



(1) **EC-TYPE-EXAMINATION CERTIFICATE**
(Translation)

(2) Equipment and Protective Systems Intended for Use in
Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 04 ATEX 1112 X



(4) Equipment: Cable entry, type .MSKE(-L)

(5) Manufacturer: WISKA Hoppmann & Mulsow GmbH

(6) Address: Kisdorfer Weg 28, 24568 Kaltenkirchen, Germany

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC 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 confidential report PTB Ex 04-14332.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50014:1997 + A1 + A2

EN 50019:2000

EN 50281-1-1:1998

(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 the 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.

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



II 2 G/D EEx e II IP 68

Zertifizierungsstelle Explosionsschutz

By order:

Braunschweig, February 2, 2005

Dr.-Ing. U. Klausmeyer
Regierungsdirektor



(13)

SCHEDULE

(14)

EC-TYPE-EXAMINATION CERTIFICATE PTB 04 ATEX 1112 X

(15) Description of equipment

The cable entry of type .MSKE(-L) is made from brass. It is used for permanently wired cables entering electrical equipment of Increased Safety "e" type of protection.

The cable entry is installed in enclosures with threaded holes and through-holes. The cable entry consists of an adapter with metric connection thread, which comes in two lengths; a set screw and a polyamide sealing element.

Accessories used are an earthing element, multiple and specially shaped sealing elements, red plug, connection thread sealing rings and lock nut.

Technical data

Connection thread size	M12 x 1.5 to M63 x 1.5 M30x2 to M56x2
Connection thread length	5 mm to 15 mm
Minimum wall thickness of housing	
Threaded hole, metal housing	3 mm
Threaded hole, plastic housing	5 mm
Through-hole, metal housing	1 mm
Through-hole, plastic housing	2 mm
Suited for cable diameters	subject to nominal size, between 4 mm and 48 mm
Suited for equipment of device group II with the mechanical risk level	high
Operating temperature range	-40 °C to +75 °C
Protection against contact, foreign bodies and water	IP 68 according to EN 60529

(16) Test report PTB Ex 04-14332

(17) Special conditions for safe use

Only permanently wired cables may be entered. The user shall provide for the required strain relief.

(18) Essential health and safety requirements

Met by compliance with the aforementioned Standards.

Zertifizierungsstelle Explosionsschutz

By order:


Dr.-Ing. U. Klausmeyer
Regierungsdirektor

Braunschweig, February 2, 2005

1st SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 04 ATEX 1112 X

(Translation)

Equipment: Cable entry fitting, type .MSKE(-L)

Marking:  II 2 G EEx e II

 II 2 D IP 68

Manufacturer: WISKA Hoppmann & Mulsow GmbH

Address: Kisdorfer Weg 28, 24568 Kaltenkirchen, Germany

Description of supplements and modifications

The explosion-protected cable entry fitting, type .MSKE(-L), made from brass, has been re-inspected on the basis of Standards EN 60079-0, EN 60079-7, EN 61241-0 and EN 61241-1.

The marking will thus change to:

 II 2 G Ex e II

 II 2 D Ex tD A21 IP 68

The Technical Data have not changed.

The Special Conditions continue to apply.

Applied standards

EN 60079-0:2006

EN 60079-7:2007

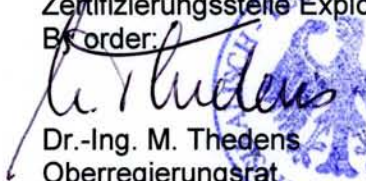
EN 61241-0:2006

EN 61241-1:2004

Test report: PTB Ex 08-18084

Zertifizierungsstelle Explosionsschutz

By order:


Dr.-Ing. M. Thedens
Oberregierungsrat

Braunschweig, June 27, 2008

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2. SUPPLEMENT


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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 04 ATEX 1112 X

(Translation)

Equipment: Cable entry fitting, type .MSKE(-L)

