



Certificate of Compliance

Certificate Number: LR 90397-6

Revision:

Date Issued: April 3, 1995

Issued To: CROWCON DETECTION INSTRUMENTS LTD.
2 Blacklands Way
Abingdon Business Park
Abingdon, Oxon
OX14 1DY, England

The products listed below are eligible to bear the CSA Mark.

Issued By: Andrew Redeker, C.E.T.
Edmonton, Alberta Canada

Signature *P Andrew Redeker*

CLASS

CLASS 4828 01 - SIGNAL APPLIANCES - Combustible Gas Detection Instruments - For Hazardous Locations

PRODUCTS

Class I, Groups A, B, C and D:

"DETECTIVE", portable, four channel, multi-gas detectors (combustibles, toxics and oxygen), battery operated ("CROWCON" battery pack Cat No CO1-406); Intrinsically safe, Temp Code T3A, Encl Type 3R.



Certificate of Compliance

Certificate Number: LR 90397-6

Revision:

Date Issued: April 3, 1995

APPLICABLE REQUIREMENTS

- CSA Standard C22.2 No 0-M1991 - General Requirements - Canadian Electrical Code Part II.
- 0.4-M1982 - Bonding and Grounding of Electrical Equipment (Protective Grounding).
- 94-M1991 - Special Purpose Enclosures.
- 142-M1987 - Process Control Equipment.
- 152-M1984 - Combustible Gas Detection Instruments.
- 157-M1992 - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations.

MARKINGS

- (1) Submitter's name, trademark, or the CSA file number (adjacent the CSA Mark).
- (2) Catalogue / Model designation.
- (3) Complete electrical rating (replacement battery pack type).
- (4) Date code / Serial number traceable to month and year of manufacture.
- (5) Hazardous Location designations. (Class I, Groups A, B, C and D)
- (6) The symbol "Exia".
- (7) Temperature code T3A.
- (8) CSA Enclosure Type 3R.
- (9) The CSA Mark.
- (10) The symbol "C22.2 No 152"
- (11) The following cautions:

WARNING: UNDERSTAND MANUAL BEFORE OPERATING

The following warnings may be marked in the instruction manual or on the DETECTIVE gas detector:

- (a) CAUTION: FOR SAFETY REASONS THIS EQUIPMENT MUST BE OPERATED AND SERVICED BY QUALIFIED PERSONNEL ONLY. READ AND UNDERSTAND INSTRUCTION MANUAL COMPLETELY BEFORE OPERATING OR SERVICING;
- (b) WARNING - SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY
- (c) WARNING - TO PREVENT IGNITION OF A HAZARDOUS ATMOSPHERE, BATTERIES MUST ONLY BE CHANGED IN AN AREA KNOWN TO BE NON-HAZARDOUS
- (d) WARNING: BATTERIES MUST ONLY BE CHARGED IN AN AREA KNOWN TO BE NONHAZARDOUS:

REQUIRED METHOD OF MARKING:

The marking shall be permanent, such as a 0.5-mm thick metal nameplate secured by drive pins or screws in bottomed holes, cast, etched, or engraved.



Certificate of Compliance

Certificate Number: LR 90397-6

Revision:

Date Issued: April 3, 1995

FACTORY TESTS

Dielectric:

The equipment at the conclusion of manufacture, prior to shipment, shall withstand for one minute without breakdown, the application of the following ac potentials:

- (1) 1000 Vac plus twice the rated voltage between primary input circuits and non-current carrying parts.
- (2) 1000 Vac plus twice the rated voltage between primary input circuits and other low voltage or extra-low voltage circuits if such circuits leave or enter the enclosure.
- (3) 500 Vac between extra-low voltage circuits and non current carrying parts if such circuits leave or enter the enclosure.

NOTES:

- (1) As an alternative, potentials 20 percent higher may be applied for one second.
- (2) The required dielectric strength test may be made by applying a dc potential, providing it is 1.414 times the ac test potential.
- (3) Capacitors in the extra-low voltage circuits may be disconnected during the dielectric test.

