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 12.0057X issue No.:0 Certificate history:

Status: **Current**

Date of Issue: **2012-08-27** Page 1 of 4

Applicant: **MSA AUER GmbH**
Thiemannstraße 1
12059 Berlin
Germany

Electrical Apparatus: **Junction box type X series AL junction box**
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 d IIC T6 or T4 Gb
Ex tb IIIC T85°C or T135°C Db
or
Ex e IIC T6 or T4 Gb
Ex tb IIIC T85°C or T135°C Db

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

Position: Head of Certification Body

Signature:
(for printed version)

Date: 27/8/2012

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

DEKRA EXAM GmbH

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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Certificate No.:	IECEx BVS 12.0057X issue No.:1	Certificate history: Issue No. 1 (2015-6-24) Issue No. 0 (2012-8-27)
Status:	**Current**	
Date of Issue:	**2015-06-24**	Page 1 of 5

Applicant:

MSA EUROPE GmbH
Schlüsselstraße 12
8645 Rapperswil-Jona
Switzerland

Electrical Apparatus: **Junction box type S47k or X series AL junction box**
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 db IIC T6 or T4 Gb, Ex tb IIIB T85°C or T135°C Db
Ex e IIC T6 or T4 Gb, Ex tb IIIB T85°C or T135°C Db
Ex db IIC T6 or T4, Ex tb IIIB T85°C or T135°C
Ex eb IIC T6 or T4, Ex tb IIIB T85°C or T135°C

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

Position: Head of Certification Body

Signature:
(for printed version)

Date: 24.6.2015

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Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA EXAM GmbH

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 12.0057X

Date of Issue: **2015-06-24** Issue No.: **1**

Manufacturer: **MSA Produktion Deutschland GmbH**
Thiemannstraße 1
12059 Berlin
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 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition: 7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition: 2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*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/ExTR12.0057/01

Quality Assessment Report:

DE/BVS/QAR06.0018/09

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 12.0057X

Date of Issue: **2015-06-24** Issue No.: **1**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Subject and type

Junction box type S47k
Junction box type X series AL Junction box

Description

The junction box consists of an aluminium enclosure and is suitable for use in gas and dust hazardous atmospheres of Categories 2G and 2D.
The junction box type X series AL junction box is equipped as follows: either with conical NPT-connections for the type of protection 'd', Flameproof Enclosure; or with metric connection threads for attaching cable glands separately certified for this purpose for the type of protection 'e', Increased Safety; and/or for attaching the sensor infrared gas monitor type PrimaX IR according to the Certificate of Conformity IECEx BVS 10.0101 X. Only the manufactured variant is marked on the apparatus. The applicable ambient temperature range depends on the cable gland used.
The junction box will be used in conjunction with the sensor infrared gas monitor type PrimaX IR according to the Certificate of Conformity IECEx BVS 10.0101 X.
The junction box can also be used in conjunction with a cable gland type HSK-M-Ex-d for an ambient temperature range from -50 °C to +80 °C.

CONDITIONS OF CERTIFICATION: YES as shown below:

The variant designed for an ambient temperature of 80 °C must feature leads for connecting the power supply and the sensor that are suitable for a service temperature of at least 90 °C.
The measuring function for explosion protection is not subject of this Test Report.
For Group III application, the apparatus has to be installed in such a way that process-related electrostatic charges, e.g. caused by media passing by, can be excluded.

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 12.0057X

Date of Issue: **2015-06-24** Issue No.: **1**

EQUIPMENT(continued):

Parameters

1 Electrical parameters

Current (constant power supply)	310 mA
Power	max. 1.92 W

2 Thermal parameters for junction box

Ambient temperature range with cable gland type HSK-M-Ex-d (NPT and metric thread)	$-50\ °C \le T_a \le +40\ °C$
temperature class	T6
maximum surface temperature	≤ 85 °C
Ambient temperature range with cable gland type HSK-M-Ex-d (NPT and metric thread)	$-50\ °C \le T_a \le +80\ °C$
Temperature class	T4
Maximum surface temperature	≤ 135 °C
Ambient temperature range with cable gland type 8161/5-M25-17	$-40\ °C \le T_a \le +40\ °C$
Temperature class	T6
Maximum surface temperature	≤ 85 °C
Ambient temperature range with cable gland type 8161/5-M25-17	$-40\ °C \le T_a \le +70\ °C$
Temperature class	T4
Maximum surface temperature	≤ 135 °C

Listing of all components used referring to older standards

Subject and type	Certificate	Standards
Terminal blocks MBK 2,5/E [1]	IECEx KEM 07.0016U	IEC 60079-0:2004 IEC 60079-7:2006-07

[1] No applicable technical differences

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 12.0057X

Date of Issue: **2015-06-24** Issue No.: **1**

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

This supplement is issued to ensure the compliance of the equipment with the updated versions of the applicable standards.

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 12.0057X

Date of Issue: **2012-08-27** Issue No.: **0**

Manufacturer: **MSA AUER GmbH**
Thiemannstraße 1
12059 Berlin
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.

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 : 2007-10 Edition: 5	Explosive atmospheres - Part 0:Equipment - General requirements
IEC 60079-1 : 2007-04 Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2008 Edition: 1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*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/ExTR12.0057/00

Quality Assessment Report:

DE/BVS/QAR06.0018/06

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 12.0057X

Date of Issue: **2012-08-27** Issue No.: **0**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Subject and type
Junction box type X series AL junction box

Description
The junction box consists of an aluminium enclosure and is suitable for use in gas and dust hazardous atmospheres of categories 2G and 2D.

