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**Intrinsically Safe**  
6700 Series  
Approval Documents  
**Product Bulletin**

David Clark is proud to announce that the 6700 Series has now received Intrinsic Safety Approvals for not only the US and Canada, IS and CSA respectively, but now also has ATEX and IECex approvals!

For your convenience we've put all of the approvals into the following pages of this one handy document.

Page	Approval Document
2	United States CERTIFICATE OF COMPLIANCE
4	Canada CERTIFICATE OF COMPLIANCE
6	IECex Quality Assessment Report
7	ATEX Examination Certificate
9	IS CONTROL DWG. 06600G-02
10	IS CERT DWG. 06600G-03

Please note that the 6700 line is growing continuously. With these new approvals we will be adding new adapters and headsets as used in these approval territories. If you don't find the solution you are looking for, feel free to contact one of our [Regional Sales Managers](#) to find out more.

We look forward to helping you [Find Your Solution!](#)



**Made in USA**



Member of the FM Global Group

FM Approvals  
1151 Boston Providence Turnpike  
P.O. Box 9102 Norwood, MA 02062 USA  
T: 781 762 4300 F: 781-762-9375 [www.fmapprovals.com](http://www.fmapprovals.com)

# CERTIFICATE OF COMPLIANCE

## HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

**Model 40416G-abc, 40918G-abc, 40256-abc and 12520G-abc. Head Set.**

IS / I,II,III / 1 / ABCDEFG / T4 Ta = 60 °C; - 0880G-02 Entity/System

I / 0 / AEx ia IIC / T4 Ta = 60 °C; - 0880G-02 Entity/System

Where a, b, and c are non-safety related

Entity Parameters:

Ui (Vmax) = 10 V, Ii (Imax) = 100 mA, Pi = 0.25 W, Ci = 3 µF, Li = 3.8 mH

Equipment Ratings:

Intrinsically safe, with entity parameters for use in Class I, II, and III, Division 1, Groups A-G and Class I, Zone 0, AEx ia Group IIC, in accordance with manufacturer's Control Drawing No. 0880G-02

FM Approved for:

David Clark Company Incorporated  
360 Franklin Street, Worcester, MA 01615-0054 USA



This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

Class 3600	1998
Class 3610	2010

Original Project ID: 3043014

Approval Granted: July 15, 2011

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
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FM Approvals LLC

Robert L. Martell Jr.  
Assistant Vice President

July 15, 2011

Date



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# CERTIFICATE OF COMPLIANCE

## HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS

This certificate is issued for the following equipment:

**Model 40416G-abc, 40918G-abc, 40256-abc and 12520G-abc. Head Set.**

IS / I,II,III / 1 / ABCDEFG / T4 Ta = 60 °C; - 0660G-02 Entity  
I / 0 / Ex ia IIC / T4 Ta = 60 °C; - 0660G-02 Entity

Where a, b, and c are non-safety related

Entity Parameters:

Ui (Vmax) = 10 V, Ii (Imax) = 100 mA, Pi = 0.25 W, Ci = 3 µF, Li = 3.8 mH

Equipment Ratings:

Intrinsically safe, with entity parameters for use in Class I, II, and III, Division 1, Groups A-G and Class I, Zone 0, Ex ia Group IIC, in accordance with manufacturer's Control Drawing No. 0660G-02

FM Approved for:

David Clark Company Incorporated  
360 Franklin Street, Worcester, MA 01615-0054 USA

This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

CAN/CSA C22.2 No. 157-92	2006
C22.2 No. 142-M1987	2009
CAN/CSA-E80079-0-07	2007
CAN/CSA-E80079-11-02 (R2006)	2006

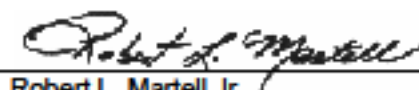
Original Project ID: 3043014C

Approval Granted: July 15, 2011

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
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FM Approvals LLC



Robert L. Martell Jr.  
Assistant Vice President

July 15, 2011

Date

## QAR :

QAR Reference Number *: (automatic numbering)	GB/FME/QAR12.0005/00
Related QARs:	
Status*:	Issued
QAR Free Reference Number*:	3043046
Audit Date*: (yyyy-mm-dd)	2012-01-06
Date of Issue*: (yyyy-mm-dd)	2012-01-31
Valid until*: (yyyy-mm-dd)	2015-01-01
Site(s) audited*:	David Clark Company Inc. 360 Franklin Street, Worcester, MA 01615 United States of America
Issuing ExCB*:	FME - FM Approvals Ltd
Manufacturer*:	David Clark Company Inc. 360 Franklin Street, Worcester, MA 01615 United States of America
Country of Manufacture*:	United States of America
Product Information*:	Headsets and Adapters for Use in Hazardous Locations.
Protection concept*:	Intrinsic Safety 'ia' & Non-Spraking 'nA'.
Related IECEX Certificates: (automatic linking)	-
Related Certificates: (manual insertion)	
Related IECEX Certificates for all previous versions:	-
Comment:	
Attachment:	