Marking:  II 2 G Ex e II

 II 2 D Ex tD A21 IP 68

Manufacturer: WISKA Hoppmann & Mulsow GmbH

Address: Kisdorfer Weg 28, 24568 Kaltenkirchen, Germany

Description of supplements and modifications

The explosion-protected cable entry fitting, type .MSKE(-L), made from brass is supplemented by the following:

- 1) The name of the type is changed to: Type .MSKE(S)(-L)(-RDE) .. (LT)(.....)
- 2) The cable entry fitting is extended by the variant for the low temperature range (designation LT).
The working temperature range for this variant is -60 °C to +75 °C.
- 3) The cable entry fitting will be supplemented by a variant with a cap nut with anti-kink spiral (designation S).
- 4) The cable entry fitting will be supplemented by a variant with reduction sealing insert (designation -RDE).
- 5) The clamping range of type EMSKE(S)(-L) 63 (LT)(EMV-Z) and MMSKE(S)(-L) 56 (LT)(EMV-Z) changes to 34 - 48 mm.
- 6) The cable entry fitting is supplemented by a variant with NPT-connection thread (designation N instead of the first point).

Nomenclature

.	M	S	K	E	(S)	(-L)	(-RDE)	..	(LT)	(.....)
1	2	3	4	5	6	7	8	9	10	11

2. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 04 ATEX 1112 X

- 1: Specification of the connection thread
 E = metrical connection thread according to EN 60423
 M = metrical connection thread according to Maritime Standard DIN 89320
 N = NPT-connection thread according to ANSI /ASME B1.20.1-1983
- 2: Specification of the cable glands made from brass
- 3: Specification of the label SPRINT
- 4: Specification of the cable gland
- 5: Specification of the Ex-cable gland
- 6: Optional specification for the design of the cable and entry fitting with cap nut with anti-kink spiral
- 7: Optional specification for a long connection thread
- 8: Optional details of equipment with a reduction sealing insert
- 9: Specification of the size of the connection thread
- 10: Optional details of low temperature design
- 11: Optional specification of a special equipment, i.e.
 EMV-Z for the equipment with earthing insert
 M for multiple sealing insert
 S for special sealing insert
 FD for sealing insert
 Specification of the largest size of the cable
 Specification of the cable type

Technical data

Size of connection thread	M12 x 1,5 to M63 x 1,5
.....	M30x2 to M56x2
Length of connection thread	5 mm to 15 mm
Minimum wall thickness of enclosure	
Threaded hole, metal enclosure.....	3 mm
Threaded hole, plastic enclosure	5 mm
Through-hole, metal enclosure	1 mm
Through-hole, plastic enclosure	2 mm
Suited for cable diameters	depending on nominal size
.....	1 mm to 48 mm
Suited for equipment of device group II	
with mechanical risk level	high
Working temperature range	-40 °C to +75 °C
Working temperature range variant LT.....	-60 °C to +75 °C
Protection against contact, entry of solids	
and water.....	IP 68 nach EN 60529

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

2. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 04 ATEX 1112 X

Size	Torque (Nm)	Clamping range (mm)	
		.MSKE(S)(-L)	.MSKE(S)(-L)-RDE
EMSKE 12, NMSKE 1/4	4	4 - 7	1 - 3
EMSKE 16, MMSKE 16, NMSKE 3/8	4	5 - 10	2 - 6
EMSKE 20, MMSKE 18, NMSKE 1/2	8	6 - 13	4 - 8
EMSKE 25, MMSKE 24, NMSKE 3/4	10	10 - 17	7 - 12
EMSKE 32, MMSKE 30, NMSKE 1	20	13 - 21	9 - 14
EMSKE 40, MMSKE 36, NMSKE 1 1/4	20	16 - 28	12 - 20
EMSKE 50, MMSKE 45, NMSKE 1 1/2	30	21 - 35	16 - 25
EMSKE 63, MMSKE 56, NMSKE 2	40	34 - 48	28 - 38
EMSKE(-L) 20 MFD 03/040	8	3 x 2,5 - 4	--
EMSKE(-L) 25 MFD 03/070	10	3 x 5 - 7	--
EMSKE(-L) 25 MFD 04/060	10	4 x 4 - 6	--
EMSKE(-L) 32 MFD 04/070	20	4 x 5 - 7	--
EMSKE(-L) 32 MFD 06/060	20	6 x 5 - 6	--
EMSKE(-L) 40 MFD 07/070	20	7 x 5 - 7	--
EMSKE(-L) 40 MFD 08/060	20	8 x 5 - 6	--
EMSKE(-L) 20 SFD 01/ASi	8	1 x Asi-Bus	--

