1. INTRODUCTION

The DX100 (I) Termination Unit is an explosion protection junction box that provides a signal connection point and mounting point for the Honeywell Analytics Searchpoint Optima or Optima Plus gas detectors. Caution: The DX100 (I) Termination Unit can only be used with Searchpoint Optima or Optima Plus gas detectors. This guide covers the basic on-site mechanical and electrical installation of the unit. Refer to the DX100 Series Termination Unit Technical Manual (Part No. 2104M0701) for more detailed information about the DX100 (I).

The unit is certified to UL and CSA standards and is intended for use in hazardous environments. The DX100 (I) provides:
- terminals for connecting the gas detector and the field cabling
- an Intrinsically Safe (IS) connection point for the Hand Held Interrogator (SHI) gas detector
- a local mounting point for the Searchpoint Optima or Optima Plus gas detector

The unit features:
- three 3/4” NPT cable/conduit entries
- two terminal blocks
- a voltage clamp and a communications link entry socket

One of the three cable/conduit entries (usually the left-hand one) is used to mount the Searchpoint Optima or Optima Plus gas detector directly to the box. The Optima and Optima Plus output a 4-20mA signal that is sent via the Termination Unit field wiring back to the controller. The voltage clamp and the external socket provide the IS connection to the Handheld Interrogator (SHIC1).

The SHC1 allows the operator to communicate with the attached gas detector to commission, calibrate or diagnose the system. Full details about the Searchpoint Optima and Optima Plus units can be found in their documentation, which includes operation of the SHC1.

Caution: Only the SHC1 Handheld Interrogator must be connected to the DX100 (I) Communications Link Entry Socket. Honeywell Analytics Limited reserve the right to change or revise the information supplied in this document without notice and without obligation to notify any person or organization of such revision or change. If further details are required that do not appear in this document contact Honeywell Analytics Limited or one of its agents.

2. SAFETY

Ensure that you read and understand this document BEFORE installing or operating the equipment. Pay particular attention to the Safety Warnings.

WARNINGS
1. The DX100 (I) Termination Unit is certified for and intended for use in potentially hazardous areas. Install and use the DX100 (I) Termination Unit in accordance with the latest regulations. No modifications to the unit are permitted without reference to the relevant certifying authority.
2. Install UL approved and certified equipment including field wiring in strict accordance with the articles of the National Electrical Code for Division 1 Hazardous Locations (NFPA 70).
3. Install CSA approved and certified equipment including field wiring in strict accordance with Canadian Electrical Code, Part 1.
4. For installations elsewhere, the appropriate local or national regulations should be used.
5. The Code of Practice regarding Selection, Installation, Use And Maintenance Of Apparatus For The Detection Of Combustible Gases (Other Than For Moting Applications Or Explosive Processing And Manufacture) must be completed with.
6. The DX100 (I) Termination Unit must be properly earthed to protect against electrical shock, minimise electrical interference and comply with IS Safety Requirements.
7. Dismantling or repair of equipment should be carried out in the safe area only.
8. Do not drill holes in the housing as this will invalidate the explosion protection.
9. In order to maintain electrical safety, the unit must not be operated in atmospheres with more than 21% oxygen.
10. Do not open the enclosure in the presence of an explosive atmosphere.

CAUTIONS
1. Only the Handheld Interrogator (SHIC1) must be connected to the Termination Unit’s communication link entry socket.
2. The DX100 (I) Termination Unit can only be used with Searchpoint Optima or Optima Plus gas detectors.
**3. MAIN FEATURES**

This section identifies the main features of the Termination Unit and also details important dimensions for the unit when installing.

**4. INSTALLATION**

It is important before starting these procedures that the detailed information provided in the DX100 Series Termination Units Technical Handbook about DX100 (i) installation has been carefully considered at the planning stage.

The following points should be noted:

**General Installation Guidelines**

1. Read the Warnings and Cautions at the beginning of this document and all the relevant instructions before starting any of the installation procedures.
2. Identify external cable requirements and the necessary cable entry ports to be used on the Termination Unit.
3. Refer to the documentation for the associated control system for details about external network connection information, field wiring, interconnections, etc.
4. Refer to the associated Searchpoint Optima handbook for details about the gas detector.

**MECHANICAL INSTALLATION**

**Mechanical Installation Guidelines**

1. Identify a suitable location where the Termination Unit can be mounted. The unit should be fitted to a flat surface.
2. When fitting a Termination Unit consideration should be made regarding the probability of mechanical impacts and interference from other equipment and apparatus.

**Procedure**

This procedure describes how the DX100 (i) is installed at the mounting location and then the Optima gas detector is fitted to the Termination Unit.

1. Securely fit the Termination Unit at the required mounting point.
2. Use the two Termination Unit mounting lugs. Ensure the communications link entry socket connector is located at the bottom. This is to fulfill the requirement to position the Optima sensor horizontally so that the risk of fouling the gas detector’s optical surfaces is reduced.
3. Remove the Termination Unit lid.
4. Use the lugs on the lid to unscrew it anticlockwise from the Termination Unit base.

**5. SPECIFICATIONS**

**INSTALLATION**

Connect the gas detector and field wiring to the terminal blocks in the DX100 (i) Termination Unit according to the following wiring diagram and table.

**5. CERTIFICATION**

This section specifies UL and CSA certification information for the DX100 (i) Termination Unit. It includes relevant Control Drawings.

A Honeywell Analytics certification label is located on the right-hand side of the DX100 (i) Termination Unit.

The label contains all the relevant information regarding the product’s identification and certification state.

The part number of the certified UL-CSA DX100 (i) (Termination Unit is 210482381).

The following diagrams show the Honeywell Analytics UL and CSA Certification Labels. The label content for the CSA label is explained. The UL label is similar.