# 1 EC-TYPE EXAMINATION CERTIFICATE



2 Equipment or Protective systems intended for use in Potentially  
Explosive Atmospheres - Directive 94/9/EC

3 EC-Type Examination Certificate No: FM11ATEX0072X

4 Equipment or protective system: 40416G, 12520G, 40918G and 40256G Headset and Adapters  
(Type Reference and Name)

5 Name of Applicant: David Clark Company Inc.

6 Address of Applicant: 360 Franklin Street  
Worcester, MA 01615-0054  
USA

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

8 FM Approvals Ltd, notified body number 1725 in accordance with Article 9 of 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 intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report number:

3043834EC dated 17 April 2012


9 Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN 60079-0: 2009 & EN 60079-11: 2007

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 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 this certificate.

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

 II 1 G Ex ia IIC T4 Ga Ta = -20°C to +60°C

**Andrew Was**  
Certification Manager, FM Approvals Ltd.

Issue date: 26<sup>th</sup> April 2012

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

FM Approvals Ltd. 1 Windsor Dials, Windsor, Berkshire, UK. SL4 1RS  
T: +44 (0) 1753 750 000 F: +44 (0) 1753 868 700 E-mail: [alex@fmaprovals.com](mailto:alex@fmaprovals.com) [www.fmaprovals.com](http://www.fmaprovals.com)

# **SCHEDULE**



Member of the FM Global Group

to EC-Type Examination Certificate No. FM11ATEX0072X

## **13 Description of Equipment or Protective System:**

The Model 40418G, 12520G, 40918G and 40258G headset assemblies are for use with ATEX Certified intrinsically safe radios. The 40418G and 12520G headsets are provided in over the head and behind the head configurations with various connector styles to accommodate intrinsically safe radios. The model 40918G and 40258G adapters are switch and cable accessories to provide different functional configurations that are electrically the same. The ambient operating temperature range of the equipment is -20°C to 60°C.

Entity Parameters:

$$U_i (V_{max}) = 10 \text{ V}, I_i (I_{max}) = 100 \text{ mA}, P_i = 0.25 \text{ W}, C_i = 3 \mu\text{F}, L_i = 3.8 \text{ mH}$$

## **14 Special Conditions for Safe Use:**

1. *The non-metallic parts of the Headset are considered to constitute an electrostatic discharge hazard. Clean only with damp cloth.*

## **15 Essential Health and Safety Requirements:**

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

## **16 Test and Assessment Procedure and Conditions:**

This EC-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Ltd's ATEX Certification Scheme.

## **17 Approved Drawings**

Details of the approved drawings and documents are identified in the confidential report identified in item 8.

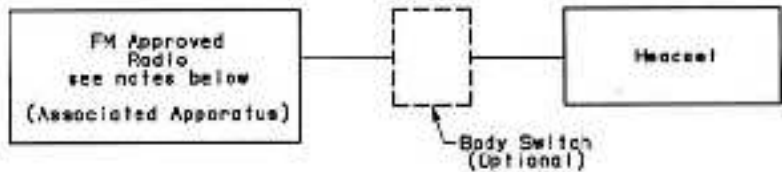
**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

FM Approvals Ltd, 1 Windsor Dials, Windsor, Berkshire, UK, SL4 1RS  
T: +44 (0) 1753 750 000 F: +44 (0) 1753 868 700 E-mail: [atex@fmaprovals.com](mailto:atex@fmaprovals.com) [www.fmaprovals.com](http://www.fmaprovals.com)



REVISIONS			
SYN	DESCRIPTION	DATE	APPROVED
A	ENGINEERING RELEASE PER DC-14392	18 MAY 11	JD WJL
B	RE-RELEASE PER DC-14392	19 MAY 11	JD NAC
C	RE-RELEASE PER DC-14392	30 JUN 11	DL NAC
D	SEE DCN 14540	23 MAY 12	DL JD

I.S. Entity Parameters  
 $V_{max}$  or  $U_1=10V$   
 $I_{max}$  or  $I_1=100mA$   
 $C_1 = 3\mu F$   
 $L_1 = 2mH$   
 $P_{max}$  or  $P_1=0.25W$   
 (Note 1)



