Translation

(1) # EC-Type Examination Certificate

(2) **- Directive 94/9/EC -**
Equipment and protective systems intended for use in potentially explosive atmospheres

(3) ## DMT 03 ATEX E 051 X

(4) **Equipment:** **Cable entries type HSK-M-Ex 1610.****.**, type HSK-M-EMV-Ex 1616.****.**, type HSK-M-EMV-D-Ex 1631.****.**, type HSK-MZ-Ex 1611.****.**, type HSK-MZ-EMV-Ex 1617.****.**, type HSK-INOX-Ex 1612.****.** and type HSK-INOX-EMV-Ex 672.****.**

(5) **Manufacturer:** **HUMMEL Elektrotechnik GmbH**

(6) **Address:** **D 79183 Waldkirch**

(7) The design and construction of this equipment and any acceptable variation thereto are specified in the schedule to this type examination certificate.

(8) The certification body of Deutsche Montan Technologie GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.
The examination and test results are recorded in the test and assessment report BVS PP 03.2038 EG.

(9) The Essential Health and Safety Requirements are assured by compliance with:

EN 50014:1997+A1-A2	General requirements
EN 50019:2000	Increased safety
EN 50281-1-1:1998	Dust explosion protection

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate

Ex II 2GD EEx e II IP 68

(12) The marking of the equipment shall include the following:

Deutsche Montan Technologie GmbH
Essen, dated 25. February 2003

Signed: Jockers — DMT-Certification body

Signed: Eickhoff — Head of special services unit

This certificate may only be reproduced in its entirety and without change
Am Technologiepark 1, 45307 Essen, Telefon (0201)172-1416, Telefax (0201)172-1716

(13) Appendix to

(14) # EC-Type Examination Certificate

DMT 03 ATEX E 051 X

(15) 15.1 Subject and type
Cable entries type
HSK-M-Ex 1610.****.**
HSK-M-EMV-Ex 1616.****.**
HSK-M-EMV-D-Ex 1631.****.**
HSK-MZ-Ex 1611.****.**
HSK-MZ-EMV-Ex 1617.****.**
HSK-INOX-Ex 1612.****.** and
HSK-INOX-EMV-Ex 1672.****.**

The * will be replaced by digits to describe the colour, the thread dimensions and the accompanying diameter range of the cable.

15.2 Description
The cable entries are designed for the installation at electrical apparatus type of protection "increased safety" (EEx e II) and serve for the installation of fixed cables. The types HSK-MZ-Ex und HSK-MZ-EMV-Ex may also be used for the installation of non fixed cables. The cable entries are also intended for the use in combustible dust atmospheres.

15.3 Parameters
Permitted temperature range of the cable entries -20 °C to + 95 °C

The ambient temperature range of electrical apparatus is normally limited to -20 °C ≤ Ta ≤ +40 °C. The ambient temperature range can be exceeded for the use of these cable entries as long as the permitted temperature range of -20 °C to +95 °C of the cable entries is taken into account.

(16) Test and assessment report
BVS PP 03.2038 EG as of 25.02.2003

(17) Special conditions for safe use
The cable entries type
HSK-M-Ex 1610.****.**
HSK-M-EMV-Ex 1616.****.**
HSK-M-EMV-D-Ex 1631.****.**
HSK-INOX-Ex 1612.****.** and
HSK-INOX-EMV-Ex 1672.****.**
shall only be used for fixed installations.

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We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

45307 Essen, 02.09.2003
BVS-Ld/Mi E 1889

Deutsche Montan Technologie GmbH

Certification body

Special services unit

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EXAM
BBG Prüf- und Zertifizier GmbH

Translation

1st Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the EC-Type Examination Certificate
DMT 03 ATEX E 051 X

Equipment:	**Cable entries type HSK-M-Ex 1610.****.**, type HSK-M-EMV-Ex 1616.****.**, type HSK-M-EMV-D-Ex 1631.****.**, type HSK-MZ-Ex 1611.****.**, type HSK-MZ-EMV-Ex 1617.****.**, type HSK-INOX-Ex 1612.****.** and type HSK-INOX-EMV-Ex 672.****.****
Manufacturer:	**HUMMEL Elektrotechnik GmbH**
Address:	**D - 79183 Waldkirch**

Description
Now the stopping plugs and reductions can be manufactured according to the descriptive documents as mentioned in the pertinent test and assessment report in further variations.

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

EN 50014:1997+A1-A2	General requirements
EN 50019:2000	Increased safety
EN 50281-1-1:1998	Dust explosion protection

Parameters
Permitted temperature range of the cable entries -20 °C to + 95 °C

The ambient temperature range of electrical apparatus is normally limited to -20 °C ≤ Ta ≤ +40 °C. The ambient temperature range can be exceeded for the use of these cable entries as long as the permitted temperature range of -20 °C to +95 °C of the cable entries is taken into account.

