



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 BVS 10.0045X Issue No.:1

Status: Current

Date of Issue: 2015-08-20 Page 1 of 4

Applicant: **Dräger Safety AG & Co. KGaA**
Revalstraße 1
23560 Lübeck
Germany

Electrical Apparatus: **Measuring head type Polytron SE Ex ** M* DD**
Optional accessory:

Type of Protection: **Equipment protection by flameproof enclosures "d", Equipment dust ignition protection by enclosure "t", Equipment protection by increased safety "e"**

Marking: Ex de IIC T6/T5/T4¹ Gb
Ex tb IIC T130°C Db
¹ See Parameters for details

Approved for issue on behalf of the IECEx Certification Body: H.-Ch. Simanski

Position: Head of Certification Body

Signature:
(for printed version)

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:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany



Certificate history:
Issue No. 1 (2015-8-20)
Issue No. 0 (2010-5-26)



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Manufacturer: **Dräger Safety AG & Co. KGaA**
Revalstraße 1
23560 Lübeck
Germany

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 Explosive atmospheres - Part 0: General requirements
Edition: 6.0
IEC 60079-1 : 2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition: 7.0
IEC 60079-31 : 2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition: 2
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.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
[DE/BVS/ExTR10.0069/01](#)

Quality Assessment Report:

[DE/BVS/QAR06.0001/10](#)

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Description

The measuring head type Polytron SE Ex ** M* DD measures flammable gases and vapours under atmospheric conditions.

It consists of a certified terminal box of type 07-51**-**00/7555 or type PL612. Inside the terminal boxes certified terminals and accessories are used. The holes in the terminal boxes are either closed by use of certified cable glands or plugs and by the used sensor head type XDS 02** or Ex Sensor LC.

Listing of all components used referring to older standards

Subject and type	Certificate	Standards
Terminal box type 07-51**-**00/7555	IECEX PTB 09.0008U, Iss. 5	¹ IEC 60079-0:2011, Edition 6 IEC 60079-7:2006, Edition 4 IEC 60079-31:2008, Edition 1
Terminal type 07-9702-0320/1	IECEX PTB 07.0007U, Iss. 1	¹ IEC 60079-0:2007, Edition 5 IEC 60079-7:2006, Edition 4
Terminal type WDU2.5	IECEX ULD 05.0008U, Iss. 0	¹ IEC 60079-0:2004, Edition 4 IEC 60079-7:2006, Edition 4

¹ No applicable technical differences
² Technical differences evaluated and found satisfactory

Subject and type

See Annex

Parameters

See Annex

CONDITIONS OF CERTIFICATION: YES as shown below:

The assignment of the ambient temperature to the respective temperature class is to be made according the tables in clause Parameters.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Reasons for this issue are:

- Update of the used standard IEC 60079-0:2007 edition 5 and IEC 61241-0:2006 edition 1 to IEC 60079-0:2011 edition 6.
- Update of the used standard IEC 60079-1:2007 edition 6 to IEC 60079-1:2014 edition 7.
- Update of the used standard IEC 61241-1:2004 edition 1 to IEC 60079-31:2013 edition 2.
- Minor changes to the type designation code.
- Corrections of the ambient temperature for type Polytron SE Ex LC M* DD.
- Optional use of five instead of three separately tested and certified terminal blocks.



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Subject and type

Measuring head type Polytron SE Ex ** M* DD

Asterisks Description

- 1 - 2 Type of Sensor head
PR Type XDS 02**
LC Type Ex Sensor LC
- 3 Terminal box configuration
- 1 Terminal box type 07-51**-0800/7555
Terminals type 07-9702-0320/1 or type 264-120
End plate type 264-370
End stop type 249-101
 - 2 Terminal box type 07-51**-1100/7555
Terminals type 07-9702-0320/1 or type 264-120
End plate type 264-370
End stop type 249-101
 - 3 Terminal box type PL612
Terminals type WDU2.5

Parameters

Type Polytron SE Ex PR M1 DD

U _{max}	P _{max}	Ambient temperature range	Temperature class	Surface temperature
30 V	2 W	-50 °C ≤ T _{amb} ≤ 40 °C	T6	T130 °C
		-50 °C ≤ T _{amb} ≤ 55 °C	T5	T130 °C
		-50 °C ≤ T _{amb} ≤ 85 °C	T4	T130 °C

Type Polytron SE Ex PR M2 DD

U _{max}	P _{max}	Ambient temperature range	Temperature class	Surface temperature
30 V	2 W	-50 °C ≤ T _{amb} ≤ 40 °C	T6	T130 °C
		-50 °C ≤ T _{amb} ≤ 55 °C	T5	T130 °C
		-50 °C ≤ T _{amb} ≤ 85 °C	T4	T130 °C

Type Polytron SE Ex PR M3 DD

U _{max}	P _{max}	Ambient temperature range	Temperature class	Surface temperature
30 V	2 W	-50 °C ≤ T _{amb} ≤ 40 °C	T6	T130 °C
		-50 °C ≤ T _{amb} ≤ 55 °C	T5	T130 °C
		-50 °C ≤ T _{amb} ≤ 85 °C	T4	T130 °C

Type Polytron SE Ex LC M1 DD

U _{max}	P _{max}	Ambient temperature range	Temperature class	Surface temperature
60 V	1 W	-40 °C ≤ T _{amb} ≤ 40 °C	T6	T130 °C
		-40 °C ≤ T _{amb} ≤ 50 °C	T5	T130 °C
		-40 °C ≤ T _{amb} ≤ 85 °C	T4	T130 °C

Type Polytron SE Ex LC M2 DD

U _{max}	P _{max}	Ambient temperature range	Temperature class	Surface temperature
60 V	1 W	-40 °C ≤ T _{amb} ≤ 40 °C	T6	T130 °C
		-40 °C ≤ T _{amb} ≤ 50 °C	T5	T130 °C
		-40 °C ≤ T _{amb} ≤ 85 °C	T4	T130 °C



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Type Polytron SE Ex LC M3 DD

U _{max}	P _{max}	Ambient temperature range	Temperature class	Surface temperature
60 V	1 W	-40 °C ≤ T _{amb} ≤ 40 °C	T6	T130 °C
		-40 °C ≤ T _{amb} ≤ 50 °C	T5	T130 °C
		-40 °C ≤ T _{amb} ≤ 65 °C	T4	T130 °C