## HAZARDOUS (CLASSIFIED) LOCATION

### Radio/Headset Connected under the entity Concept

Class I, Division 1, Groups A, B, C and D T4 e Tambient 60C  
 Class I, Zone O, Group IIC T4 e Tambient 60C  
 Class II, Division 1, Groups E, F, and G T4 e Tambient 60C  
 Class III, Division 1 T4 e Tambient 60C

### Radio/Headset Connected under the System Concept with Motorola Proseries Radios.

Class I, Division 1, Groups C and D T3C e Tambient 60C  
 Class II, Division 1, Groups E, F, and G T3C e Tambient 60C  
 Class III, Division 1 T3C e Tambient 60C

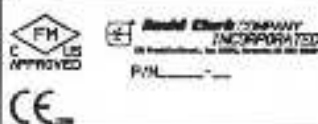
Ex II 1 G Ex Ia IIC T4 G<sub>o</sub> -20°C ≤ T<sub>a</sub> ≤ +60°C FM IATEX0072X  
 Ex Ia IIC T4 G<sub>o</sub> -20°C ≤ T<sub>a</sub> ≤ +60°C IECEx FMS II.0027X

### Notes:

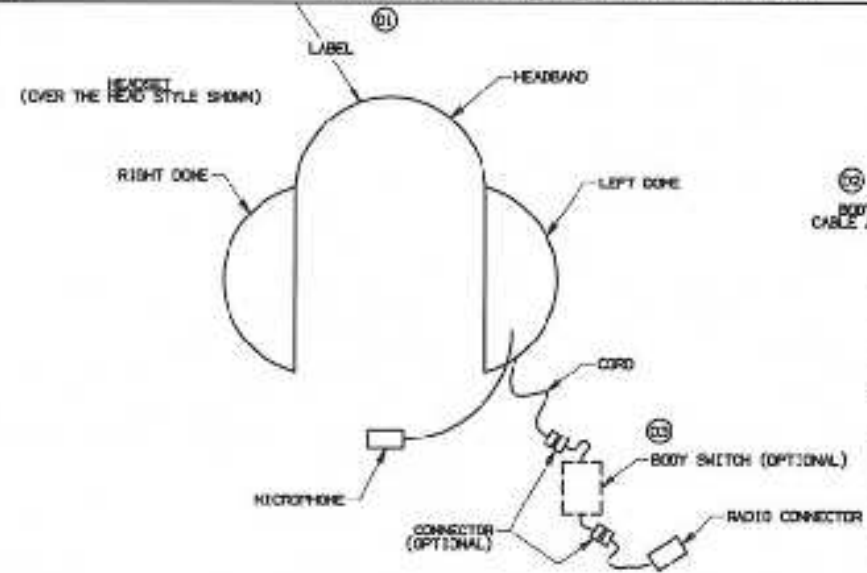
- $V_{max}$  or  $U_1 > V_1$ ;  $I_{max}$  or  $I_1 > I_1$ ;  $(C_1 \text{ of all loops} + C_{\text{cable}}) < C_a$  or  $C_b$ ;  $(L_1 \text{ of all loops} + L_{\text{cable}}) < L_a$  or  $L_b$ ;  $P_{max}$  or  $P_1 > P_a$
- The configuration of associated Apparatus must be FM Approved (CSA Certified when installed in Canada) under Entity Concept.
- No revision to this drawing is permitted without FM approval.
- The non-metallic parts of the Headset are considered to constitute an electrostatic discharge hazard. Clean only with a damp cloth.