The junction box type X series AL junction box is equipped as follows: either with conical NPT-connections for the type of protection 'd', Flameproof Enclosure; or with metric connection threads for attaching cable glands separately certified for this purpose for the type of protection 'e', Increased Safety; and/or for attaching the sensor infrared gas monitor type PrimaX IR according to the Certificate of Conformity IECEx BVS 10.0101 X. Only the manufactured variant is marked on the apparatus. The applicable ambient temperature range depends on the cable gland used.

When manufactured for the type of protection 'e', Increased Safety, the junction box is also equipped with terminals certified according to a Certificate of Conformity.

The junction box will be used in conjunction with the sensor infrared gas monitor type PrimaX IR according to the Certificate of Conformity IECEx BVS 10.0101 X.

The junction box can also be used in conjunction with a cable gland type HSK-M-Ex-d for an ambient temperature range from -50 °C to +80 °C.

CONDITIONS OF CERTIFICATION: YES as shown below:

- The variant designed for an ambient temperature of 80 °C must feature leads for connecting the power supply and the sensor that are suitable for a service temperature of at least 90 °C.

- The measuring function for explosion protection is not subject of this test report.

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 12.0057X

Date of Issue: **2012-08-27** Issue No.: **0**

EQUIPMENT(continued):

Parameters

1 Electrical parameters

Current (constant power supply)	310 mA
Power	max. 1.92 W

2 Thermal parameters for junction box type X series AL junction box

Ambient temperature range with cable gland type HSK-M-Ex-d (NPT and metric thread)	-50 °C ≤ T_a ≤ +40 °C
Temperature class	T6
Maximum surface temperature	≤ 85 °C
Ambient temperature range with cable gland type HSK-M-Ex-d (NPT and metric thread)	-50 °C ≤ T_a ≤ +80 °C
Temperature class	T4
Maximum surface temperature	≤ 135 °C
Ambient temperature range with cable gland type 8161/5-M25-17	-40 °C ≤ T_a ≤ +40 °C
Temperature class	T6
Maximum surface temperature	≤ 85 °C
Ambient temperature range with cable gland type 8161/5-M25-17	-40 °C ≤ T_a ≤ +70 °C
Temperature class	T4
Maximum surface temperature	≤ 135 °C

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Status:	**Current**	
Date of Issue:	**2015-06-24**	Page 1 of 5

Applicant:

MSA EUROPE GmbH
Schlüsselstraße 12
8645 Rapperswil-Jona
Switzerland

Electrical Apparatus: **Junction box type S47k or X series AL junction box**
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 db IIC T6 or T4 Gb, Ex tb IIIB T85°C or T135°C Db
Ex e IIC T6 or T4 Gb, Ex tb IIIB T85°C or T135°C Db
Ex db IIC T6 or T4, Ex tb IIIB T85°C or T135°C
Ex eb IIC T6 or T4, Ex tb IIIB T85°C or T135°C

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

Position: Head of Certification Body

Signature:
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Date: 24.6.2015

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Manufacturer: **MSA Produktion Deutschland GmbH**
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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 60079-1 : 2014-06 Edition: 7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition: 2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*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:
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Quality Assessment Report:

DE/BVS/QAR06.0018/09

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 12.0057X

Date of Issue: **2015-06-24** Issue No.: **1**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Subject and type

Junction box type S47k
Junction box type X series AL Junction box

Description

The junction box consists of an aluminium enclosure and is suitable for use in gas and dust hazardous atmospheres of Categories 2G and 2D.
The junction box type X series AL junction box is equipped as follows: either with conical NPT-connections for the type of protection 'd', Flameproof Enclosure; or with metric connection threads for attaching cable glands separately certified for this purpose for the type of protection 'e', Increased Safety; and/or for attaching the sensor infrared gas monitor type PrimaX IR according to the Certificate of Conformity IECEx BVS 10.0101 X. Only the manufactured variant is marked on the apparatus. The applicable ambient temperature range depends on the cable gland used.
The junction box will be used in conjunction with the sensor infrared gas monitor type PrimaX IR according to the Certificate of Conformity IECEx BVS 10.0101 X.
The junction box can also be used in conjunction with a cable gland type HSK-M-Ex-d for an ambient temperature range from -50 °C to +80 °C.

CONDITIONS OF CERTIFICATION: YES as shown below:

The variant designed for an ambient temperature of 80 °C must feature leads for connecting the power supply and the sensor that are suitable for a service temperature of at least 90 °C.
The measuring function for explosion protection is not subject of this Test Report.
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Certificate No.: IECEx BVS 12.0057X

Date of Issue: **2015-06-24** Issue No.: **1**

EQUIPMENT(continued):

Parameters

1 Electrical parameters

Current (constant power supply)	310 mA
Power	max. 1.92 W

2 Thermal parameters for junction box

Ambient temperature range with cable gland type HSK-M-Ex-d (NPT and metric thread)	$-50\ °C \le T_a \le +40\ °C$
temperature class	T6
maximum surface temperature	≤ 85 °C
Ambient temperature range with cable gland type HSK-M-Ex-d (NPT and metric thread)	$-50\ °C \le T_a \le +80\ °C$
Temperature class	T4
Maximum surface temperature	≤ 135 °C
Ambient temperature range with cable gland type 8161/5-M25-17	$-40\ °C \le T_a \le +40\ °C$
Temperature class	T6
Maximum surface temperature	≤ 85 °C
Ambient temperature range with cable gland type 8161/5-M25-17	$-40\ °C \le T_a \le +70\ °C$
Temperature class	T4
Maximum surface temperature	≤ 135 °C

Listing of all components used referring to older standards

Subject and type	Certificate	Standards
Terminal blocks MBK 2,5/E [1]	IECEx KEM 07.0016U	IEC 60079-0:2004 IEC 60079-7:2006-07

[1] No applicable technical differences

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 12.0057X

Date of Issue: **2015-06-24** Issue No.: **1**

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