Special conditions for safe use

Only permanently wired cables may be entered. The user shall provide for the required strain relief.

Applied standards


EN 60079-0:2006, EN 60079-7:2007, EN 61241-0:2006, EN 61241-1:2004

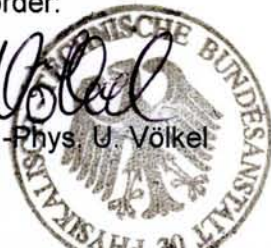
Assessment and test report: PTB Ex 09-19080

Zertifizierungssektor Explosionsschutz

Braunschweig, July 15, 2009

By order:


Dipl.-Phys. U. Völkel



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EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

3rd SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 04 ATEX 1112 X (Translation)

Equipment: Cable gland type *MSKE(S)(-L)(-RDE) ** (LT)(*****)

Marking:  II 2 G Ex e II
 II 2 D Ex tD A21 IP68

Manufacturer: WISKA Hoppmann & Mulsow GmbH

Address: Kisdorfer Weg 28, 24568 Kaltenkirchen, Germany

Description of supplements and modifications

The cable gland type *MSKE(S)(-L)(-RDE) ** (LT)(*****) is modified in the following respects:

- 1) The type designation will be changed to: type *MSKE(S)(-L)(-**)(-RDE) **(-**) (LT) (****).
- 2) The cable gland shall be supplemented by a design with PT-connection thread (designation P in place of the first point).
- 3) As an accessory the blanking plug type BS ** is added.
- 4) The cable gland has been re-assessed according to EN 60079-0:2012 and EN 60079-31:2009.

Thus the marking changes to:

 II 2 G Ex e IIC Gb

 II 2 D Ex tb IIC Db

Nomenclature

*	M	S	K	E	(S)	(-L)	(-**)	(-RDE)		**	(-**)		(LT)		(*****)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

1 = Type of connection thread

E = metric connection thread according to EN 60423

N = NPT connection thread according to ANSI B1.20.1

P = Pg connection thread according to DIN 40430

M = metric connection thread according to DIN 89280

- 2 = material
 - M = brass (Messing)
- 3 = code for the cable gland system
 - S = WISKA SPRINT System
- 4 = code for the product type
 - K = cable gland (Kabelverschraubung)
- 5 = code for the application area
 - E = explosion proof area
- 6 = optional declaration for a special cable protection
 - S = with anti-kink spiral
- 7 = optional declaration for a special connection thread
 - L = long connection thread (only for thread E and P)
- 8 = declaration of the material surface
 - Ni = nickel plated (standard for thread E, N and P)
 - Cr = chromium plated
 - Bl = blank (standard for thread M)
- 9 = optional declaration for a additional reduced sealing insert
 - RDE = reduced sealing insert
- 10 = space
- 11 = nominal size of the connection thread, for example:
 - 16 = metric thread M16x1,5
 - 40 = metric thread M40x1,5
 - 1/2 = NPT thread 1/2"
 - 1 1/4 = NPT thread 1 1/4"
 - 13,5 = Pg thread Pg 13,5
 - etc.
- 12 = optional declaration of the sealing range (base is the metric sealing range) – obligatory for Pg- and enlargement threads, not obligatory for cable glands "Normal"-E, N and M, for example:
 - 12 = sealing range from the cable gland M12
 - 25 = sealing range from the cable gland M25
 - etc.
- 13 = space
- 14 = optional declaration of a special temperature range
 - LT = low temperature configuration (-60°C)
- 15 = space
- 16 = optional declaration of the EMC configuration
 - EMV-Z = configuration with earthing cones
 - EMV-S = configuration with contact cage made of stainless steel
 - EMV-C = configuration with contact cage made of copper-beryllium