DO NOT SCALE DRAWING				<table border="1"> <thead> <tr> <th>QTY</th> <th>ITEM</th> <th>PART NO.</th> <th>DESCRIPTION</th> <th>MATERIAL</th> <th>SPECIFICATION</th> </tr> </thead> <tbody> <tr> <td colspan="6" style="text-align: right;">LIST OF MATERIALS DC-14392</td> </tr> <tr> <td colspan="2">DRAWN</td> <td colspan="2">DATE</td> <td colspan="2" rowspan="3"> <b>David Clark COMPANY INC.</b>            WORCESTER, MA 01615-0054         </td> </tr> <tr> <td colspan="2">J. DEDINS</td> <td colspan="2">18 MAY 11</td> </tr> <tr> <td colspan="2">CHECKED</td> <td colspan="2">DATE</td> </tr> <tr> <td colspan="2">M. VAN LEREP</td> <td colspan="2">17 MAY 11</td> <td colspan="2" rowspan="2"> <b>INTRINSICALLY SAFE CONTROL DRAWING</b> </td> </tr> <tr> <td colspan="2">APP. APPROVAL</td> <td colspan="2">DATE</td> </tr> <tr> <td colspan="2">N. J. CARRATA</td> <td colspan="2">17 MAY 11</td> <td colspan="2">           19542P-01            (05-12)         </td> </tr> <tr> <td colspan="2">NEXT APPY</td> <td colspan="2">USED BY</td> <td colspan="2"> <table border="1"> <tr> <td>USE UNIT NO.</td> <td>SIZE</td> <td>DRAWING NO.</td> <td>REV</td> </tr> <tr> <td>71463</td> <td>C</td> <td>06600G-02</td> <td>D</td> </tr> </table> </td> </tr> <tr> <td colspan="2">APPLICATION</td> <td colspan="2">QTY REQ'D</td> <td colspan="2">SCALE _____</td> </tr> <tr> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"> <table border="1"> <tr> <td>TOLERANCES UNLESS OTHERWISE STATED</td> <td>FRACTIONS</td> <td>DECIMALS</td> <td>ANGLES</td> </tr> <tr> <td>± _____</td> <td>± _____</td> <td>± _____</td> <td>± _____</td> </tr> </table> </td> </tr> </tbody> </table>		QTY	ITEM	PART NO.	DESCRIPTION	MATERIAL	SPECIFICATION	LIST OF MATERIALS DC-14392						DRAWN		DATE		<b>David Clark COMPANY INC.</b> WORCESTER, MA 01615-0054		J. DEDINS		18 MAY 11		CHECKED		DATE		M. VAN LEREP		17 MAY 11		<b>INTRINSICALLY SAFE CONTROL DRAWING</b>		APP. APPROVAL		DATE		N. J. CARRATA		17 MAY 11		19542P-01 (05-12)		NEXT APPY		USED BY		<table border="1"> <tr> <td>USE UNIT NO.</td> <td>SIZE</td> <td>DRAWING NO.</td> <td>REV</td> </tr> <tr> <td>71463</td> <td>C</td> <td>06600G-02</td> <td>D</td> </tr> </table>		USE UNIT NO.	SIZE	DRAWING NO.	REV	71463	C	06600G-02	D	APPLICATION		QTY REQ'D		SCALE _____						<table border="1"> <tr> <td>TOLERANCES UNLESS OTHERWISE STATED</td> <td>FRACTIONS</td> <td>DECIMALS</td> <td>ANGLES</td> </tr> <tr> <td>± _____</td> <td>± _____</td> <td>± _____</td> <td>± _____</td> </tr> </table>		TOLERANCES UNLESS OTHERWISE STATED	FRACTIONS	DECIMALS	ANGLES	± _____	± _____	± _____	± _____
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06600G-02 | D



IS Division I, Class I, II, III, Groups A, B, C, D, E, F, G T4 at 50C  
 Class I, Zone 0 AEx/Ex to IIC T4 at 50C Control Drawing: 06600G-02  
 U1 = 50 Volts, I1 = 100 mA P1 = 0.25 watts L1 = 3.8 mH, C1 = 3uF  
 The non-metallic parts of the headset are considered to constitute an electrostatic  
 discharge hazard. Clear only with a damp cloth.  
 Ⓡ I I O Da to IIC T4 Gc -20°C to 5 +60°C FMIATED0072X  
 Ex to IIC T4 Gc -20°C to 5 +60°C ICCEx FMD 11-0027X



PART NUMBERS

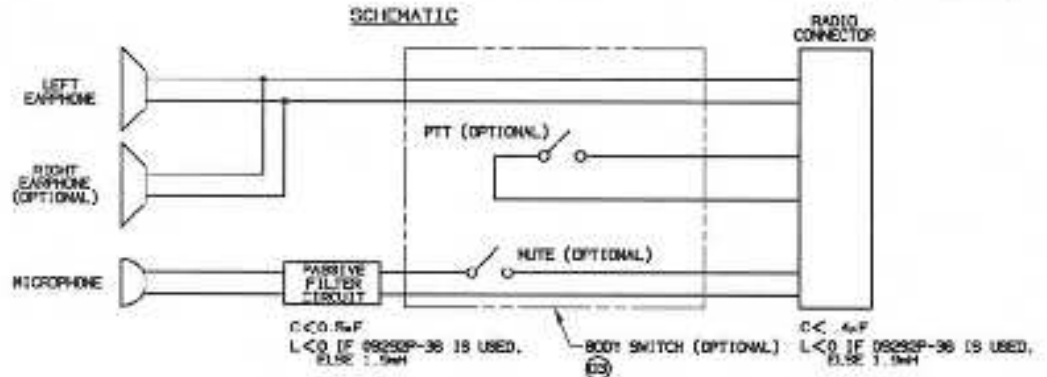
HEADSETS	40180-01
	125200-01
BODY SWITCH & CABLE ASSEMBLIES	409180-01
	402580-01

