EC-TYPE EXAMINATION CERTIFICATE

[2]

[1]

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



- [3] EC-Type Examination Certificate Number: DEMKO 05 ATEX 137483X
- [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.
- 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:

On behalf of UL International Demko A/S

Herlev, 2005-07-28

Karina Christiansen Certification Manager

UL International Demko A/S

Lyskaer 8, P.O. Box 514 DK-2730, Herley, Denmark Telephone: +45 44856565 Fax. +45 44856500 Certificate: 05 ATEX 137483



Schedule

[14]

EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 05 ATEX 137483X

[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		
-	V2-10023-S, V2-10024-S, V2-10025-S, V2-10031-S, V2-10034-S		
	V2-10068-S, V2-10112-S, V2-10134-S, V2-10139-S, V2-10162-S		
Speaker/Mic	V2-10168-S, V2-10228-S, V2-10230-S, V2-10234-S, V2-10240-S		
	V2-10241-S, V2-10256-S, V2-10273-S, V2-10274-S, V2-10278-S		
	V2-10316-S		
Ranger Headset	V4-NR2BA1-S, V4-NR2CD1-S, V4-NR2CE1-S, V4-NR2MJ1-S		
Kanger Freadset	V4-10421-S		
Earphone Kit	V1-10432-S		
Hurricane Headset	V4-HC2CD1-S, V4-HC2CE1-S, V4-HC2KB1-S, V4-HC2KB3B-S		
riurricane rieagset	V4-HC2MA3B-S, V4-HC2MA5-S, V4-HC2MJ5-S		

Temperature range:

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

Electrical data:

Intrinsically safe specifications:

Speak	er/Mic	Ranger Headset	Earphone Kit	Hurricane Headset
U_i :	9,6V	U _i : 9,6V	U: 9,6V	U: 9,6V
Ι, :	0,22A	$I_i : 0,11A$	I_i : 0,22A	$I_{i} : 0,11A$
P_i :	1,3W	$P_i: 1,3W$	P _i : 1,3W	P ₁ : 1,3W
L :	0,35mH	$L_i: 1,8mH$	$L_{i}: 0.35 mH$	$L_i: 1, lmH$
C_i :	1,8µF	$C_i: 1.8\mu F$	$C_i: 1.8\mu F$	$C_i: 1.8\mu F$

Routine tests:

None.

[16] Report No.

Project Report No.: 04CA31283 (Hazardous Location Testing)

Schedule

EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 05ATEX 137483X

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D	rawings:
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Number	Date	Description
804184	2006-04	Speaker/Mic Installation Manual
V2-ISSPEAKER	2006-03-17, Revision A	Speaker/Mic Safety Critical Design
804205	2006-04	Ranger Headset Installation Manual
V4-ISRANGER	2006-03-17, Revision A	Ranger Headset Safety Critical Design
804206	2006-04	Earphone Kit Installation Manual
V1-ISEARPHONE	2006-03-31, Revision A	Earphone Kit Safety Critical Design
804203	2006-04	Hurricane Headset Installation Manual
V4-ISHURRICANE	2006-03-24, Revision A	Hurricane Headset Safety Critical Design

[17] Special conditions for safe use:

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

Speaker /Mic:	Installation Manual Number 804184
Ranger Headset:	Installation Manual Number 804205
Earphone Kit:	Installation Manual Number 804206
Hurricane Headset:	Installation Manual Number 804203

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:

	•	
$U_o \leq U_i$	$I_o \leq I_i$	$P_o \leq P_i$
**************************************	3-24-20-2	-01
$L_{\alpha} \geq L$	$C_{\alpha} \geq C$	

[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

Herley, 2006-05-10

Karina Christiansen Certification Manager

UL International Demko A/S

Report: 0431283



Certificate: 05 ATEX 137483X