Technical data

Connection thread size	Metric, EN 60423: M12x1.5 to M75x1.5 Metric, DIN 89280: M16x1,5 to M72x2 NPT, ANSI 1.20.1: NPT ¼" to NPT 2 ½" Pg, DIN 40430: Pg 7 to Pg 48
Connection thread length	5 mm to 15 mm
Minimum wall thickness of housing	Threaded hole, metal housing 3 mm Threaded hole, plastic housing : 5 mm Through-hole, metal housing: 1 mm Through hole, plastic housing: 2 mm
Suited for cable diameters	Subject to nominal size, between 1 mm and 62 mm
Suited for equipment of device group IIC with the mechanical risk level	high
Operating temperature range	Normal type -40°C ... +75°C LT type -60°C ... +75°C
Ingress protection	IP66 / IP68 (5bar, 30min) according to EN 60529

Sealing range / Anchorage range [mm]	Type of cable gland	Reduced sealing range / Anchorage range [mm] (-RDE)	Type of cable gland	Test torques [Nm]
4 ... 7	EMSKE(S)(-L) 12 (LT) (****) PMSKE(S)(-L) 7-12 (LT) (****) NMSKE(S) 1/4 (LT) (****)	1 ... 3	EMSKE(S)(-L)-RDE 12 (LT) (****) PMSKE(S)(-L)-RDE 7-12 (LT) (****) NMSKE(S)-RDE 1/4 (LT) (****)	4
5 ... 10	EMSKE(S)(-L) 16 (LT) (****) EMSKE(S)(-L) 12-16 (LT) (****) NMSKE(S) 3/8 (LT) (****) PMSKE(S)(-L) 7-16 (LT) (****) PMSKE(S)(-L) 9-16 (LT) (****) PMSKE(S)(-L) 11-16 (LT) (****) MMSKE(S) 16 (LT) (****)	2 ... 6	EMSKE(S)(-L)-RDE 16 (LT) (****) EMSKE(S)(-L)-RDE 12-16 (LT) (****) NMSKE(S)-RDE 3/8 (LT) (****) PMSKE(S)(-L)-RDE 7-16 (LT) (****) PMSKE(S)(-L)-RDE 9-16 (LT) (****) PMSKE(S)(-L)-RDE 11-16 (LT) (****) MMSKE(S)-RDE 16 (LT) (****)	4
6 ... 13	EMSKE(S)(-L) 20 (LT) (****) EMSKE(S)(-L) 16-20 (LT) (****) NMSKE(S) 1/2 (LT) (****) PMSKE(S)(-L) 11-20 (LT) (****) PMSKE(S)(-L) 13,5-20 (LT) (****) PMSKE(S)(-L) 16-20 (LT) (****) MMSKE(S) 18 (LT) (****)	4 ... 8	EMSKE(S)(-L)-RDE 20 (LT) (****) EMSKE(S)(-L)-RDE 16-20 (LT) (****) NMSKE(S)-RDE 1/2 (LT) (****) PMSKE(S)(-L)-RDE 11-20 (LT) (****) PMSKE(S)(-L)-RDE 13,5-20 (LT) (****) PMSKE(S)(-L)-RDE 16-20 (LT) (****) MMSKE(S)-RDE 18 (LT) (****)	8
10 ... 17	EMSKE(S)(-L) 25 (LT) (****) EMSKE(S)(-L) 20-25 (LT) (****) NMSKE(S) 3/4 (LT) (****)	7 ... 12	EMSKE(S)(-L)-RDE 25 (LT) (****) EMSKE(S)(-L)-RDE 20-25 (LT) (****) NMSKE(S)-RDE 3/4 (LT) (****)	10

