


## 3<sup>rd</sup> SUPPLEMENT


according to Directive 94/9/EC Annex III.6


to EC-TYPE-EXAMINATION CERTIFICATE PTB 11 ATEX 1005 X

(Translation)

Equipment: Gas detection transmitters of type ETR/ITR/XTR 0\*\*\*

Marking:  II 2 G Ex d [ia] IIC T6/T4 Gb resp.

 II 2 G Ex d e [ia] IIC T6/T4 Gb resp.

 II 2 D Ex tb [ia] IIIC T135°C Db IP6X

Manufacturer: Dräger Safety AG & Co. KGaA

Address: Revalstraße 1, 23560 Lübeck, Germany

### Description of supplements and modifications

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 or infrared sensing principle with a catalytic sensor interface. The sensor frontend (EC sensing head) of the ETR 0\*\*\* series comprises a galvanically separating barrier circuit (inside the flameproof enclosure) and intrinsically safe electronics located outside the flameproof enclosure as well as an electrochemical sensor - all of them being covered by this certificate.

The sensors of the ITR 0\*\*\* and XTR 0\*\*\* series are covered by separate certifications, which are accepted under this certificate.

## Nomenclature

$\frac{*}{1} \text{TR} 0 \frac{*}{2} \frac{*}{3} \frac{*}{4}$

### 1: Sensing principle / sensor

E	=	electrochemical
I	=	infrared
X	=	Ex-Sensor (catalytic sensor interface)

### 2: Series and enclosure material

2	=	02/03 series, aluminum enclosure
3	=	02/03 series, stainless steel enclosure
4	=	04/05 series, aluminum enclosure
5	=	04/05 series, stainless steel enclosure

### 3: Sensor

$\text{ITR} 0 \frac{***}{3}$

#### 3:Sensor

0	=	IDS 0001
1	=	IDS 0101
2	=	IDS 0102
5	=	IDS 0105

$\text{ETR} 0 \frac{***}{3}$

#### 3:Sensor

0	=	DrägerSensor or XS with adapter
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$\text{XTR} 0 \frac{***}{3}$

#### 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  $\frac{**}{12}$

1: Enclosure Material

0 = Aluminum

1 = Stainless Steel

2: Features not relevant for the types of protection

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

Type	Ambient temperature range	Temperature class (Gas)	Maximum surface temperature (Dust)
ITR 0*0*, XTR0*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
ETR 02/03**	-40 °C to +70 °C	T4	T135°C
ETR 04/05**, ETR 02/03**	-40 °C to +40 °C	T6	T135°C
ETR 04/05**, ETR 04/05**			

### Electrical Ratings:

Maximum supply wattage:  $P_{max}$ : 5 W

Supply: 10...30 VDC, 80...150 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)

Supply: 10...30 VDC, 0.1...0.35 A (ETR 04/05\*\* series)

Supply: 10...30 VDC, 0.3...1.0 A (ITR 04/05\*\* series)

Supply: 10...30 VDC, 0.15...0.45 A (XTR 04/05\*\* series)

Relays: 5 A, 30 VDC or 230 VAC (if relays are fitted)

Modell ETR 02/03, ETR 04/05

Sensor circuit

protected by Intrinsic safety Ex ia IIC / IIIC

internal circuit for connecting an associated electrochemical Sensor or a remote sensor via a remote sensor adapter.

## Description of supplements and modifications

Addition of the Gas detection transmitters types ETR 02\*\* and ETR 03\*\* using electrochemical sensors, whose electronics is located in a housing of the type of protection flameproof enclosure and which provides intrinsic safe circuits to supply the field sensors.







The flameproof enclosure of the series \*TR 0\*\*\* no longer requires an O-Ring gasket between bottom part and cover. The specified torque value is reduced from originally 30 Nm to 5 Nm. This applies to the aluminium and stainless steel variant.

The minimum depth of the plugs (see drawing No. SE20882) of the enclosure series \*TR 0\*\*\* and EAC 01\*\* changes from 15.1 mm to 13.9 mm initially.

The Nomenclature varies in removing the DrägerSensor XS variant under item "3: Sensor". The nomenclature and rated data in the 3<sup>rd</sup> ATEX Supplement covers all changes of the supplements 1 to 3.

The Gas detection transmitters of type ETR/ITR/XTR 0\*\*\* meets the requirements of the standards EN 60079-0:2012. The requirements of EN 60079-1:2007, EN 60079-7:2007, EN 60079-11:2012 und EN 60079-31:2009 remain unchanged.

The marking is as follows:

-  II 2 G Ex d IIC T6/T4 Gb resp.
-  II 2 G Ex d e IIC T6/T4 Gb resp.
-  II 2 D Ex tb IIIC T80°C/T130°C Db IP6X
  
-  II 2 G Ex d [ia] IIC T6/T4 Gb resp.
-  II 2 G Ex d e [ia] IIC T6/T4 Gb resp.
-  II 2 D Ex tb [ia] IIIC T135°C Db IP6X

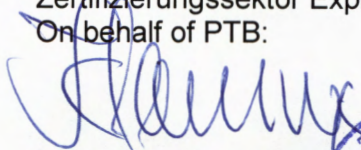
All other specifications and special conditions of the EC-Type-Examination Certificate PTB 11 ATEX 1005 X remain without changes.

Applied standards

EN 60079-0:2012, EN 60079-1:2007, EN 60079-7:2007, EN 60079-11:2012,  
EN 60079-31:2009

Test report: PTB Ex 14-14052

Zertifizierungssektor Explosionsschutz  
On behalf of PTB:



Dr.-Ing. U. Klausmeyer  
Direktor und Professor



Braunschweig, May 6, 2014