

[1] **EC-TYPE EXAMINATION CERTIFICATE**



[2] **Equipment or Protective System intended for use
in Potentially Explosive Atmospheres
Directive 94/9/EC**

[3] EC-Type Examination Certificate Number: **DEMKO 06 ATEX 137482X**

[4] Equipment or Protective System: **Radio Accessories**

[5] Manufacturer: **Otto Controls Division of Otto Engineering**

[6] Address: **2 East Main Street, Carpentersville, IL 60110, USA**

[7] This equipment or protective system and any acceptable variation there to is specified in the schedule to this certificate and the documents therein referred to.

[8] UL International Demko A/S, notified body number 0539 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to 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 confidential report no. 04CA32183

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 50014: 1997 E incl. A1+A2 **EN 50020: 2002 E**

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system 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 or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by the certificate.

[12] The marking of the equipment or protective system shall include the following:

⊕ II 2 G EEx ia IIB T4

On behalf of UL International Demko A/S

Herlev, 2006-05-09


Karina Christiansen
Certification Manager

UL International Demko A/S

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Certificate: 06 ATEX 137482

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Schedule

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[14]

EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 06 ATEX 137482X

[15]

Description of Equipment or protective system

These devices are intrinsically safe radio accessories intended for use with radios that have intrinsically safe connection facilities.

Types comprising the certification:

Description	Model Numbers
Headset	V4-10001-S, V4-10002-S, V4-10006-S, V4-10024-S, V4-10080-S
	V4-10081-S, V4-10092-S, V4-10093-S, V4-10145-S, V4-10148-S
	V4-10150-S, V4-10313-S, V4-10316-S, V4-10317-S, V4-10351-S
	V4-10364-S, V4-10367-S, V4-10391-S, V4-10392-S, V4-10430-S
	V4-10431-S, V4-10433-S, V4-10434-S, V4-10469-S, V4-10470-S
Skull Mic	V4-10420-S, V4-10432-S
Throat Mic	V1-T12MA117-S, V1-T12MA137-S, V1-T12MJ137-S

Temperature range:

The ambient temperature range of these devices is -40 °C to +40 °C.

Electrical data:

Intrinsically safe specifications:

Headset	Skull Mic	Throat Mic
U_i : 9,6V	U_i : 9,6V	U_i : 9,6V
I_i : 0,24A	I_i : 0,24A	I_i : 0,24A
P_i : 1,3W	P_i : 1,3W	P_i : 1,3W
L_i : 10mH	L_i : 1,1mH	L_i : 0,35mH
C_i : 13,0 μ F	C_i : 13,0 μ F	C_i : 13,0 μ F

Routine tests:

None.

[16]

Report No.

Project Report No.: 04CA32183 (Hazardous Location Testing)

UL International Demko A/S

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Certificate: 06 ATEX 137482X
Report: 0431283

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Schedule

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Drawings:

Number	Date	Description
804185	2006-04	Headset Installation Manual
V4-ISHEADSETOH	2006-03-21, Revision A	Headset Safety Critical Design
V4-ISHEADSETBH	2006-03-21, Revision A	Headset Safety Critical Design
804204	2006-04	Skull Mic Installation Manual
V4-ISSKULLMIC	2006-03-20, Revision A	Skull Mic Safety Critical Design
804186	2006-04	Throat Mic Installation Manual
V1-ISTHROATMIC	2006-03-21, Revision A	Throat Mic Safety Critical Design

[17] Special conditions for safe use:

These devices are intended for use only as specified in the installation manual as follows:

Headset:	Installation Manual Number 804185
Skull Mic :	Installation Manual Number 804204
Throat Mic :	Installation Manual Number 804186

The above OTTO ATEX certified radio accessory products are only intended for connection to intrinsically safe radios. The radio accessory products have been evaluated for intrinsic safety and can be used with any ATEX certified radio that has intrinsic safety (entity) parameters at the accessory connection conforming to the following:

$$\begin{array}{lll} U_o \leq U_i & I_o \leq I_i & P_o \leq P_i \\ L_o \geq L_i & C_o \geq C_i & \end{array}$$

[18] Essential Health and Safety Requirements

Concerning ESR this Schedule verifies compliance with the Ex standards only. The manufacturer's Declaration of Conformity declares compliance with other relevant Directives.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 94/9/EC of the European Parliament and the Council of 23 March 1994.

On behalf of UL International Demko A/S

Herlev, 2006-05-09

Karina Christiansen
Certification Manager

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