	PMSKE(S)(-L) 13,5-25 (LT) (*****) PMSKE(S)(-L) 16-25 (LT) (*****) PMSKE(S)(-L) 21-25 (LT) (*****) MMSKE(S) 24 (LT) (*****)		PMSKE(S)(-L)-RDE 13,5-25 (LT) (*****) PMSKE(S)(-L)-RDE 16-25 (LT) (*****) PMSKE(S)(-L)-RDE 21-25 (LT) (*****) MMSKE(S)-RDE 24 (LT) (*****)	
13 ... 21	EMSKE(S)(-L) 32 (LT) (*****) EMSKE(S)(-L) 25-32 (LT) (*****) NMSKE(S) 1 (LT) (*****) PMSKE(S)(-L) 21-32 (LT) (*****) MMSKE(S) 30 (LT) (*****)	9 ... 14	EMSKE(S)(-L)-RDE 32 (LT) (*****) EMSKE(S)(-L)-RDE 25-32 (LT) (*****) NMSKE(S)-RDE 1 (LT) (*****) PMSKE(S)(-L)-RDE 21-32 (LT) (*****) MMSKE(S)-RDE 30 (LT) (*****)	20
16 ... 28	EMSKE(S)(-L) 40 (LT) (*****) EMSKE(S)(-L) 32-40 (LT) (*****) NMSKE(S) 1 1/4 (LT) (*****) PMSKE(S)(-L) 29-40 (LT) (*****) MMSKE(S) 36 (LT) (*****)	12 ... 20	EMSKE(S)(-L)-RDE 40 (LT) (*****) EMSKE(S)(-L)-RDE 32-40 (LT) (*****) NMSKE(S)-RDE 1 1/4 (LT) (*****) PMSKE(S)(-L)-RDE 29-40 (LT) (*****) MMSKE(S)-RDE 36 (LT) (*****)	20
21 ... 35	EMSKE(S)(-L) 50 (LT) (*****) EMSKE(S)(-L) 40-50 (LT) (*****) NMSKE(S) 1 1/2 (LT) (*****) PMSKE(S)(-L) 36-50 (LT) (*****) PMSKE(S)(-L) 42-50 (LT) (*****) MMSKE(S) 45 (LT) (*****)	16 ... 25	EMSKE(S)(-L)-RDE 50 (LT) (*****) EMSKE(S)(-L)-RDE 40-50 (LT) (*****) NMSKE(S)-RDE 1 1/2 (LT) (*****) PMSKE(S)(-L)-RDE 36-50 (LT) (*****) PMSKE(S)(-L)-RDE 42-50 (LT) (*****) MMSKE(S)-RDE 45 (LT) (*****)	30
34 ... 48	EMSKE(S)(-L) 63 (LT) (*****) EMSKE(S)(-L) 50-63 (LT) (*****) NMSKE(S) 2 (LT) (*****) PMSKE(S)(-L) 48-63 (LT) (*****) MMSKE(S) 56 (LT) (*****)	28 ... 38	EMSKE(S)(-L)-RDE 63 (LT) (*****) EMSKE(S)(-L)-RDE 50-63 (LT) (*****) NMSKE(S)-RDE 2 (LT) (*****) PMSKE(S)(-L)-RDE 48-63 (LT) (*****) MMSKE(S)-RDE 56 (LT) (*****)	40
48 ... 62	EMSKE(S)(-L) 75 (LT) (*****) EMSKE(S)(-L) 63-75 (LT) (*****) NMSKE(S) 2 1/2 (LT) (*****) MMSKE(S) 72 (LT) (*****)	---	---	50

Special conditions for safe use

Only permanently wired cables may be entered. The user shall provide for the required strain relief.

Degree of protection will be safeguarded only when sealing and cable entry fittings are properly fitted. The manufacturer's instructions have to be observed.

Applied standards

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

Test report: PTB Ex 13-11305

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, July 25, 2013

Dr.-Ing. U. Klausmeyer
Direktor und Professor



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EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.