WARNING:

The factory test(s) specified may present a hazard of injury to personnel and/or property, and should be performed by persons knowledgeable of such hazards, and under conditions designed to minimize the possibility of injury.



Certificate of Compliance

Certificate Number: LR 90397-6

Revision: LR 90397-18

Date Issued: July 15, 1998

Issued to: CROWCON DETECTION INSTRUMENTS LTD.
2 Blacklands Way
Abingdon Business Park
Abingdon, Oxon
OX14 1DY, England
Attention: Mr. Leigh Greenham

The products listed below are eligible to bear the CSA Mark

Issued by: G. Black
Toronto, ON Canada

Signature: *Glen Black*

CLASS 4828 01 - SIGNAL APPLIANCES - Combustible Gas Detection Instruments - For Hazardous Locations

PRODUCTS

Class I, Groups A, B, C and D:

"DETECTIVE", portable, four channel, multi-gas detectors (combustibles, toxics and oxygen), battery operated ("CROWCON" battery pack Cat No CO1-406); Intrinsically safe, Temp Code T3A, Encl Type 3R.



Certificate No: LR 90397-6

Date: July 15, 1998

Revision: LR 90397-18

APPLICABLE REQUIREMENTS

CSA Standard C22.2 No 0-M1991	-	General Requirements - Canadian Electrical Code Part II.
0.4-M1982	-	Bonding and Grounding of Electrical Equipment (Protective Grounding).
94-M1991	-	Special Purpose Enclosures.
142-M1987	-	Process Control Equipment.
152-M1984	-	Combustible Gas Detection Instruments.
157-M1992	-	Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations.

MARKINGS

- (1) Submitter's name, trademark, or the CSA file number (adjacent the CSA Mark).
- (2) Catalogue / Model designation.
- (3) Complete electrical rating (replacement battery pack type).
- (4) Date code / Serial number traceable to month and year of manufacture.
- (5) Hazardous Location designations. (Class I, Groups A, B, C and D)
- (6) The symbol "Exia".
- (7) Temperature code T3A.
- (8) CSA Enclosure Type 3R.
- (9) The CSA Mark.
- (10) The symbol "C22.2 No 152"
- (11) The following cautions:
WARNING: UNDERSTAND MANUAL BEFORE OPERATING

The following warnings may be marked in the instruction manual or on the DETECTIVE gas detector:

- (a) CAUTION: FOR SAFETY REASONS THIS EQUIPMENT MUST BE OPERATED AND SERVICED BY QUALIFIED PERSONNEL ONLY. READ AND UNDERSTAND INSTRUCTION MANUAL COMPLETELY BEFORE OPERATING OR SERVICING;
- (b) WARNING - SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY
- (c) WARNING - TO PREVENT IGNITION OF A HAZARDOUS ATMOSPHERE, BATTERIES MUST ONLY BE CHANGED IN AN AREA KNOWN TO BE NON-HAZARDOUS
- (d) WARNING: BATTERIES MUST ONLY BE CHARGED IN AN AREA KNOWN TO BE NONHAZARDOUS:

REQUIRED METHOD OF MARKING:

The marking shall be permanent, such as a 0.5-mm thick metal nameplate secured by drive pins or screws in bottomed holes, cast, etched, or engraved.



Supplement to Certificate of Compliance

Certificate Number: LR 90397-6

Issued to: CROWCON DETECTION INSTRUMENTS LTD.
2 Blacklands Way
Abingdon Business Park
Abingdon, Oxon
OX14 1DY, England
Attention: Mr. Leigh Greenham

*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Issued By: G. Black
Toronto, ON Canada

Signature: *Glen Black*

Product Certification History

Revision	Date	Description
-18	July 15/98	Add new manufacturer for toxic cell.
-6	April 3/95	Certification of "Detective" gas detector.