0..1), or per the increased safety connection box (E,I,X)TR 02\*(I..J) / (E,I,X)TR 03\*(I..J). For remote applications the system may optionally be installed with the Flameproof Junction Box EAC 01\*\*.

The relation between ambient temperature and the assigned temperature class is as follows:

Type	Ambient temperature range	Temperature class (G)	Maximum surface temperature (D)
ITR 0*0*, XTR 0*0*	-40 °C to +65 °C	T4	T130°C
All other versions	-40 °C to +80 °C	T4	T130°C
All versions	-40 °C to +40 °C	T6	T80°C

### Electrical Ratings:

Supply: 16...30 VDC, 4...20 mA (ETR 02/3\*\* series)  
Supply: 10...30 VDC, 0.1...0.75 A (ITR 02/3\*\* series)  
Supply: 10...30 VDC, 0.1...0.2 A (XTR 02/3\*\* series)  
Relays: 5 A, 30 VDC or 230 VAC (if relays are fitted)

### Routine tests

Routine tests according to clause 16 of IEC 60079-1 are to be conducted.  
Dielectric tests in accordance with clause 7.1 of IEC 60079-7 are to be conducted.

### Conditions of Certification:

- Repair on the basis of the values in tables 1 and 2 of IEC 60079-1 is not accepted. Repairs on flameproof joints may only be performed in accordance with the manufacturer's design specifications.

### Additional notes for safe operation

- Any components attached or installed (e.g. sensors, terminal compartments, bushings, 'Ex' cable glands, connectors) must be of a technical standard that complies with the specifications on the cover sheet. They must be suited for the operating conditions, and be covered by a separate examination certificate, and a separate examination certificate must have been issued for them. The operating conditions set forth in the relevant component certificates must by all means be complied with.
- For relation between ambient temperature and temperature class the installer or end user has to refer to this Certificate or manufacturers Installation Instructions.



## Nomenclature

Nomenclature for type ETR/ITR/XTR 0\*\*\*:

**\* TR 0 \* \* \***  
**1 2 3 4**

1: Sensing principle / sensor

E = electro chemical  
I = infrared  
X = Ex-Sensor (catalytic)

2: Series and Enclosure material

2 = 02/03 series, Aluminium Enclosure  
3 = 02/03 series, Stainless Steel Enclosure

3: Sensor

**ETR 0 \* \* \***  
**3**

3: Sensor  
0 = DrägerSensor or DrägerSensorXS with Adaptor  
1 = DrägerSensor XS

**ITR 0 \* \* \***  
**3**

3: Sensor  
0 = IDS 0001  
1 = IDS 0101  
2 = IDS 0102  
5 = IDS 0105

**XTR 0 \* \* \***  
**3**

3: Sensor  
0 = IDS 0002  
1 = XDS 020\*  
2 = Ex-Sensor LC NPT

4: Interface

0 = "d", 4-20 mA  
1 = "d", 4-20 mA with Relays  
I = "d"+"e", 4-20 mA  
J = "d"+"e", 4-20 mA with Relays

Nomenclature for Junction Box, type EAC 01\*\* (Remote Sensor)

**EAC 01 \* \***  
**1 2**

1: Enclosure Material

0 = Aluminum  
1 = Stainless Steel

2: Features not relevant for the types of protection