TEMPERATURE

T RATING	PACKAGE SIZE	R	M
T4	0402	50a	100a
T4	0503	ANY	ANY
T4	0605	ANY	ANY

COMPONENTS

TYPE	PART #	R <sub>MIN</sub>	f <sub>MAX</sub>
SPEAKER	05252P-30	25	4000 Hz
SPEAKER	05252P-32	50	5000 Hz
SPEAKER	05252P-36	100	3.5kHz
SPEAKER	102750-51	18	3000 Hz
MICROPHONE	09100P-34		2.1 uF



REVISIONS

SYM	DESCRIPTION	DATE	APPROVED
A	ENGINEERING RELEASE PER DC-14392	25 APR 11	JD JVL
B	RE-RELEASE PER DC-14392	19 MAY 11	JD KJC
C	RE-RELEASE PER DC-14392	30 JUN 11	DL KJC
D	REV EDN 14540	23 MAY 12	DL JD

402580-01 & 409180-01  
 BODY SWITCH CABLE ASSEMBLY MATERIALS LISTING

COMPONENT	MATERIAL
CORD JACKET	POLYURETHANE
RADIO CONNECTOR BODY	PVC
RADIO CONNECTOR GROMMET	POLYURETHANE
INLINE CONNECTOR BODY	NYLON
INLINE CONNECTOR GROMMET	SANTOPRENE
BODYSWITCH PTT HOUSING	POLYCARBONATE
BODYSWITCH GROMMET	SANTOPRENE
BOLT CLIP	STAINLESS STEEL/PVC
SHRINK TUBING LABELS	POLYOLEFIN

40180-01 & 125200-01  
 HEADSETS MATERIALS LISTING

COMPONENT	MATERIAL
DOSE	ABS PLASTIC
EARSIAL	URETHANE
NAPE SPRING ASSEMBLY	STAINLESS STEEL/PVC
HEADBAND	STAINLESS STEEL/PVC
SUPPORT ASSEMBLY	POLYURETHANE/NYLON
PTT SWITCH	THERMOPLASTIC
PTT SWITCH GUARD	DELRIN
PTT SWITCH SHIELD	PVC
TOGGLE SWITCH	STEEL
TOGGLE SWITCH GUARD	DELRIN
OVERHEAD CORD JACKET	POLYURETHANE
COMMUNICATION CORD JACKET	POLYURETHANE
RADIO CONNECTOR	ABS PLASTIC
RADIO CONNECTOR GROMMET	PVC
MICROPHONE	ABS PLASTIC
MICROPHONE PROTECTOR	HYDAR FLUOROCARBON GARRICH
MICROPHONE BOOM	POLYOLEFIN
INLINE CONNECTOR BODY	NYLON
INLINE CONNECTOR GROMMET	SANTOPRENE
SHRINK TUBING LABELS	POLYOLEFIN

DO NOT SCALE DRAWING  
 UNLESS OTHERWISE SPECIFIED:  
 ALL DIMENSIONS APPLY AFTER FINAL FINISH  
 REMOVE ALL BURRS AND BREAK SHARP EDGES

NEXT ARMY	USER OR	NEXT ARMY	TELEPHONE CORDS OTHERWISE WITH FRACTIONS DECIMALS ANGLES
APPLICATION	BY	REV'S	

QTY	ITEM	PART NO.	DESCRIPTION	MATERIAL	SPECIFICATION
LIST OF MATERIALS					
DC-14392					
DRAFTER J. DEONAS		DATE 25 APR 11		<b>David Clark COMPANY INC.</b> WORCESTER, MA 01515-0054	
CHECKER MR. VAN LEWEP		DATE 17 MAY 11			
ENG. APPROVAL N.J. CANNATA		DATE 17 MAY 11			
<b>INTRINSICALLY SAFE CERTIFICATION DRAWING</b>					
PART NO. 19542P-02 (05-12)		REV. 714E3	DRAWING NO. C 06600G-03	REV. D	
SCALE: _____ BY: _____ SHEET _____ OF _____					

1. "00" DIMENS STYLE OF HEADSET AND RADIO INTERFACE

06600G-03 D1