Test and assessment report
BVS PP 03.2038 EG as of 25.03.2004

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(until 31.05.2003: Deutsche Montan Technologie GmbH Am Technologiepark 1 45307 Essen Germany)

EXAM
BBG Prüf- und Zertifizier GmbH

Special conditions for safe use
The cable entries type
HSK-M-Ex 1610.****.**
HSK-M-EMV-Ex 1616.****.**
HSK-M-EMV-D-Ex 1631.****.**
HSK-INOX-Ex 1612.****.** and
HSK-INOX-EMV-Ex 1672.****.**
shall only be used for fixed installations.

EXAM BBG Prüf- und Zertifizier GmbH
Bochum, dated 25. March 2004

Signed: Dr. Jockers
Certification body

Signed: Dr. Eickhoff
Special services unit

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 25.03.2004
BVS-Ld/Mi A 20030771

EXAM BBG Prüf- und Zertifizier GmbH

Certification body

Special services unit

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EXAM
BBG Prüf- und Zertifizier GmbH

Translation

2nd Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the EC-Type Examination Certificate
DMT 03 ATEX E 051 X

Equipment: **Cable entries type HSK-M-Ex 1610.****.**, type HSK-M-EMV-Ex 1616.****.**, type HSK-M-EMV-D-Ex 1631.****.**, type HSK-MZ-Ex 1611.****.**, type HSK-MZ-EMV-Ex 1617.****.**, type HSK-INOX-Ex 1612.****.** and type HSK-INOX-EMV-Ex 1672.****.**

Manufacturer: **HUMMEL Elektrotechnik GmbH**

Address: **79211 Denzlingen, Germany**

Description
Now the cable entries can be modified according to the descriptive documents as mentioned in the pertinent test and assessment report. Now they are also intended for the use in combustible dust atmospheres of category 1D.

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

EN 50014:1997+A1-A2	General requirements
EN 50019:2000	Increased safety 'e'
EN 50281-1-1:1998 +A1	Dust explosion protection

Marking
The marking of the equipment shall include the following:

II 2G EEx e II
II 1D IP 68

Test and assessment report
BVS PP 03.2038 EG as of 15.09.2005

Special conditions for safe use
The cable entries type
HSK-M-Ex 1610.****.**
HSK-M-EMV-Ex 1616.****.**
HSK-M-EMV-D-Ex 1631.****.**
HSK-INOX-Ex 1612.****.** and
HSK-INOX-EMV-Ex 1672.****.**
shall only be used for fixed installations.

EXAM BBG Prüf- und Zertifizier GmbH
Bochum, dated 15. September 2005

Signed: Migenda
Certification body

Signed: Dr.Eickhoff
Special services unit

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Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234 3696-105 Fax +49 234 3696-110
(until 31.05.2003: Deutsche Montan Technologie GmbH Am Technologiepark 1 45307 Essen)

[redacted]

EXAM
BBG Prüf- und Zertifizier GmbH

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 15.09.2005
BVS-Ld/Mi A 20050470

EXAM BBG Prüf- und Zertifizier GmbH

Certification body

Special services unit

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[redacted]

EXAM
BBG Prüf- und Zertifizier GmbH

Translation

3rd Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the EC-Type Examination Certificate
DMT 03 ATEX E 051 X

Equipment:	**Cable entries type HSK-M.Multi-Ex 1687.****.****
Manufacturer:	**HUMMEL Elektrotechnik GmbH**
Address:	**79183 Waldkirch, Germany**

Description
The cable entries can be manufactured also according to the descriptive documents as mentioned in the pertinent test and assessment report in further variations with multi entry units.

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

EN 50014:1997+A1-A2	General requirements
EN 50019:2000	Increased safety
EN 50281-1-1:1998 +A1	Dust explosion protection

Parameters

Permitted temperature range of the cable entries -20 °C to +95 °C

Reference to the permitted ambient temperature range in use:

- The ambient temperature range of electrical apparatus is normally limited to -20 °C ≤ Ta ≤ +40 °C. The upper value of the ambient temperature range can be exceeded 40 °C for the use of these cable entries as long as the permitted temperature range of -20 °C to +95 °C of the cable entries is taken into account.

The marking of the equipment shall include the following:

II 2G EEx e II
II 1D IP 68

Special conditions for safe use
The cable entries shall only be used for fixed installations. If the cable entries are used for multi cable entry all entry places shall be closed.

Test and assessment report
BVS PP 03.2038 EG, as of 30.01.2006

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(until 31.05.2003: Deutsche Montan Technologie GmbH Am Technologiepark 1 45307 Essen Germany)

EXAM
BBG Prüf- und Zertifizier GmbH

EXAM BBG Prüf- und Zertifizier GmbH
Bochum, dated 30. January 2005

Signed: Dr. Jockers
Certification body

Signed: Dr. Eickhoff
Special services unit

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 13.02.2006
BVS-Ld/Mi A 20040288

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Certification body

Special services unit

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EXAM
BBG Prüf- und Zertifizier GmbH

Translation

4th Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the EC-Type Examination Certificate
DMT 03 ATEX E 051 X

Equipment: **Cable entries type HSK-M-FLAKA-Ex 1689.****.****

Manufacturer: **HUMMEL Elektrotechnik GmbH**

Address: **79183 Waldkirch, Germany**

Description
Now the cable entries type HSK-M-Ex 1610.****.**. can be manufactured in further variations with entry units for flat cables according to the descriptive documents as mentioned in the pertinent test and assessment report.

In this variation the cable entries get the type marking:

Cable entries type HSK-M-FLAKA-Ex 1689.**.****

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

EN 50014:1997+A1-A2	General requirements
EN 50019:2000	Increased safety
EN 50281-1-1:1998 +A1	Dust explosion protection

The marking of the equipment shall include the following:

II 2G EEx e II
II 1D IP 68

Parameters
Permitted temperature range of the cable entries -20 °C to +95 °C

The ambient temperature range of electrical apparatus is normally limited to –20 °C ≤ Ta ≤ +40 °C. The upper value of the ambient temperature range can be exceeded 40 °C for the use of these cable entries as long as the permitted temperature range of –20 °C to +95 °C of the cable entries is taken into account.

Special conditions for safe use
The flat cable entries shall only be used for fixed installations.

Test and assessment report
BVS PP 03.2038 EG as of 18.05.2006

EXAM BBG Prüf- und Zertifizier GmbH
Bochum, dated 18. May 2006

Signed: Dr. Jockers — Certification body

Signed: Dr. Eickhoff — Special services unit

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(until 31.05.2003: Deutsche Montan Technologie GmbH Am Technologiepark 1 45307 Essen Germany)

EXAM
BBG Prüf- und Zertifizier GmbH

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 18.05.2006
BVS-Ld/Mi A20060231

EXAM BBG Prüf- und Zertifizier GmbH

Certification body

Special services unit

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(until 31.05.2003: Deutsche Montan Technologie GmbH Am Technologiepark 1 45307 Essen Germany)

DEKRA

Translation

5th Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the EC-Type Examination Certificate
DMT 03 ATEX E 051 X

Equipment:	**Screwed cable glands** **type HSK-M-Ex 1610.****.**** **type HSK-M-EMV-Ex 1616.****.**** **type HSK-M-EMV-D-Ex 1631.****.**** **type HSK-MZ-Ex 1611.****.**** **type HSK-MZ-EMV-Ex 1617.****.**** **type HSK-INOX-Ex 1612.****.**** **type HSK-INOX-EMV-Ex 1672.****.**** **type HSK-M-Multi-Ex 1687.****.**** and **type HSK-M-FLAKA-Ex 1689.****.****
Manufacturer:	**Hummel Elektrotechnik GmbH**
Address:	**79183 Waldkirch, Germany**

Description

The screwed cable glands (cable and conduit entries) are intended for being attached to apparatus that meets the requirements of the type of protection Increased Safety (Ex e II); they serve the purpose of leading in fixedly installed cables and conduits. The screwed cable glands may also be installed in areas where combustible dust is present. The main reason for issuing this supplement is the fact that there have been adjustments of the following standards: EN 60079-0:2006 General Requirements; EN 60079-7:2003 Increased Safety 'e'; EN 61241-0:2006 General Requirements and EN 61241-1:2004 Protection by Enclosures. In future, the screwed cable glands may be manufactured according to the documents listed in the test report if the marking is modified accordingly.

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

EN 60079-0:2006	General requirements
EN 60079-7:2003	Increased safety
EN 61241-0:2006	General requirements
EN 61241-1:2004	Protection by enclosures

The marking of the equipment shall include the following:

II 2G 1D Ex e II tD A20 IP68*

* IP68 Marking on packaging or accompanying operating manual

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DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234/3696-105 Fax +49 234/3696-110 E-mail zs-exam@dekra.com
(until 31.05.2003: Deutsche Montan Technologie GmbH Am Technologiepark 1 45307 Essen Germany)

Special conditions for safe use

The screwed cable glands (cable and conduit entries), which are provided with a cap nut without a strain-relief clamp, may only be used to lead in fixedly installed cables and conduits. Cap nuts with strain-relief clamps are only provided for types HSK-MZ-Ex 1611.****.** and HSK-MZ-EMV-Ex 1617.****.**.

Test and assessment report

BVS PP 03.2038 EG as of 13.02.2008

DEKRA EXAM GmbH

Bochum, dated 13th February 2008

Signed: Dr. Jockers	Signed: Dr. Eickhoff
Certification body	Special services unit

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 16.06.2008
BVS-Ld/Ar E 0864/08

DEKRA EXAM GmbH

Certification body	Special services unit

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